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## **Summary of 2014 and 2015 Cigarette Market Surveys**

### **OBJECTIVE:**

The objective of this report is to summarize selected data from two U.S. cigarette market surveys conducted in 2014 and 2015. The results summarized in this report were prepared in support of an anticipated regulatory submission (MRTPA) related to Camel Snus.

### **SUMMARY:**

U.S. cigarettes were sampled in August 2014 and August 2015 for testing. Quantitative analyses were performed for reportable harmful and potentially harmful constituents (HPHCs) and other selected analytes of interest. This report summarizes a subset of those results and provides data for endpoints in common with results from Camel Snus testing. All analytical determinations were conducted at R.J. Reynolds Tobacco Company (RJRT) by Eurofins Lancaster Laboratories-Professional Scientific Services (ELL-PSS).

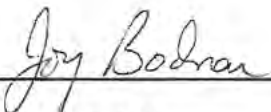
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### **KEYWORDS:**

Nicotine, acetaldehyde, formaldehyde, crotonaldehyde, acrylamide, arsenic, cadmium, benzo(a)pyrene, NAB, NAT, NNN, NNK, acrylamide, benzo(a)pyrene, benzo(a)anthracene, benzo(b/j)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene, naphthalene.

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## INTRODUCTION

Approximately 40 – 50 cigarette brand styles were investigated in two market surveys (2014 U.S. cigarette market survey and 2015 U.S. cigarette market survey). Cigarettes were sampled either by purchasing at retail (b) (4) (b) (4) ) or from bonded warehouse (RJRT-managed product distribution center) in the case of cigarette brand styles manufactured by RJRT and Santa Fe Natural Tobacco company (SFNTC). Products were purchased on August 6, 2014 and August 31, 2015.

Analytes evaluated in the cigarette market surveys consisted of the mainstream cigarette smoke analytes specified in Table 1 of the FDA Draft Guidance for Industry, “Reporting Harmful and Potentially Harmful Constituents in Tobacco Products and Tobacco Smoke Under Section 904(a)(3) of the Federal Food, Drug, and Cosmetic Act” issued March 2012 and other selected analytes of interest. This report summarizes a subset of those results and provides data for endpoints in common with results from Camel Snus testing.

## EXPERIMENTAL

### Sampling Rationale

The brand styles selected for the 2014 and 2015 surveys provided broad representation of the different cigarettes available for purchase in the U.S. In the 2014 cigarette market survey, forty-five (45) commercial filter cigarette brand styles were selected for analysis. Brand style selection was based on a combination of factors, including market share, manufacturer and elements of the product design. In total, the brand styles evaluated in the 2014 survey represented about 51% of the U.S. cigarette market share based on full-year 2013 “Marlin data” (i.e., U.S. cigarette market data collected by IRI/Capstone, processed and managed by MSAi).

The cigarettes tested were stratified by ISO ‘tar’ yield and represented a wide range, with twenty-one brand styles yielding 13-18 mg/cig ‘tar’, eighteen brand styles yielding 7-13 mg/cig ‘tar’ and six brand styles yielding 1-6 mg/cig ‘tar’, including one style yielding 1 mg/cig ‘tar’. Cigarettes sold in the U.S. typically differ in lengths from 70 to 120 mm. All filtered cigarette lengths were represented by the brand styles sampled, with thirty cigarette brand styles in the range of 72-85 mm (two of which were capsule filters and smoked both crushed and uncrushed), thirteen 100 mm cigarette brand styles and two 120 mm styles. Two of the cigarettes had charcoal filters. Non-filtered cigarette styles were not included in the study. Cigarettes brand styles sold in the U.S. typically differ in circumference within the range of approximately 17 to 27 mm, with most in the range of approximately 21 to 25 mm. All cigarettes sampled were within the circumference range of 21.1-25.0 mm. There were thirty-one non-menthol and fourteen mentholated cigarette brand styles tested. The cigarettes represented all major manufacturers: Philip Morris USA (17), RJRT (14), SFNTC (3), Lorillard (5),

Commonwealth (2) and Liggett (4). Also, a reference cigarette, 3R4F, was included in the study in order to bridge to other studies and as a check of method reliability.

In the 2015 cigarette market survey, fifty (50) commercial filter cigarette brand styles were selected for analysis. Brand style selection was again based on market share, manufacturer and elements of product design. In total, the brand styles evaluated in the 2015 survey represented about 60% of the U.S. cigarette market share (based on full year 2014 "Marlin data" (i.e., U.S. cigarette market data collected by IRI/Capstone, processed and managed by MSAi).

The cigarettes tested were further stratified by ISO 'tar' yield and represented a wide range with twenty-two brand styles yielding 13-18 mg/cig 'tar', twenty-three brand styles yielding 7 -13 mg/cig 'tar' and five brand styles yielding 1- 6 mg/cig 'tar', including one style yielding 1 mg/cig 'tar'. All filtered cigarette lengths were represented by the brand styles sampled, with thirty-three cigarette brand styles in the range of 72-85 mm (three of which were capsule filters and smoked both crushed and uncrushed), fifteen 100 mm cigarette brand styles and two 120 mm styles. All cigarettes were within the circumference range of 21.1-25.0 mm. There were thirty-six non-menthol and fourteen mentholated cigarette brand styles tested. The cigarettes represented all the major manufacturers: Philip Morris USA (18), RJRT (17), SFNTC (6), ITG Brands (4), Commonwealth (2) and Liggett (3). Also a reference cigarette, 3R4F, was included in the study in order to bridge to other studies and as a check of method reliability.

#### Cigarette Brand Styles Sampled

RJRT and SFNTC brand styles were obtained through the RJRT product distribution center. Other commercial brand styles were purchased through (b) (4) retailers. Table 1 shows the brand styles sampled and analyzed for the two surveys.

Table 1 Cigarette Brand Styles Analyzed

<b>2014 Brand Styles from RJRT Distribution Center</b>	<b>2014 Brand Styles Purchased from Retail</b>	<b>2015 Brand Styles from RJRT Distribution Center</b>	<b>2015 Brand Styles Purchased from Retail</b>
Camel Blue Hard Pack	L&M Blue Pack Box	Camel Blue Hard Pack	Kent Kings
Camel Crush	L&M Box	Camel Crush	Kool Box
Camel Filters Hard Pack	Marlboro 72s Box	Camel Filters Hard Pack	L&M Box
Camel Menthol Silver Hard Pack	Marlboro Blend No. 27 Box	Camel Menthol Silver Hard Pack	Marlboro Box
Kool Box	L&M Menthol 100's Box	Misty Blue 120's Box	Marlboro Edge Box
Misty Menthol Green 120's Box	Marlboro 72s Blue Pack Box	More 120's Soft Pack	Marlboro Eighty Threes Box
More 120's Soft Pack	Marlboro Box	Natural American Spirit Full Bodied Taste	Marlboro Gold Pack Box
Natural American Spirit Full Bodied Taste	Marlboro Menthol Box	Natural American Spirit Made with Organic Tobacco Full Bodied Taste	Marlboro Gold Pack 100's Box
Natural American Spirit Made with Organic Tobacco Full Bodied Taste	Marlboro Gold Pack Box	Natural American Spirit Made with Organic Tobacco Mellow Taste	Marlboro Menthol Box
Natural American Spirit Perique Blend Rich Robust Taste	Marlboro Special Blend 100's (Red) Box	Natural American Spirit Mellow Taste	Marlboro Menthol Gold Pack Box
Now Soft Pack	Marlboro Special Blend 100's (Black) Box	Natural American Spirit Menthol Mellow Taste	Marlboro NXT Box
Pall Mall Blue 100's Box	Marlboro Special Blend (Black) Box	Natural American Spirit Perique Blend Rich Robust Taste	Maverick 100s Box
Pall Mall Menthol White 100's Box	Marlboro Silver Pack 100's Box	Now Soft Pack	Marlboro 100's Box
Pall Mall Orange Box	Marlboro Menthol Silver Pack Box	Pall Mall Blue 100's Box	Marlboro Special Blend 100's (Black) Box
Pall Mall Red 100's Box	Marlboro Silver Pack Box	Pall Mall Menthol 100's Box	Marlboro Special Blend (Black) Box
Tareyton Soft Pack	Marlboro Special Blend (Gold) Box	Pall Mall Orange Box	Marlboro Silver Pack 100's Box
Winston Red Box	Maverick Gold 100s Box	Pall Mall Red 100's Box	Marlboro Silver Pack Box
	Maverick Menthol 100s Box	Pall Mall Red Box	Marlboro Special Blend (Gold) Box
	Newport Box		Marlboro Special Blend (Red) Box
	Newport Box 100s		Marlboro Special Blend 100's (Red) Box
	Newport Non-menthol Box		Marlboro Special Blend 100's Box (Gold Pack)
	Parliament (White Pack) Box		Maverick Menthol 100s Box
	Pyramid Menthol Silver 100s Box		Newport Box
	Pyramid Orange 100s Box		Newport Box 100s
	Pyramid Red 100s Box		Newport Menthol Gold Box
	Pyramid Red Box		Pyramid Blue 100s Box
	Sonoma Red Box		Pyramid Menthol Silver 100s Box
	USA Gold Red Box		Pyramid Red 100s Box
			Sonoma Red Box

Table 1 Cigarette Brand Styles Analyzed (cont'd)

2014 Brand Styles from RJRT Distribution Center	2014 Brand Styles Purchased from Retail	2015 Brand Styles from RJRT Distribution Center	2015 Brand Styles Purchased from Retail
			True Kings
			USA Gold Red Box
			Winston Red Box

Sample Handling Prior to Testing

All samples were received by RJRT Finished Goods Inventory at Bowman Gray Technical Center in Winston-Salem, North Carolina and then transported to the laboratory for subsequent analysis. Samples were transported at ambient temperature. Chain-of-custody was established at the time of sample receipt.

The reference 3R4F cigarettes were received from the University of Kentucky, Center for Tobacco Reference Products (CTRP) into RJRT Finished Goods Inventory on July 7, 2014. They were stored by RJRT Finished Goods Inventory in a temperature-controlled room held at -2 °C to -7 °C. 3R4F cigarettes were transported at ambient temperature to the laboratory for analysis.

Testing Laboratory

RJRT currently has an outsourced solution for analytical testing using a Professional Staffing Services (PSS) model that is provided by Eurofins Lancaster Laboratories Professional Scientific Services (ELL-PSS). The laboratory facility is on-site at RJRT and the laboratory equipment and testing protocols are developed and/or maintained by RJRT. Operation of the facility and testing is conducted by ELL-PSS personnel on a contract basis. The certificates of ISO 17025 accreditation list R.J. Reynolds Tobacco Company as the accredited facility, and ELL-PSS is contractually required to maintain the Quality System and ensure accreditation while providing analytical services. The RJRT Chemical and Mechanical accreditations are attached as Appendix C (Chemical Accreditation June 2018) and Appendix D (Mechanical Accreditation June 2018). The routine testing in this report is within the scope of that accreditation.

Testing Conditions

In general, samples were maintained at room temperature (~ 72 °F) during testing via thermostatic control of the central heat and air conditioning system. Certain areas such as the smoking laboratory and smoking preparation room were both temperature and humidity controlled. These locations were monitored and maintained in the range of 69.8-73.4 °F and 57-63% relative humidity for the smoking preparation room and 68-75.2 °F and 55-65% relative humidity for the smoke laboratory.

## Methods

Mainstream smoke was generated by ELL-PSS for chemical testing using both the ISO and Health Canada intensive (HCI) smoking regimens following internal standard operating procedures. All analytical methods used to generate smoke yield data are listed in Table A below. Over time the methods have undergone revision. Document names were changed from ACD prefix to RJRT-WI- prefix with a new document repository system in 2014. A short description of each method follows Table A. All analytical methods, including specific revisions applicable at the time of sample analysis, are attached in Appendix B.

Table A: Analytes and Methods

Analyte	Document Name	Method	Revision-Date
Acetaldehyde	ACD0050STM/ RJRT-WI-004112	Determination of Selected Carbonyls in Mainstream Smoke	Rev 20 7/21/2014
Acetaldehyde	RJRT-WI-004112	Determination of Selected Carbonyls in Mainstream Smoke	Rev 21 08/26/2014
Acetaldehyde	RJRT-WI-004112	Determination of Selected Carbonyls in Mainstream Smoke	Rev 22 3/20/2015
Acrylamide	ACD0308STM/ RJRT-WI-004196	Quantitation of Pyridine, Quinoline and Acrylamide in Cigarette Smoke by GCMS	Rev 9 7/31/2014
Acrylamide	RJRT-WI-04196	Quantitation of Pyridine, Quinoline and Acrylamide in Cigarette Smoke by GCMS	Rev 10 3/23/2015
Acrylamide	RJRT-WI-04196	Quantitation of Pyridine, Quinoline and Acrylamide in Cigarette Smoke by GCMS	Rev 11 11/30/2015
Arsenic	ACD1113STM/ RJRT-WI-004231	Smoke Metal Analysis by ICPMS	Rev 4 2/21/2014
Arsenic	RJRT-WI-004231	Smoke Metal Analysis by ICPMS	Rev 5 11/03/2014
Benzo(a)anthracene	ACD1109-3STM/ RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 10 07/29/2014
Benzo(a)anthracene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 11 03/25/2015
Benzo(a)anthracene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 12 10/08/2015

Table A: Analytes and Methods (cont'd)

Analyte	Document Name	Method	Revision-Date
Benzo(a)pyrene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 10 07/29/2014
Benzo(a)pyrene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 11 03/25/2015
Benzo(a)pyrene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 12 10/08/2015
Benzo(b/j)fluoranthene	ACD1109-3STM/ RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 10 07/29/2014
Benzo(b/j)fluoranthene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 11 03/25/2015
Benzo(b/j)fluoranthene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 12 10/08/2015
Benzo(k)fluoranthene	ACD1109-3STM/ RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 10 07/29/2014
Benzo(k)fluoranthene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 11 03/25/2015
Benzo(k)fluoranthene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 12 10/08/2015
Cadmium	ACD1113STM/ RJRT-WI-004231	Smoke Metal Analysis by ICPMS	Rev 4 2/21/2014
Cadmium	RJRT-WI-004231	Smoke Metal Analysis by ICPMS	Rev 5 11/03/2014
Crotonaldehyde	ACD0050STM/ RJRT-WI-004112	Determination of Selected Carbonyls in Mainstream Smoke	Rev 20 7/21/2014
Crotonaldehyde	ACD0050STM/ RJRT-WI-004112	Determination of Selected Carbonyls in Mainstream Smoke	Rev 21 08/26/2014
Crotonaldehyde	RJRT-WI-004112	Determination of Selected Carbonyls in Mainstream Smoke	Rev 22 3/20/2015
Dibenz(a,h)anthracene	ACD1109-3STM/ RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 10 07/29/2014
Dibenz(a,h)anthracene	RJRT-WI-00422	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 11 03/25/2015



Table A: Analytes and Methods (cont'd)

Analyte	Document Name	Method	Revision-Date
Dibenz(a,h)anthracene	RJRT-WI-00422	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 12 10/08/2015
Formaldehyde	ACD0050STM/ RJRT-WI-004112	Determination of Selected Carbonyls in Mainstream Smoke	Rev 20 7/21/2014
Formaldehyde	RJRT-WI-004112	Determination of Selected Carbonyls in Mainstream Smoke	Rev 21 08/26/2014
Formaldehyde	RJRT-WI-004112	Determination of Selected Carbonyls in Mainstream Smoke	Rev 22 3/20/2015
Indeno(1,2,3 c,d)pyrene	ACD1109-3STM/ RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 10 07/29/2014
Indeno(1,2,3 c,d)pyrene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 11 03/25/2015
Indeno(1,2,3 c,d)pyrene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 12 10/08/2015
Naphthalene	ACD1109-3STM/ RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 10 07/29/2014
Naphthalene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 11 03/25/2015
Naphthalene	RJRT-WI-004227	Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS	Rev 12 10/08/2015
Nicotine	ACD0061-2STM	Standard Operating Procedure for the Gas Chromatographic Determination of Nicotine and Water in Smoke	Rev 18 05/02/2014
Nicotine	RJRT-WI-0004181	Gas Chromatographic Determination of Nicotine and Water in Smoke	Rev 19 01/09/2015
Nicotine	RJRT-WI-0004181	Nicotine and Water in Smoke	Rev 20 11/30/2015
NAB	ACD1101-3STM/ RJRT-WI-004216	Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)	Rev 11 02/12/2014
NAB	RJRT-WI-004216	Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)	Rev 12 08/28/2014

Table A: Analytes and Methods (cont'd)

Analyte	Document Name	Method	Revision-Date
NAB	RJRT-WI-004216	Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)	Rev 13 03/17/2015
NAT	ACD1101-3STM/ RJRT-WI-004216	Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)	Rev 11 02/12/2014
NAT	RJRT-WI-004216	Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)	Rev 12 08/28/2014
NAT	RJRT-WI-004216	Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)	Rev 13 03/17/2015
NNK	ACD1101-3STM/ RJRT-WI-004216	Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)	Rev 11 02/12/2014
NNK	RJRT-WI-004216	Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)	Rev 12 08/28/2014
NNK	RJRT-WI-004216	Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)	Rev 13 03/17/2015
NNN	ACD1101-3STM/ RJRT-WI-004216	Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)	Rev 11 02/12/2014
NNN	RJRT-WI-004216	Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)	Rev 12 08/28/2014
NNN	RJRT-WI-004216	Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)	Rev 13 03/17/2015

## Analytical Method Descriptions

### **Standard Operating Procedure for the Gas Chromatographic Determination of Nicotine and Water in Smoke (ACD0061-2STM), Gas Chromatographic Determination of Nicotine and Water in Smoke/ Nicotine and Water in Smoke (RJRT-WI-004181)**

Cigarettes are conditioned according to ISO 3402 and smoked using a Cerulean SM450 20-port linear smoke machine equipped with a CO analyzer (non-dispersive infrared detection (NDIR)). Cigarettes are smoked following either an ISO smoking procedure or a Canadian Intense smoking procedure. For the ISO regimen, the smoke from five cigarettes is collected onto conditioned pre-weighed 44 mm Cambridge Filter Pads (CFPs) using a 35-mL two second puff every 60 seconds. For the Canadian Intense regimen, the smoke from three cigarettes is collected onto a CFP using a 55-mL two second puff every 30 seconds with 100% of the ventilation holes on the cigarettes blocked using scotch tape. For both regimens, eight replicates are collected. The gas phase is collected in bags and analyzed by NDIR and the percent carbon monoxide is determined. The pad is re-weighed after smoke collection, and the difference is the Total Particulate Matter (TPM). The CFP is extracted using an isopropanol/octadecane/ethyl alcohol solution. Extracts are analyzed by a gas chromatograph (GC) equipped with both a flame ionization detector (FID) for nicotine analysis and a thermal conductivity detector (TCD) for water analysis. Nicotine-free dry particulate matter (NFDPM) is calculated by subtracting the amount of water and nicotine determined by the GC analysis from the TPM.

### **Determination of Selected Carbonyls in Mainstream Smoke (RJRT-WI-004112)**

Cigarettes are conditioned according to ISO 3402 and smoked using a Cerulean SM450 20-port linear smoke machine modified to accommodate liquid trapping systems following either an ISO smoking procedure or a Canadian Intense smoking procedure. For the ISO regimen, the smoke from four cigarettes is collected into impingers containing 100 mL acidified 2,4-dinitrophenylhydrazine (DNPH) in acetonitrile. For the Canadian Intense regimen, the smoke from 2 cigarettes is collected. The number of cigarettes can be increased to improve detection for cigarettes with low levels of these constituents. Carbonyls are derivatized with the DNPH under these conditions to form stable compounds for spectroscopic analysis. Derivatized carbonyls are quantified using high performance liquid chromatography with ultra-violet detection (HPLC-UV). The method is applicable to the quantitative determination of formaldehyde, acetaldehyde, acetone, acrolein, butyraldehyde, crotonaldehyde, methyl ethyl ketone (2-butanone), and propionaldehyde in smoke.

### **Determination of Pyridine, Quinoline and Acrylamide in Cigarette Smoke by GC/MS (RJRT-WI-004196)**

Cigarettes are conditioned according to ISO 3402 and smoked using a Borgwaldt 20-port rotary smoking machine. The smoke is collected on conditioned pre-weighed 44 mm CFPs. For the ISO regimen, the smoke of ten cigarettes is collected. For Canadian Intense regime, the smoke from three cigarettes is collected. The CFPs are extracted with methanol. Internal standard is added and the sample extract is shaken on a wrist-

action shaker for 30 minutes. A drop of 28% ammonium hydroxide is added to each GC vial and the vial shaken prior to analysis with gas chromatography/mass spectrometry (GC/MS).

The method is applicable to the quantitative determination of pyridine, quinolone and acrylamide in cigarette smoke.

#### **Quantitative Determination of Tobacco Specific Nitrosamines by High Performance Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS) (RJRT-WI-004216)**

Cigarettes are conditioned according to ISO 3402 and smoked using a Borgwaldt 20-port rotary smoke machine. The smoke is collected onto conditioned pre-weighed 92 mm CFPs. For the ISO regimen, the smoke from five cigarettes is collected. For the Canadian Intense regime, the smoke from three cigarettes is collected. The CFPs are extracted using ammonium acetate containing deuterated TSNA analogs. The extract is filtered to remove particulates and then analyzed by liquid chromatography tandem mass spectroscopy (LC/MS-MS). The method is applicable to the quantitative determination of n-nitrosonornicotine (NNN), n-nitrosoanatabine (NAT), 4-nitrosomethylamino-1-3-pyridyl-1-butanone (NNK), and n-nitroanabasine (NAB).

#### **Quantitation of PAHs in MSPP from Burn-Down, HNB, Aerosols from e-cigs and Tobacco Products by GC/MS (RJRT-WI-004227)**

Cigarettes are conditioned according to ISO 3402 and smoked using a Cerulean SM450 20-port linear smoke machine. Cigarettes are smoked following either an ISO smoking procedure or a Canadian Intense smoking procedure. For the ISO regimen, the smoke from five cigarettes is collected. For the Canadian Intense regime, the smoke from three cigarettes is collected. Cigarette smoke is collected onto conditioned pre-weighed 44 mm CFPs. The CFPs are solvent extracted in cyclohexane containing a PAH internal standard, before the solvent with the CFP is filtered through a 0.45 micron PTFE filter. Filtered solvents are volume reduced under nitrogen at room temperature and then analyzed by GCMS using electron ionization (EI), SIM. The method is applicable to the quantitative determination of naphthalene, fluorine, fluoroanthene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, acenaphthene, acenaphthylene, dibenzo(a,h)anthracene, benzo(j)fluoranthene, and indeno(1,2,3-cd)pyrene.

#### **Smoke Metal Analysis by ICPMS (RJRT-WI-004231)**

Cigarettes are conditioned according to ISO 3402. Cigarette smoke is collected onto quartz tubes by electrostatic precipitation using a Borgwaldt RM20CS 20-port rotary smoke machine equipped with an electrostatic precipitator and tungsten electrode. For the ISO regimen, the smoke from twenty cigarettes is collected. For the Canadian Intense regime, the smoke from ten cigarettes is collected. The smoke condensate is extracted from the tube using ultra-pure methanol, the methanol dried off, and the condensate acid digested using ultra-pure nitric acid before analysis by ICP-MS. The method is applicable to the quantitative determination of arsenic, cadmium, chromium, lead, nickel, and cobalt.

The limits of quantification (LOQ) for the analytical methods used in the surveys are summarized in Table B below at both the ISO and Canadian Intense (CI) smoking regimens.

**Table B Method Limits of Quantitation (LOQ)**

Method and Analyte	CAS Number	LOQ ISO	LOQ CI	No of cigs smoked ISO/Canadian Intense
<b>PAH</b>		<b>ng/cig</b>	<b>ng/cig</b>	
Benzo(a)pyrene	50-32-8	2.88	4.80	5/3
Benz(a)anthracene	56-55-3	2.88	4.80	5/3
Benzo(b/j)fluoranthene	205-99-2 & 205-82-3	1.92	3.20	5/3
Benzo(k)fluoranthene	207-08-9	1.92	3.20	5/3
Dibenz(a,h)anthracene	53-70-3	2.88	4.80	5/3
Indeno(1,2,3-c,d)pyrene	193-39-5	0.384	0.640	5/3
Naphthalene	91-20-3	19	32	5/3
<b>TNCO</b>		<b>mg/cig</b>	<b>mg/cig</b>	
Nicotine	54-11-5	0.04	0.07	5/2
<b>TSNA</b>		<b>ng/cig</b>	<b>ng/cig</b>	
N-Nitrosoanabasine (NAB)	37620-20-5	1.5	2.5	5/3
N-Nitrosoanatabine (NAT)	71267-22-6	6	10	5/3
N-Nitrososornicotine (NNN)	16543-55-8	6	10	5/3
4-(nitrosmethylamino)-1-(3-pyridyl)-1-butanone (NNK)	64091-91-4	6	10	5/3
<b>CARBONYLS</b>		<b>µg/cig</b>	<b>µg/cig</b>	
Acetaldehyde	75-07-0	19.9	79.8	4/2
Crotonaldehyde	4170-30-3	1.42	5.68	4/2
Formaldehyde	50-00-0	1.45	5.80	4/2
<b>METALS</b>		<b>ng/cig</b>	<b>ng/cig</b>	
Arsenic	7440-38-2	0.11	0.081	20/10
Cadmium	7440-43-9	0.96	2.4	20/10
<b>ACRYLAMIDE</b>		<b>µg/cig</b>	<b>µg/cig</b>	
Acrylamide	79-06-1	0.05	0.17	10/3

## RESULTS

Combined cigarette survey results are tabulated in Appendix A as follows:

Table 1 provides a listing of all data (by individual replicate) collected under ISO smoking conditions grouped by analyte and arranged alphabetically by product name. Table 2 includes individual cigarette brand style summary data by year (mean, minimum value, maximum value and number of replicates) based on the data in Table 1.

Table 3 shows the product mean range (minimum and maximum values) for each analyte tested under ISO smoking conditions in 2014 and 2015. Product mean ranges were determined based upon a single mean for each cigarette brand style tested. For brand styles tested in both years, the mean value was based upon the combined data sets from those years.

Table 4 provides a listing of all the data (by individual replicate) collected under Canadian Intense smoking conditions grouped by analyte and arranged alphabetically by product name.

Table 5 includes individual cigarette brand style summary data by year (mean, minimum value, maximum value and number of replicates) based on the data in Table 4.

Table 6 shows the product mean range (minimum and maximum values) for each analyte tested under Canadian Intense smoking conditions in 2014 and 2015. Product mean ranges were determined based upon a single mean for each cigarette brand style tested. For brand styles tested in both years, the mean value was based upon the combined data sets from those years.

Table 7 provides a listing of all data (by individual replicate) for the reference cigarette, 3R4F, collected under ISO smoking conditions grouped by analyte.

Table 8 includes summary data by year (mean, minimum value, maximum value and number of replicates) for the reference cigarette, 3R4F, based on the data in Table 7.

Table 9 provides a listing of all data (by individual replicate) for the reference cigarette, 3R4F, collected under Canadian Intense smoking conditions grouped by analyte.

Table 10 includes summary data by year (mean, minimum value, maximum value and number of replicates) for the reference cigarette, 3R4F, based on the data in Table 9.

For all cigarette brand styles tested, manufacture and purchase dates are included the data listings tables (Tables 1 and 4), along with the analysis completion date.

Manufacture dates are provided for RJRT and SFTNC products. Purchase dates are provided for all other products.

Tables 1, 4, 7 and 9 include data from all individual analysis replicates. Three replicate determinations were conducted for most analyses. Eight replicate determinations were conducted for nicotine. In some cases, ELL-PSS reanalyzed a sample for particular endpoints. If reanalysis occurred, additional replicates are reported. In cases in which analyses are completed on different days, replicate data are grouped by analysis completion date.

## APPENDIX A

### Cigarette Market Survey Data

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Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Camel Blue Hard Pack	25JUN2014	1	0.89	07AUG2014
		2	0.90	07AUG2014
		3	0.81	07AUG2014
		4	0.88	07AUG2014
		5	0.88	07AUG2014
		6	0.92	07AUG2014
		7	0.86	07AUG2014
		8	0.90	07AUG2014
	16JUL2015	1	0.93	08SEP2015
		2	0.91	08SEP2015
		3	0.88	08SEP2015
		5	0.90	09SEP2015
		6	0.92	09SEP2015
		7	0.85	09SEP2015
		8	0.86	09SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Camel Crush (crushed)	16JUN2014	1	0.92	07AUG2014
		2	0.93	07AUG2014
		3	0.97	07AUG2014
		4	1.00	07AUG2014
		5	0.85	06AUG2014
		6	0.95	06AUG2014
		7	0.98	06AUG2014
		8	0.95	06AUG2014
	17JUN2015	1	1.01	02SEP2015
		2	0.95	02SEP2015
		3	0.98	03SEP2015
		4	1.08	03SEP2015
		5	1.00	03SEP2015
		6	1.01	03SEP2015
		7	1.00	03SEP2015
		8	1.01	03SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Camel Crush (uncrushed)	16JUN2014	1	0.88	11AUG2014
		2	0.85	11AUG2014
		3	0.94	11AUG2014
		4	0.86	11AUG2014
		5	0.83	11AUG2014
		6	0.90	11AUG2014
		7	0.91	11AUG2014
		8	0.92	11AUG2014
	17JUN2015	1	0.97	08SEP2015
		2	1.01	08SEP2015
		3	0.85	08SEP2015
		4	0.96	08SEP2015
		5	0.98	09SEP2015
		6	0.98	09SEP2015
		7	0.93	09SEP2015
		8	0.87	09SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Camel Filters Hard Pack	24JUN2014	1	0.90	11AUG2014
		2	0.63	11AUG2014
		3	0.95	11AUG2014
		4	0.93	11AUG2014
		5	0.89	11AUG2014
		6	0.90	11AUG2014
		7	1.01	11AUG2014
		8	0.95	11AUG2014
	15JUN2015	1	1.05	22SEP2015
		2	1.10	22SEP2015
		3	1.06	22SEP2015
		4	1.11	22SEP2015
		5	1.06	22SEP2015
		6	1.02	22SEP2015
		7	1.03	22SEP2015
		8	1.03	22SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	0.81	07AUG2014
		2	0.81	07AUG2014
		3	0.86	07AUG2014
		4	0.78	07AUG2014
		5	0.88	06AUG2014
		6	0.83	06AUG2014
		7	0.84	06AUG2014
		8	0.89	06AUG2014
	10AUG2015	1	0.88	08SEP2015
		2	0.92	08SEP2015
		3	0.87	08SEP2015
		4	0.90	08SEP2015
		5	0.93	08SEP2015
		6	0.89	08SEP2015
		7	0.87	08SEP2015
		8	0.88	08SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	0.86	11AUG2014
		2	0.89	11AUG2014
		3	0.92	11AUG2014
		4	0.81	11AUG2014
		5	0.89	11AUG2014
		6	0.92	11AUG2014
		7	0.88	11AUG2014
		8	0.86	11AUG2014
	10AUG2015	1	0.84	02SEP2015
		2	0.83	02SEP2015
		3	0.91	03SEP2015
		4	0.89	03SEP2015
		5	0.80	03SEP2015
		6	0.87	03SEP2015
		7	0.82	03SEP2015
		8	0.74	03SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Kent Kings	01JUN2015	1	0.92	01OCT2015
		2	0.90	01OCT2015
		3	0.92	24SEP2015
		4	0.75	24SEP2015
		5	0.85	30SEP2015
		6	0.86	30SEP2015
		7	0.97	30SEP2015
		8	0.89	30SEP2015
Kool Box	02JUL2014	1	1.15	13AUG2014
		2	1.19	13AUG2014
		4	1.12	13AUG2014
		5	1.15	13AUG2014
		6	1.22	13AUG2014
		7	1.15	13AUG2014
		8	1.07	13AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Kool Box	15JUL2015	1	1.10	11SEP2015
		2	1.19	11SEP2015
		3	1.10	14SEP2015
		4	1.17	14SEP2015
		5	1.09	14SEP2015
		6	1.11	14SEP2015
		7	1.12	16SEP2015
		8	1.08	16SEP2015
L&M Blue Pack Box	06AUG2014	1	0.63	14AUG2014
		2	0.63	14AUG2014
		3	0.64	14AUG2014
		4	0.63	14AUG2014
		5	0.62	15AUG2014
		6	0.64	15AUG2014
		7	0.66	14AUG2014
		8	0.61	14AUG2014



Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
L&M Box	06AUG2014	1	0.81	18AUG2014
		2	0.73	18AUG2014
		3	0.82	18AUG2014
		4	0.81	18AUG2014
		5	0.80	19AUG2014
		6	0.69	19AUG2014
		7	0.75	18AUG2014
		8	0.84	18AUG2014
	31AUG2015	1	0.72	22SEP2015
		2	0.73	22SEP2015
		3	0.75	22SEP2015
		4	0.78	22SEP2015
		5	0.74	22SEP2015
		6	0.71	22SEP2015
		7	0.79	23SEP2015
		8	0.80	23SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
L&M Menthol 100's Box	06AUG2014	1	1.03	14AUG2014
		2	1.01	14AUG2014
		3	1.04	14AUG2014
		4	1.00	14AUG2014
		5	0.99	15AUG2014
		6	1.01	15AUG2014
		7	1.01	14AUG2014
		8	1.00	14AUG2014
Marlboro 100's Box	31AUG2015	1	1.05	01OCT2015
		2	1.06	01OCT2015
		3	1.10	24SEP2015
		4	1.04	24SEP2015
		5	1.03	30SEP2015
		6	1.01	30SEP2015
		7	1.09	30SEP2015
		8	1.05	30SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro 72s Blue Pack Box	06AUG2014	1	0.87	14AUG2014
		2	0.82	14AUG2014
		3	0.89	14AUG2014
		4	0.86	14AUG2014
		5	0.86	15AUG2014
		6	0.82	15AUG2014
		7	0.75	14AUG2014
		8	0.88	14AUG2014
Marlboro 72s Box	06AUG2014	1	0.91	15AUG2014
		2	0.87	15AUG2014
		3	0.95	15AUG2014
		4	0.93	15AUG2014
		5	0.92	15AUG2014
		6	0.87	15AUG2014
		7	0.88	15AUG2014
		8	0.90	15AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Blend No. 27 Box	06AUG2014	1	0.69	15AUG2014
		2	0.74	15AUG2014
		3	0.75	15AUG2014
		4	0.75	15AUG2014
		5	0.83	15AUG2014
		6	0.82	15AUG2014
		7	0.84	18AUG2014
		8	0.78	18AUG2014
Marlboro Box	06AUG2014	1	0.97	15AUG2014
		2	1.00	15AUG2014
		3	1.06	15AUG2014
		4	1.00	15AUG2014
		5	1.02	15AUG2014
		6	1.00	15AUG2014
		7	1.00	15AUG2014
		8	1.03	15AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Box	31AUG2015	1	0.95	22SEP2015
		2	1.02	22SEP2015
		3	0.96	22SEP2015
		4	0.97	22SEP2015
		5	0.91	22SEP2015
		6	0.88	22SEP2015
		7	0.95	22SEP2015
		8	0.94	22SEP2015
Marlboro Edge Box	31AUG2015	1	0.98	16SEP2015
		2	0.95	16SEP2015
		3	0.97	17SEP2015
		4	1.02	16SEP2015
		5	0.98	16SEP2015
		6	0.87	16SEP2015
		7	0.84	18SEP2015
		8	0.84	18SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Eighty Threes Box	31AUG2015	1	0.99	17SEP2015
		2	1.04	17SEP2015
		3	0.94	18SEP2015
		4	0.97	18SEP2015
		5	1.01	18SEP2015
		6	0.99	18SEP2015
		7	1.03	18SEP2015
		8	1.10	18SEP2015
Marlboro Gold Pack 100's Box	31AUG2015	1	0.79	01OCT2015
		2	0.76	01OCT2015
		3	0.72	24SEP2015
		4	0.75	24SEP2015
		5	0.69	30SEP2015
		6	0.70	30SEP2015
		7	0.79	30SEP2015
		8	0.74	30SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Gold Pack Box	06AUG2014	1	0.74	15AUG2014
		2	0.75	15AUG2014
		3	0.75	15AUG2014
		4	0.78	15AUG2014
		5	0.82	15AUG2014
		6	0.76	15AUG2014
		7	0.81	15AUG2014
		8	0.81	15AUG2014
	31AUG2015	1	0.75	01OCT2015
		2	0.77	01OCT2015
		3	0.73	24SEP2015
		4	0.75	24SEP2015
		5	0.68	30SEP2015
		6	0.68	30SEP2015
		7	0.79	30SEP2015
		8	0.75	30SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Menthol Box	06AUG2014	1	0.98	15AUG2014
		2	0.86	15AUG2014
		3	1.02	15AUG2014
		4	1.24	15AUG2014
		5	1.00	15AUG2014
		6	1.04	15AUG2014
		7	1.02	18AUG2014
	31AUG2015	8	0.93	18AUG2014
		1	1.04	30SEP2015
		2	1.03	30SEP2015
		3	0.98	30SEP2015
		4	0.98	30SEP2015
		5	0.98	01OCT2015
		6	0.99	01OCT2015
		7	1.06	01OCT2015
		8	0.96	01OCT2015



Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Menthol Gold Pack Box	31AUG2015	1	0.79	23SEP2015
		2	0.70	23SEP2015
		3	0.63	23SEP2015
		4	0.72	23SEP2015
		5	0.74	23SEP2015
		6	0.69	23SEP2015
		7	0.62	23SEP2015
		8	0.71	23SEP2015
Marlboro Menthol Silver Pack Box	06AUG2014	1	0.46	15AUG2014
		2	0.46	15AUG2014
		3	0.46	15AUG2014
		4	0.45	15AUG2014
		5	0.46	15AUG2014
		6	0.45	15AUG2014
		7	0.48	18AUG2014
		8	0.45	18AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	1.06	15AUG2014
		2	1.04	15AUG2014
		3	1.08	15AUG2014
		4	1.12	15AUG2014
		5	1.09	15AUG2014
		6	1.11	15AUG2014
		7	1.03	18AUG2014
		8	1.03	18AUG2014
	31AUG2015	1	1.11	01OCT2015
		2	1.16	01OCT2015
		3	1.12	24SEP2015
		4	1.10	24SEP2015
		5	1.00	30SEP2015
		6	1.10	30SEP2015
		7	1.08	30SEP2015
		8	1.07	30SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro NXT Box (crushed)	31AUG2015	1	0.72	24SEP2015
		2	0.73	24SEP2015
		3	0.74	24SEP2015
		4	0.78	24SEP2015
		5	0.71	24SEP2015
		6	0.77	24SEP2015
		7	0.76	24SEP2015
		8	0.74	24SEP2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	0.64	16SEP2015
		2	0.68	16SEP2015
		3	0.63	16SEP2015
		4	0.62	16SEP2015
		5	0.74	16SEP2015
		6	0.71	16SEP2015
		7	0.70	16SEP2015
		8	0.71	16SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Silver Pack 100's Box	06AUG2014	1	0.49	15AUG2014
		2	0.50	15AUG2014
		3	0.48	15AUG2014
		4	0.47	15AUG2014
		5	0.49	15AUG2014
		6	0.50	15AUG2014
		7	0.50	18AUG2014
	31AUG2015	8	0.46	18AUG2014
		1	0.49	22SEP2015
		2	0.46	22SEP2015
		3	0.43	22SEP2015
		4	0.47	22SEP2015
		5	0.45	22SEP2015
		6	0.44	22SEP2015
		7	0.44	22SEP2015
		8	0.46	22SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Silver Pack Box	06AUG2014	1	0.47	15AUG2014
		2	0.48	15AUG2014
		3	0.44	15AUG2014
		4	0.44	15AUG2014
		5	0.48	15AUG2014
		6	0.47	15AUG2014
		7	0.49	15AUG2014
		8	0.49	15AUG2014
	31AUG2015	1	0.44	16SEP2015
		2	0.43	16SEP2015
		3	0.47	16SEP2015
		4	0.38	16SEP2015
		5	0.48	16SEP2015
		6	0.45	16SEP2015
		7	0.46	16SEP2015
		8	0.48	16SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Special Blend (Black) Box	06AUG2014	1	0.97	15AUG2014
		2	0.89	15AUG2014
		3	1.01	15AUG2014
		4	0.93	15AUG2014
		5	0.94	15AUG2014
		6	0.88	15AUG2014
		7	0.98	18AUG2014
	31AUG2015	8	0.97	18AUG2014
		1	0.95	22SEP2015
		2	0.86	22SEP2015
		3	0.97	22SEP2015
		4	0.97	22SEP2015
		5	0.92	22SEP2015
		6	0.91	22SEP2015
		7	0.88	22SEP2015
		8	0.87	22SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Special Blend (Gold) Box	06AUG2014	1	0.70	15AUG2014
		2	0.73	15AUG2014
		3	0.78	15AUG2014
		4	0.73	15AUG2014
		5	0.71	15AUG2014
		6	0.77	15AUG2014
		7	0.79	15AUG2014
		8	0.78	15AUG2014
	31AUG2015	1	0.69	01OCT2015
		2	0.71	01OCT2015
		3	0.70	24SEP2015
		4	0.67	24SEP2015
		5	0.72	30SEP2015
		6	0.71	30SEP2015
		7	0.73	30SEP2015
		8	0.71	30SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Special Blend (Red) Box	31AUG2015	1	0.77	23SEP2015
		2	0.73	23SEP2015
		3	0.85	23SEP2015
		4	0.79	23SEP2015
		5	0.83	23SEP2015
		6	0.79	23SEP2015
		7	0.84	23SEP2015
		8	0.82	23SEP2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	0.95	15AUG2014
		2	1.01	15AUG2014
		3	1.01	15AUG2014
		4	1.00	15AUG2014
		5	0.99	15AUG2014
		6	1.02	15AUG2014
		7	1.04	15AUG2014
		8	0.79	15AUG2014



Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Special Blend 100's (Red) Box	31AUG2015	1	0.90	22SEP2015
		2	0.95	22SEP2015
		3	0.93	22SEP2015
		4	0.86	22SEP2015
		5	0.88	22SEP2015
		6	0.88	22SEP2015
		7	0.78	22SEP2015
		8	0.81	22SEP2015
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	0.84	01OCT2015
		2	0.75	01OCT2015
		3	0.82	24SEP2015
		4	0.80	24SEP2015
		5	0.75	30SEP2015
		6	0.73	30SEP2015
		7	0.79	30SEP2015
		8	0.77	30SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Maverick 100s Box	31AUG2015	1	0.99	01OCT2015
		2	1.04	01OCT2015
		3	1.05	24SEP2015
		4	0.98	24SEP2015
		5	0.91	30SEP2015
		6	0.91	30SEP2015
		7	0.98	30SEP2015
		8	0.96	30SEP2015
Maverick Gold 100s Box	06AUG2014	2	0.60	15AUG2014
		3	0.66	15AUG2014
		4	0.62	15AUG2014
		5	0.66	15AUG2014
		6	0.60	15AUG2014
		7	0.61	18AUG2014
		8	0.62	18AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Maverick Menthol 100 Box	06AUG2014	1	1.11	14AUG2014
		2	1.05	14AUG2014
		3	1.12	14AUG2014
		4	1.13	14AUG2014
		5	1.07	15AUG2014
		6	1.05	15AUG2014
		7	1.08	14AUG2014
		8	1.05	14AUG2014
	31AUG2015	1	1.13	30SEP2015
		2	1.17	30SEP2015
		3	1.11	30SEP2015
		4	1.08	30SEP2015
		5	1.14	01OCT2015
		6	1.15	01OCT2015
		7	1.17	01OCT2015
		8	1.11	01OCT2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Misty Blue 120's Box	24JUL2015	1	0.95	09SEP2015
		2	0.99	09SEP2015
		3	1.08	09SEP2015
		4	1.02	09SEP2015
		5	1.02	09SEP2015
		6	0.91	09SEP2015
		7	0.96	10SEP2015
		8	1.06	10SEP2015
Misty Menthol Green 120's Box	27JUN2014	1	0.78	13AUG2014
		2	0.76	13AUG2014
		3	0.77	13AUG2014
		4	0.80	13AUG2014
		5	0.77	13AUG2014
		6	0.75	13AUG2014
		7	0.70	13AUG2014
		8	0.74	13AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
More 120's Soft Pack	05JUN2014	1	0.86	11AUG2014
		2	0.86	11AUG2014
		3	0.96	11AUG2014
		4	0.92	11AUG2014
		5	0.94	11AUG2014
		6	0.91	11AUG2014
		7	1.00	11AUG2014
		8	0.86	11AUG2014
	10JUL2015	1	0.96	16SEP2015
		2	0.88	16SEP2015
		3	0.76	17SEP2015
		4	0.82	17SEP2015
		5	0.98	17SEP2015
		6	0.90	17SEP2015
		7	0.96	18SEP2015
		8	0.91	18SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Natural American Spirit Full-Bodied Taste	27JUN2014	1	1.93	15AUG2014
		2	1.94	15AUG2014
		3	1.87	15AUG2014
		4	1.97	15AUG2014
		5	1.98	15AUG2014
		6	1.98	15AUG2014
		7	1.96	15AUG2014
		8	1.96	15AUG2014
	05MAY2015	1	1.94	08SEP2015
		2	1.99	08SEP2015
		3	1.85	08SEP2015
		4	1.95	08SEP2015
		5	1.91	09SEP2015
		6	1.82	09SEP2015
		7	1.74	09SEP2015
		8	1.83	09SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	25JUN2014	1	1.74	15AUG2014
		2	1.83	15AUG2014
		3	1.89	15AUG2014
		4	1.81	15AUG2014
		5	1.99	15AUG2014
		6	1.91	15AUG2014
		7	1.68	15AUG2014
		8	1.99	15AUG2014
	07AUG2015	1	1.79	09SEP2015
		2	1.99	09SEP2015
		3	1.97	09SEP2015
		4	1.94	09SEP2015
		5	1.89	09SEP2015
		6	1.86	09SEP2015
		7	1.99	10SEP2015
		8	1.89	10SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	1.05	09SEP2015
		2	1.17	09SEP2015
		3	1.14	09SEP2015
		4	1.10	09SEP2015
		5	1.12	09SEP2015
		6	1.28	09SEP2015
		7	1.08	10SEP2015
		8	1.12	10SEP2015
Natural American Spirit Mellow Taste	06JUL2015	1	1.55	09SEP2015
		2	1.46	09SEP2015
		3	1.47	09SEP2015
		4	1.46	09SEP2015
		5	1.48	09SEP2015
		6	1.48	09SEP2015
		7	1.53	10SEP2015
		8	1.42	10SEP2015



Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	1.77	08SEP2015
		2	1.88	08SEP2015
		3	1.75	08SEP2015
		4	1.70	08SEP2015
		5	1.94	10SEP2015
		6	1.82	10SEP2015
		7	1.90	08SEP2015
		8	1.94	08SEP2015
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	1.56	15AUG2014
		2	1.62	15AUG2014
		3	1.61	15AUG2014
		4	1.61	15AUG2014
		5	1.57	15AUG2014
		6	1.53	15AUG2014
		7	1.52	15AUG2014
		8	1.59	15AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Natural American Spirit Perique Blend Rich Robust Taste	11AUG2015	1	2.06	22SEP2015
		2	2.10	22SEP2015
		3	2.16	22SEP2015
		4	2.10	22SEP2015
		5	2.07	22SEP2015
		6	2.11	22SEP2015
		7	2.26	23SEP2015
		8	2.15	23SEP2015
Newport Box	06AUG2014	1	0.88	14AUG2014
		2	0.91	14AUG2014
		3	0.97	14AUG2014
		4	0.92	14AUG2014
		5	0.87	15AUG2014
		6	0.86	15AUG2014
		7	0.99	14AUG2014
		8	0.90	14AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Newport Box	04AUG2015	1	0.98	30SEP2015
		2	0.85	30SEP2015
		3	0.87	30SEP2015
		4	0.97	30SEP2015
		5	0.93	01OCT2015
		6	0.95	01OCT2015
		7	0.93	01OCT2015
		8	0.88	01OCT2015
Newport Box 100s	06AUG2014	1	1.27	14AUG2014
		2	1.24	14AUG2014
		3	1.24	14AUG2014
		4	1.30	14AUG2014
		5	1.20	15AUG2014
		6	1.16	15AUG2014
		7	1.18	14AUG2014
		8	1.34	14AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Newport Box 100s	30JUL2015	1	1.16	30SEP2015
		2	1.23	30SEP2015
		3	1.01	30SEP2015
		4	1.16	30SEP2015
		5	1.17	01OCT2015
		6	1.17	01OCT2015
		7	1.16	01OCT2015
		8	1.19	01OCT2015
Newport Menthol Gold Box	25MAY2015	1	0.59	17SEP2015
		2	0.60	17SEP2015
		3	0.56	17SEP2015
		4	0.58	17SEP2015
		5	0.59	17SEP2015
		6	0.61	17SEP2015
		7	0.64	17SEP2015
		8	0.60	17SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Newport Non-Menthol Box	06AUG2014	1	1.00	14AUG2014
		2	0.98	14AUG2014
		3	0.96	14AUG2014
		4	1.00	14AUG2014
		5	0.90	15AUG2014
		6	0.94	15AUG2014
		7	0.98	14AUG2014
		8	0.95	14AUG2014
Now Soft Pack	23APR2014	1	0.14	07AUG2014
		2	0.13	07AUG2014
		3	0.16	07AUG2014
		4	0.15	07AUG2014
		5	0.16	07AUG2014
		6	0.15	07AUG2014
		7	0.15	07AUG2014
		8	0.14	07AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Now Soft Pack	15MAY2015	1	0.14	22SEP2015
		2	0.15	22SEP2015
		3	0.15	22SEP2015
		4	0.16	22SEP2015
		5	0.14	22SEP2015
		6	0.12	22SEP2015
		7	0.14	23SEP2015
		8	0.14	23SEP2015
Pall Mall Blue 100's Box	19JUN2014	1	0.89	11AUG2014
		2	0.83	11AUG2014
		3	0.86	11AUG2014
		4	1.00	11AUG2014
		5	0.89	11AUG2014
		6	0.87	11AUG2014
		7	0.94	11AUG2014
		8	0.96	11AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pall Mall Blue 100's Box	27JUL2015	1	0.81	09SEP2015
		2	0.86	09SEP2015
		3	0.89	09SEP2015
		4	0.86	09SEP2015
		5	0.80	09SEP2015
		6	0.88	09SEP2015
		7	0.81	10SEP2015
		8	0.84	10SEP2015
Pall Mall Menthol 100's Box	07JUL2015	1	0.98	22SEP2015
		2	0.99	22SEP2015
		3	1.01	22SEP2015
		4	0.98	22SEP2015
		5	0.87	22SEP2015
		6	0.91	22SEP2015
		7	0.97	22SEP2015
		8	0.99	22SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pall Mall Menthol White 100's Box	20JUN2014	1	0.64	11AUG2014
		2	0.53	11AUG2014
		3	0.66	12AUG2014
		4	0.58	12AUG2014
		5	0.55	11AUG2014
		6	0.57	11AUG2014
		7	0.64	11AUG2014
		8	0.60	11AUG2014
Pall Mall Orange Box	07JUL2014	1	0.41	11AUG2014
		2	0.36	11AUG2014
		3	0.41	11AUG2014
		4	0.42	12AUG2014
		5	0.37	11AUG2014
		6	0.42	11AUG2014
		7	0.44	11AUG2014
		8	0.38	11AUG2014



Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pall Mall Orange Box	15AUG2015	1	0.37	08SEP2015
		2	0.34	08SEP2015
		3	0.35	08SEP2015
		4	0.40	08SEP2015
		5	0.36	09SEP2015
		6	0.34	09SEP2015
		7	0.31	09SEP2015
		8	0.37	09SEP2015
Pall Mall Red 100's Box	01JUL2014	1	1.03	07AUG2014
		2	0.96	07AUG2014
		3	1.01	07AUG2014
		4	0.98	07AUG2014
		5	1.12	07AUG2014
		6	1.06	07AUG2014
		7	0.92	07AUG2014
		8	1.08	07AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pall Mall Red 100's Box	05AUG2015	1	1.17	08SEP2015
		2	1.15	08SEP2015
		3	1.19	08SEP2015
		4	1.17	08SEP2015
		5	1.16	09SEP2015
		6	1.17	09SEP2015
		7	1.11	09SEP2015
		8	1.12	09SEP2015
Pall Mall Red Box	03AUG2015	1	0.97	08SEP2015
		2	1.09	08SEP2015
		3	1.02	08SEP2015
		4	0.93	08SEP2015
		5	1.04	09SEP2015
		6	1.02	09SEP2015
		7	1.01	09SEP2015
		8	1.01	09SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Parliament (White Pack) Box	06AUG2014	1	0.63	14AUG2014
		2	0.60	14AUG2014
		3	0.69	14AUG2014
		4	0.61	14AUG2014
		5	0.64	15AUG2014
		6	0.60	15AUG2014
		7	0.60	14AUG2014
		8	0.61	14AUG2014
Pyramid Blue 100s Box	31AUG2015	1	0.73	16SEP2015
		2	0.74	16SEP2015
		3	0.74	16SEP2015
		4	0.70	16SEP2015
		5	0.69	16SEP2015
		6	0.71	16SEP2015
		7	0.67	18SEP2015
		8	0.68	18SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pyramid Menthol Silver 100s Box	06AUG2014	1	0.67	14AUG2014
		2	0.69	14AUG2014
		3	0.70	14AUG2014
		4	0.75	14AUG2014
		5	0.59	15AUG2014
		6	0.66	15AUG2014
		7	0.66	14AUG2014
		8	0.68	14AUG2014
	31AUG2015	1	0.75	16SEP2015
		2	0.69	16SEP2015
		4	0.74	16SEP2015
		5	0.69	16SEP2015
		6	0.68	16SEP2015
		7	0.63	18SEP2015
		8	0.67	18SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pyramid Orange 100s Box	06AUG2014	1	0.45	15AUG2014
		2	0.45	15AUG2014
		3	0.47	14AUG2014
		4	0.48	14AUG2014
		5	0.49	14AUG2014
		6	0.48	14AUG2014
		7	0.49	14AUG2014
		8	0.47	14AUG2014
Pyramid Red 100s Box	06AUG2014	1	0.77	15AUG2014
		2	0.78	15AUG2014
		3	0.88	15AUG2014
		4	0.80	15AUG2014
		5	0.83	15AUG2014
		6	0.81	15AUG2014
		7	0.81	18AUG2014
		8	0.83	18AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pyramid Red 100s Box	31AUG2015	1	0.91	22SEP2015
		2	0.96	22SEP2015
		3	0.96	22SEP2015
		4	0.98	22SEP2015
		5	0.79	22SEP2015
		6	0.79	22SEP2015
		7	0.83	22SEP2015
		8	0.85	22SEP2015
Pyramid Red Box	06AUG2014	1	0.76	15AUG2014
		2	0.72	15AUG2014
		3	0.85	15AUG2014
		4	0.77	15AUG2014
		5	0.77	15AUG2014
		6	0.81	15AUG2014
		7	0.71	18AUG2014
		8	0.69	18AUG2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Sonoma Red Box	06AUG2014	1	0.75	15AUG2014
		2	0.84	15AUG2014
		3	0.88	14AUG2014
		4	0.79	14AUG2014
		5	0.84	14AUG2014
		6	0.81	14AUG2014
		7	0.82	14AUG2014
		8	0.75	14AUG2014
	31AUG2015	1	0.92	15SEP2015
		2	0.97	15SEP2015
		3	1.00	15SEP2015
		4	0.93	15SEP2015
		5	0.95	15SEP2015
		6	0.88	15SEP2015
		7	1.02	14SEP2015
		8	0.95	14SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Tareyton Soft Pack	23APR2014	1	0.84	13AUG2014
		2	0.80	13AUG2014
		3	0.73	13AUG2014
		4	0.76	13AUG2014
		5	0.79	13AUG2014
		6	0.83	13AUG2014
		7	0.83	13AUG2014
		8	0.79	13AUG2014
True Kings	13MAY2015	1	0.42	01OCT2015
		2	0.39	01OCT2015
		3	0.39	24SEP2015
		4	0.35	24SEP2015
		5	0.41	30SEP2015
		6	0.38	30SEP2015
		7	0.36	30SEP2015
		8	0.35	30SEP2015



Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
USA Gold Red Box	06AUG2014	1	0.80	15AUG2014
		2	0.83	15AUG2014
		3	0.92	14AUG2014
		4	0.80	14AUG2014
		5	0.86	14AUG2014
		6	0.81	14AUG2014
		7	0.96	14AUG2014
		8	0.78	14AUG2014
	31AUG2015	2	0.93	16SEP2015
		3	0.94	16SEP2015
		4	1.04	16SEP2015
		5	0.96	16SEP2015
		6	0.93	16SEP2015
		7	0.90	18SEP2015
		8	0.84	18SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Winston Red Box	12JUN2014	1	1.03	13AUG2014
		2	1.10	13AUG2014
		3	1.11	13AUG2014
		4	1.14	13AUG2014
		5	1.13	13AUG2014
		6	1.13	13AUG2014
		7	1.13	13AUG2014
		8	1.16	13AUG2014
	10JUL2015	1	1.11	11SEP2015
		2	1.13	11SEP2015
		3	1.11	14SEP2015
		4	1.06	14SEP2015
		5	1.11	14SEP2015
		6	1.05	14SEP2015
		7	1.06	16SEP2015
		8	1.10	16SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	
Camel Blue Hard Pack	25JUN2014	1	613.5	11.9	20.9	15AUG2014
		2	644.7	12.3	21.5	15AUG2014
		3	622.6	11.8	21.2	15AUG2014
	16JUL2015	1	688.6	14.1	19.7	10SEP2015
		2	682.6	13.9	19.6	10SEP2015
		3	643.1	12.0	17.8	10SEP2015
Camel Crush (crushed)	16JUN2014	1	621.1	11.0	24.6	15AUG2014
		2	582.0	10.6	21.6	15AUG2014
		3	560.4	9.8	22.3	15AUG2014
	17JUN2015	1	606.1	10.2	21.1	15SEP2015
		2	607.2	10.3	21.2	15SEP2015
		3	605.3	10.3	21.1	15SEP2015
Camel Crush (uncrushed)	16JUN2014	1	520.6	9.4	22.0	15AUG2014
		2	527.1	9.1	21.1	15AUG2014
		3	569.5	9.6	21.2	15AUG2014

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	
Camel Crush (uncrushed)	17JUN2015	1	623.1	11.5	19.4	15SEP2015
		2	624.5	11.6	19.6	15SEP2015
		3	580.6	10.6	17.8	15SEP2015
Camel Filters Hard Pack	24JUN2014	1	687.9	16.5	31.8	14AUG2014
		2	710.2	16.5	33.2	14AUG2014
		3	691.2	16.1	31.0	14AUG2014
	15JUN2015	1	684.0	16.8	28.0	14SEP2015
		2	702.6	16.9	26.7	14SEP2015
		3	702.4	17.2	26.5	14SEP2015
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	527.0	9.3	23.1	15AUG2014
		2	491.1	8.8	18.4	15AUG2014
		3	458.6	7.3	18.8	15AUG2014
	10AUG2015	1	525.1	9.1	18.5	10SEP2015
		2	525.1	9.1	18.5	10SEP2015
		3	505.7	8.2	13.0	10SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	534.0	8.9	21.6	14AUG2014
		2	576.1	9.8	22.3	14AUG2014
		3	585.0	9.7	25.2	14AUG2014
	10AUG2015	1	581.6	10.9	16.8	10SEP2015
		2	581.8	10.9	16.8	10SEP2015
		3	532.9	10.1	15.8	10SEP2015
Kent Kings	01JUN2015	1	678.4	12.5	17.3	24SEP2015
		2	676.6	12.5	17.4	24SEP2015
		3	678.9	12.6	17.5	24SEP2015
Kool Box	02JUL2014	1	650.9	13.9	26.0	14AUG2014
		2	715.6	16.6	30.7	14AUG2014
		3	663.7	13.9	20.2	14AUG2014
	15JUL2015	1	712.9	15.8	20.4	10SEP2015
		2	717.6	15.8	20.5	10SEP2015
		3	674.1	14.7	22.1	10SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	Completed Analysis Date
L&M Blue Pack Box	06AUG2014	1	537.5	11.9	19.4	26AUG2014
		2	541.0	11.6	22.4	26AUG2014
		3	532.5	12.8	20.9	26AUG2014
L&M Box	06AUG2014	1	676.2	17.0	32.3	25AUG2014
		2	730.3	17.9	29.7	25AUG2014
		3	711.6	18.3	30.0	25AUG2014
	31AUG2015	1	730.2	17.7	28.8	18SEP2015
		2	730.6	17.7	28.6	18SEP2015
		3	720.1	16.9	23.4	18SEP2015
L&M Menthol 100's Box	06AUG2014	1	806.2	17.8	42.5	26AUG2014
		2	797.7	17.7	38.7	26AUG2014
		3	775.4	18.4	41.1	26AUG2014
Marlboro 100's Box	31AUG2015	1	740.9	16.0	29.9	23SEP2015
		2	743.7	16.0	30.0	23SEP2015
		3	741.1	16.1	29.5	23SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	
Marlboro 72s Blue Pack Box	06AUG2014	1	652.1	15.7	39.0	26AUG2014
		2	658.5	15.8	35.8	26AUG2014
		3	652.1	15.6	34.9	26AUG2014
Marlboro 72s Box	06AUG2014	1	599.2	14.8	28.6	27AUG2014
		2	666.9	17.2	30.2	27AUG2014
		3	643.3	16.9	29.4	27AUG2014
Marlboro Blend No. 27 Box	06AUG2014	1	663.2	15.4	36.1	25AUG2014
		2	611.1	14.3	33.3	25AUG2014
		3	628.5	14.1	35.6	25AUG2014
Marlboro Box	06AUG2014	1	663.2	15.7	26.9	26AUG2014
		2	678.3	16.3	27.5	26AUG2014
		3	694.0	16.4	26.9	26AUG2014
	31AUG2015	1	714.8	18.0	33.3	18SEP2015
		2	716.4	18.0	33.5	18SEP2015
		3	714.7	18.0	33.3	18SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	Completed Analysis Date
Marlboro Edge Box	31AUG2015	1	698.6	15.0	38.8	10SEP2015
		2	701.2	15.1	39.0	10SEP2015
		3	753.4	17.5	36.4	10SEP2015
Marlboro Eighty Threes Box	31AUG2015	1	660.9	15.4	23.7	16SEP2015
		2	660.0	15.3	23.8	16SEP2015
		3	664.5	15.1	24.7	16SEP2015
Marlboro Gold Pack 100's Box	31AUG2015	1	623.1	11.3	17.5	21SEP2015
		2	563.0	9.3	14.7	21SEP2015
		3	610.1	11.0	16.0	21SEP2015
Marlboro Gold Pack Box	06AUG2014	1	588.2	11.2	21.5	26AUG2014
		2	543.5	10.6	20.7	26AUG2014
		3	534.7	9.7	19.5	26AUG2014
	31AUG2015	1	615.8	11.7	23.8	24SEP2015
		2	597.7	11.1	21.5	24SEP2015
		3	627.1	12.2	24.4	24SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	Completed Analysis Date
Marlboro Menthol Box	06AUG2014	1	706.1	16.7	44.2	26AUG2014
		2	757.7	17.6	41.8	26AUG2014
		3	715.0	16.6	41.1	26AUG2014
	31AUG2015	1	688.4	14.4	34.5	29SEP2015
		2	695.4	14.5	34.8	29SEP2015
		3	730.1	15.2	38.7	29SEP2015
Marlboro Menthol Gold Pack Box	31AUG2015	1	469.7	7.9	20.8	16SEP2015
		2	496.7	8.8	22.0	16SEP2015
		3	510.4	9.0	22.4	16SEP2015
Marlboro Menthol Silver Pack Box	06AUG2014	1	364.1	7.3	10.5	25AUG2014
		2	385.6	7.8	10.5	25AUG2014
		3	362.2	7.1	9.6	25AUG2014
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	831.3	18.3	30.4	25AUG2014
		2	840.9	19.1	30.9	25AUG2014
		3	815.1	17.6	28.1	25AUG2014

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	
Marlboro Menthol Special Blend 100's (Black) Box	31AUG2015	1	787.2	15.3	34.7	29SEP2015
		2	784.6	15.4	34.9	29SEP2015
		3	816.0	16.8	35.3	29SEP2015
Marlboro NXT Box (crushed)	31AUG2015	1	435.8	6.4	14.5	29SEP2015
		2	457.7	7.3	19.6	29SEP2015
		3	457.5	7.2	19.7	29SEP2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	403.0	8.1	14.9	16SEP2015
		2	403.2	8.1	14.8	16SEP2015
		3	389.0	7.9	14.8	16SEP2015
Marlboro Silver Pack 100's Box	06AUG2014	1	334.1	5.7	7.4	25AUG2014
		2	391.3	6.7	8.4	25AUG2014
		3	390.6	6.8	8.0	25AUG2014
	31AUG2015	1	343.2	4.2	6.4	23SEP2015
		2	317.6	4.0	6.7	23SEP2015
		3	325.3	4.1	6.8	23SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	Completed Analysis Date
Marlboro Silver Pack Box	06AUG2014	1	327.6	6.8	8.4	27AUG2014
		2	361.4	7.2	9.3	27AUG2014
		3	344.2	7.0	9.0	27AUG2014
	31AUG2015	1	367.6	5.2	8.4	16SEP2015
		2	320.9	4.3	7.8	16SEP2015
		3	366.5	5.2	8.3	16SEP2015
Marlboro Special Blend (Black) Box	06AUG2014	1	684.0	16.7	28.9	25AUG2014
		2	678.4	16.5	31.0	25AUG2014
		3	635.3	14.7	30.8	25AUG2014
	31AUG2015	1	762.1	18.2	35.3	18SEP2015
		2	722.0	17.3	31.6	18SEP2015
		3	760.6	18.2	35.4	18SEP2015
Marlboro Special Blend (Gold) Box	06AUG2014	1	520.5	10.2	18.3	26AUG2014
		2	511.2	9.4	16.0	26AUG2014
		3	533.6	10.5	20.8	26AUG2014

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	
Marlboro Special Blend (Gold) Box	31AUG2015	1	506.3	9.5	16.0	18SEP2015
		2	516.4	9.9	16.4	18SEP2015
		3	496.5	8.8	15.3	18SEP2015
Marlboro Special Blend (Red) Box	31AUG2015	1	610.2	13.2	21.4	21SEP2015
		2	600.8	13.3	20.3	21SEP2015
		3	611.1	13.3	21.5	21SEP2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	642.3	14.3	22.6	27AUG2014
		2	632.9	15.2	22.9	27AUG2014
		3	682.9	15.9	24.7	27AUG2014
	31AUG2015	1	691.2	14.5	19.4	18SEP2015
		2	689.7	14.4	19.4	18SEP2015
		3	688.9	14.5	19.5	18SEP2015
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	529.9	7.7	13.0	24SEP2015
		2	565.6	9.1	14.7	24SEP2015
		3	565.9	9.2	14.8	24SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	Completed Analysis Date
Maverick 100s Box	31AUG2015	1	808.6	14.6	23.5	24SEP2015
		2	782.7	14.5	23.9	24SEP2015
		3	772.2	14.6	21.0	24SEP2015
Maverick Gold 100s Box	06AUG2014	1	509.3	7.4	14.4	26AUG2014
		2	490.0	6.5	11.9	26AUG2014
		3	521.7	7.2	13.1	26AUG2014
Maverick Menthol 100 Box	06AUG2014	1	832.3	18.1	30.8	29AUG2014
		2	816.6	18.0	32.3	29AUG2014
		3	790.9	17.1	31.3	29AUG2014
	31AUG2015	1	904.0	16.4	29.9	24SEP2015
		2	857.5	15.5	28.9	24SEP2015
		3	854.8	15.6	28.9	24SEP2015
Misty Blue 120's Box	24JUL2015	1	546.4	9.0	15.2	10SEP2015
		2	520.1	8.5	12.9	10SEP2015
		3	522.5	8.6	12.9	10SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	
Misty Menthol Green 120's Box	27JUN2014	1	505.4	10.4	15.9	15AUG2014
		2	453.3	9.0	14.5	15AUG2014
		3	474.4	9.2	12.4	15AUG2014
More 120's Soft Pack	05JUN2014	1	573.7	10.3	13.4	14AUG2014
		2	685.7	13.0	17.0	14AUG2014
		3	650.1	11.8	17.9	14AUG2014
	10JUL2015	1	739.8	15.1	18.8	14SEP2015
		2	739.6	15.1	18.7	14SEP2015
		3	736.1	14.9	18.7	14SEP2015
Natural American Spirit Full- Bodied Taste	27JUN2014	1	707.4	18.6	41.0	27AUG2014
		2	678.1	17.4	37.7	27AUG2014
		3	672.7	17.6	36.3	27AUG2014
	05MAY2015	1	722.5	21.0	48.9	11SEP2015
		2	693.4	20.2	43.6	11SEP2015
		3	750.3	21.8	49.3	11SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	
Natural American Spirit Made With Organic Tobacco Full- Bodied Taste	25JUN2014	1	646.4	16.3	24.5	27AUG2014
		2	615.7	15.9	23.5	27AUG2014
		3	568.0	14.4	23.0	27AUG2014
	07AUG2015	1	609.4	15.2	21.6	11SEP2015
		2	609.4	15.3	21.6	11SEP2015
		3	608.3	15.2	21.6	11SEP2015
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	421.3	9.6	11.1	11SEP2015
		2	436.5	9.9	11.5	11SEP2015
		3	450.8	10.2	12.5	11SEP2015
Natural American Spirit Mellow Taste	06JUL2015	1	597.4	15.4	28.0	11SEP2015
		2	594.6	15.6	26.5	11SEP2015
		3	593.4	15.6	26.4	11SEP2015
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	460.4	9.8	16.4	11SEP2015
		2	457.1	9.7	16.3	11SEP2015
		3	587.8	14.2	22.4	11SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	657.1	16.3	32.5	15AUG2014
		2	686.5	16.8	33.7	15AUG2014
		3	674.2	16.4	32.9	15AUG2014
	11AUG2015	1	740.8	20.5	39.6	11SEP2015
		2	694.7	18.1	29.5	11SEP2015
		3	709.5	18.5	28.4	11SEP2015
Newport Box	06AUG2014	1	874.9	19.9	37.9	29AUG2014
		2	791.8	18.4	37.6	29AUG2014
		3	939.9	22.1	38.7	29AUG2014
	04AUG2015	1	841.8	16.9	34.2	29SEP2015
		2	931.6	18.7	37.8	29SEP2015
		3	902.7	18.1	35.4	29SEP2015
Newport Box 100s	06AUG2014	1	690.7	14.6	28.8	27AUG2014
		2	723.4	14.8	27.2	27AUG2014
		3	737.7	15.4	32.6	27AUG2014

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	Completed Analysis Date
Newport Box 100s	30JUL2015	1	827.7	16.6	27.2	23SEP2015
		2	823.3	16.6	27.2	23SEP2015
		3	827.3	16.5	27.4	23SEP2015
Newport Menthol Gold Box	25MAY2015	1	493.7	7.2	10.1	15SEP2015
		2	488.2	7.6	10.7	15SEP2015
		3	472.5	7.3	10.8	15SEP2015
Newport Non-Menthol Box	06AUG2014	1	832.3	19.5	39.5	29AUG2014
		2	908.1	21.6	40.7	29AUG2014
		3	798.1	18.2	35.5	29AUG2014
Now Soft Pack	23APR2014	1	131.3	3.3	2.3	15AUG2014
		2	138.0	3.4	2.2	15AUG2014
		3	140.9	2.9	2.3	15AUG2014
	15MAY2015	1	86.7	1.6*	1.5	14SEP2015
		2	86.6	1.6*	1.6	14SEP2015
		3	68.6	1.6*	1.4*	14SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	
Pall Mall Blue 100's Box	19JUN2014	1	549.0	10.9	19.2	15AUG2014
		2	563.7	10.5	18.1	15AUG2014
		3	551.8	9.9	16.3	15AUG2014
	27JUL2015	1	416.7	5.8	9.5	14SEP2015
		2	418.0	5.9	9.4	14SEP2015
		3	531.3	9.0	13.5	14SEP2015
		4	570.1	9.5	14.0	16SEP2015
		5	562.0	9.4	14.3	16SEP2015
		6	536.4	9.0	13.1	16SEP2015
Pall Mall Menthol 100's Box	07JUL2015	1	605.9	11.2	19.8	14SEP2015
		2	578.8	10.5	18.1	14SEP2015
		3	597.8	10.7	18.8	14SEP2015
Pall Mall Menthol White 100's Box	20JUN2014	1	515.4	8.8	12.9	15AUG2014
		2	518.8	9.2	13.2	15AUG2014
		3	480.1	8.5	11.1	15AUG2014

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	Completed Analysis Date
Pall Mall Orange Box	07JUL2014	1	375.2	6.7	10.0	14AUG2014
		2	329.3	5.3	7.4	14AUG2014
		3	368.8	6.2	9.3	14AUG2014
	15AUG2015	1	353.6	5.1	6.8	10SEP2015
		2	352.7	5.1	6.7	10SEP2015
		3	335.4	4.5	6.1	10SEP2015
Pall Mall Red 100's Box	01JUL2014	1	639.1	13.4	23.1	15AUG2014
		2	719.7	15.9	29.0	15AUG2014
		3	635.7	13.2	20.1	15AUG2014
	05AUG2015	1	765.7	16.0	24.0	10SEP2015
		2	708.5	14.1	20.2	10SEP2015
		3	748.8	14.4	24.2	10SEP2015
Pall Mall Red Box	03AUG2015	1	594.8	12.9	19.6	14SEP2015
		2	588.5	13.5	21.1	14SEP2015
		3	593.8	12.9	19.6	14SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	Completed Analysis Date
Parliament (White Pack) Box	06AUG2014	1	524.8	12.3	16.3	26AUG2014
		2	549.1	13.3	18.5	26AUG2014
		3	528.2	12.3	16.2	26AUG2014
Pyramid Blue 100s Box	31AUG2015	1	585.7	11.5	17.3	15SEP2015
		2	613.1	12.6	18.3	15SEP2015
		3	577.9	11.4	17.1	15SEP2015
Pyramid Menthol Silver 100s Box	06AUG2014	1	555.9	11.7	17.8	26AUG2014
		2	619.1	13.9	22.7	26AUG2014
		3	533.2	11.5	18.7	26AUG2014
	31AUG2015	1	599.3	11.7	18.8	16SEP2015
		2	598.5	11.6	18.7	16SEP2015
		3	623.0	11.6	17.6	16SEP2015
Pyramid Orange 100s Box	06AUG2014	1	395.1	8.1	8.3	29AUG2014
		2	368.3	7.5	6.8	29AUG2014
		3	416.8	8.1	8.3	29AUG2014

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	Completed Analysis Date
Pyramid Red 100s Box	06AUG2014	1	817.9	17.0	39.9	26AUG2014
		2	879.6	19.3	44.6	26AUG2014
		3	881.5	18.6	37.2	26AUG2014
	31AUG2015	1	865.2	21.3	41.7	18SEP2015
		2	819.7	19.7	38.9	18SEP2015
		3	837.7	19.9	41.5	18SEP2015
Pyramid Red Box	06AUG2014	1	773.1	19.8	40.4	29AUG2014
		2	668.4	16.7	36.3	29AUG2014
		3	717.7	18.0	38.2	29AUG2014
Sonoma Red Box	06AUG2014	1	611.5	14.7	28.2	29AUG2014
		2	654.5	16.4	34.7	29AUG2014
		3	677.6	17.7	37.5	29AUG2014
	31AUG2015	1	688.1	17.8	40.9	15SEP2015
		2	693.3	17.5	37.0	15SEP2015
		3	692.2	17.5	37.0	15SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	
Tareyton Soft Pack	23APR2014	1	607.2	9.7	34.3	15AUG2014
		2	641.8	10.8	34.9	15AUG2014
		3	616.8	10.7	31.5	15AUG2014
True Kings	13MAY2015	1	278.2	3.4	4.6	24SEP2015
		2	229.4	2.7	3.7	24SEP2015
		3	279.6	3.7	4.6	24SEP2015
USA Gold Red Box	06AUG2014	1	641.4	16.6	38.2	26AUG2014
		2	648.1	16.2	37.7	26AUG2014
		3	628.4	15.9	39.6	26AUG2014
	31AUG2015	1	658.4	16.2	36.4	15SEP2015
		2	648.4	16.2	35.8	15SEP2015
		3	707.6	17.8	44.8	15SEP2015
Winston Red Box	12JUN2014	1	713.6	16.8	29.2	15AUG2014
		2	764.5	17.8	30.2	15AUG2014
		3	805.2	19.2	33.1	15AUG2014

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (µg/cig)	Crotonaldehyde (µg/cig)	Formaldehyde (µg/cig)	Completed Analysis Date
Winston Red Box	10JUL2015	1	812.0	20.2	30.8	10SEP2015
		2	825.2	20.8	35.4	10SEP2015
		3	808.5	20.3	32.0	10SEP2015

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Camel Blue Hard Pack	25JUN2014	1	2.95	42.7	15AUG2014
		2	2.99	43.5	15AUG2014
		3	2.87	42.0	15AUG2014
	16JUL2015	1	2.78	42.9	23SEP2015
		2	2.52	38.7	23SEP2015
		3	2.61	40.4	23SEP2015
Camel Crush (crushed)	16JUN2014	1	3.07	35.6	16AUG2014
		2	3.02	37.3	16AUG2014
		3	3.31	38.2	16AUG2014
	17JUN2015	1	3.00	35.3	18SEP2015
		2	2.95	36.9	18SEP2015
		3	2.98	35.8	18SEP2015
Camel Crush (uncrushed)	16JUN2014	1	3.05	41.4	16AUG2014
		2	2.71	37.4	16AUG2014
		3	2.93	37.4	16AUG2014
	17JUN2015	1	2.89	39.7	17SEP2015
		2	2.94	39.4	17SEP2015
		3	3.00	38.2	17SEP2015

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Camel Filters Hard Pack	24JUN2014	1	4.39	60.2	16AUG2014
		2	3.93	56.8	16AUG2014
		3	4.27	66.4	16AUG2014
	15JUN2015	1	4.11	54.6	18SEP2015
		2	3.97	48.8	18SEP2015
		3	3.85	50.4	18SEP2015
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	3.00	32.0	16AUG2014
		2	2.91	31.4	16AUG2014
		3	3.02	32.2	16AUG2014
	10AUG2015	1	3.01	36.2	18SEP2015
		2	2.96	36.7	18SEP2015
		3	2.71	32.5	18SEP2015
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	2.87	36.5	16AUG2014
		2	2.87	38.4	16AUG2014
		3	2.84	36.2	16AUG2014
	10AUG2015	1	2.83	38.1	18SEP2015
		2	2.71	37.1	18SEP2015
		3	2.41	33.3	18SEP2015

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Kent Kings	01JUN2015	1	3.07	43.6	01OCT2015
		2	3.56	43.7	01OCT2015
		3	3.17	43.9	01OCT2015
Kool Box	02JUL2014	1	3.64	46.4	15AUG2014
		2	3.73	49.3	15AUG2014
		3	3.67	46.5	15AUG2014
	15JUL2015	1	3.85	52.6	01OCT2015
		2	3.62	49.5	01OCT2015
		3	3.94	48.7	01OCT2015
L&M Blue Pack Box	06AUG2014	1	2.29	37.6	02SEP2014
		2	2.28	40.5	02SEP2014
		3	2.63	39.8	02SEP2014
L&M Box	06AUG2014	1	2.83	40.4	02SEP2014
		2	3.02	39.2	02SEP2014
		3	3.12	37.1	02SEP2014
	31AUG2015	1	2.53	30.7	01OCT2015
		2	2.54	31.1	01OCT2015
		3	2.45	31.3	01OCT2015

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
L&M Menthol 100's Box	06AUG2014	1	4.02	59.4	02SEP2014
		2	4.01	58.7	02SEP2014
		3	3.73	60.4	02SEP2014
Marlboro 100's Box	31AUG2015	1	5.32	55.5	01OCT2015
		2	4.90	54.6	01OCT2015
		3	5.09	54.7	01OCT2015
Marlboro 72s Blue Pack Box	06AUG2014	1	3.24	47.3	02SEP2014
		2	3.23	44.9	02SEP2014
		3	3.28	48.1	02SEP2014
Marlboro 72s Box	06AUG2014	1	3.91	48.8	20AUG2014
		2	3.93	46.3	20AUG2014
		3	3.70	45.1	20AUG2014
Marlboro Blend No. 27 Box	06AUG2014	1	3.52	N/A	21AUG2014
		2	3.90	N/A	21AUG2014
		3	3.76	N/A	21AUG2014
		1	N/A	46.0	08SEP2014
		2	N/A	43.7	08SEP2014
		3	N/A	45.7	08SEP2014

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Marlboro Box	06AUG2014	1	4.07	53.5	20AUG2014
		2	4.35	56.4	20AUG2014
		3	4.12	54.3	20AUG2014
	31AUG2015	1	4.49	52.0	01OCT2015
		2	4.51	50.6	01OCT2015
		3	4.60	51.5	01OCT2015
Marlboro Edge Box	31AUG2015	1	3.22	39.2	16DEC2015
		2	3.20	40.5	16DEC2015
		3	3.15	40.7	16DEC2015
Marlboro Eighty Threes Box	31AUG2015	1	4.43	52.2	16DEC2015
		2	4.76	53.7	16DEC2015
		3	4.38	55.0	16DEC2015
Marlboro Gold Pack 100's Box	31AUG2015	1	3.06	36.0	01OCT2015
		2	3.01	34.7	01OCT2015
		3	3.21	35.5	01OCT2015
Marlboro Gold Pack Box	06AUG2014	1	3.35	47.3	20AUG2014
		2	3.14	47.4	20AUG2014
		3	3.27	45.8	20AUG2014

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Marlboro Gold Pack Box	31AUG2015	1	3.40	42.4	01OCT2015
		2	3.28	40.4	01OCT2015
		3	3.01	39.4	01OCT2015
Marlboro Menthol Box	06AUG2014	1	3.88	59.4	21AUG2014
		2	4.28	58.0	21AUG2014
		3	4.18	61.6	21AUG2014
	31AUG2015	1	3.92	51.3	13OCT2015
		2	3.91	52.7	13OCT2015
		3	3.96	52.8	13OCT2015
Marlboro Menthol Gold Pack Box	31AUG2015	1	2.41	32.2	01OCT2015
		2	2.30	29.8	01OCT2015
		3	2.18	29.7	01OCT2015
Marlboro Menthol Silver Pack Box	06AUG2014	1	1.79	N/A	21AUG2014
		2	1.70	N/A	21AUG2014
		3	1.65	N/A	21AUG2014
		1	N/A	22.8	08SEP2014
		2	N/A	22.5	08SEP2014
		3	N/A	24.0	08SEP2014

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	5.14	N/A	21AUG2014
		2	5.23	N/A	21AUG2014
		3	5.45	N/A	21AUG2014
		1	N/A	71.3	08SEP2014
		2	N/A	71.4	08SEP2014
		3	N/A	72.4	08SEP2014
	31AUG2015	1	4.85	59.6	14DEC2015
		2	5.16	63.1	14DEC2015
		3	4.95	60.0	16DEC2015
Marlboro NXT Box (crushed)	31AUG2015	1	2.29	28.2	13OCT2015
		2	2.03	26.2	13OCT2015
		3	2.15	25.9	13OCT2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	1.85	25.2	13OCT2015
		2	1.74	23.3	13OCT2015
		3	1.85	25.1	13OCT2015

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Marlboro Silver Pack 100's Box	06AUG2014	1	1.47	19.7	21AUG2014
		2	1.50	21.1	21AUG2014
		3	1.44	19.1	21AUG2014
	31AUG2015	1	1.39	N/A	09OCT2015
		2	1.38	N/A	09OCT2015
		3	1.27	N/A	09OCT2015
		1	N/A	17.7	09DEC2015
		2	N/A	16.9	09DEC2015
		3	N/A	15.8	09DEC2015
Marlboro Silver Pack Box	06AUG2014	1	1.44	21.6	20AUG2014
		2	1.41	20.2	20AUG2014
		3	1.44	21.9	20AUG2014
	31AUG2015	1	1.63	20.8	01OCT2015
		2	1.61	20.2	01OCT2015
		3	1.50	19.2	01OCT2015
Marlboro Special Blend (Black) Box	06AUG2014	1	4.66	60.7	21AUG2014
		2	5.15	65.8	21AUG2014
		3	4.53	61.4	21AUG2014

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Marlboro Special Blend (Black) Box	31AUG2015	1	4.42	55.4	13OCT2015
		2	4.40	55.0	13OCT2015
		3	4.56	55.6	13OCT2015
Marlboro Special Blend (Gold) Box	06AUG2014	1	2.84	42.2	20AUG2014
		2	2.77	41.8	20AUG2014
		3	2.94	43.1	20AUG2014
	31AUG2015	1	2.60	32.9	14DEC2015
		2	2.76	34.1	14DEC2015
		3	2.60	33.1	14DEC2015
Marlboro Special Blend (Red) Box	31AUG2015	1	3.43	43.0	01OCT2015
		2	3.44	41.2	01OCT2015
		3	3.63	41.8	01OCT2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	3.64	54.0	20AUG2014
		2	3.50	50.6	20AUG2014
		3	3.92	54.7	20AUG2014
	31AUG2015	1	3.20	N/A	09OCT2015
		2	3.39	N/A	09OCT2015
		3	3.24	N/A	09OCT2015

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Marlboro Special Blend 100's (Red) Box	31AUG2015	1	N/A	40.4	09DEC2015
		2	N/A	39.9	09DEC2015
		3	N/A	40.6	09DEC2015
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	2.62	N/A	09OCT2015
		2	2.98	N/A	09OCT2015
		3	2.79	N/A	09OCT2015
		1	N/A	35.8	09DEC2015
		2	N/A	36.4	09DEC2015
		3	N/A	36.7	09DEC2015
Maverick 100s Box	31AUG2015	1	4.77	45.9	01OCT2015
		2	4.40	42.7	01OCT2015
		3	4.66	45.0	01OCT2015
Maverick Gold 100s Box	06AUG2014	1	2.44	N/A	21AUG2014
		2	2.47	N/A	21AUG2014
		3	2.54	N/A	21AUG2014
		1	N/A	22.4	08SEP2014
		2	N/A	21.4	08SEP2014
		3	N/A	21.2	08SEP2014

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Maverick Menthol 100 Box	06AUG2014	1	4.23	49.7	02SEP2014
		2	4.16	49.6	02SEP2014
		3	4.20	49.8	02SEP2014
	31AUG2015	1	4.76	51.6	01OCT2015
		2	4.53	51.4	01OCT2015
		3	4.68	51.0	01OCT2015
Misty Blue 120's Box	24JUL2015	1	2.66	28.2	23SEP2015
		2	2.86	28.9	23SEP2015
		3	2.51	26.9	23SEP2015
Misty Menthol Green 120's Box	27JUN2014	1	2.45	22.1	15AUG2014
		2	2.62	26.3	15AUG2014
		3	2.76	25.4	15AUG2014
More 120's Soft Pack	05JUN2014	1	6.51	34.5	15AUG2014
		2	5.90	33.2	15AUG2014
		3	6.14	33.2	15AUG2014
	10JUL2015	1	4.15	42.7	23SEP2015
		2	4.04	43.7	23SEP2015
		3	4.06	41.4	23SEP2015

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Natural American Spirit Full-Bodied Taste	27JUN2014	1	4.36	73.5	20AUG2014
		2	4.57	72.5	20AUG2014
		3	4.32	66.7	20AUG2014
	05MAY2015	1	4.62	76.6	18SEP2015
		2	4.08	67.8	18SEP2015
		3	4.75	80.0	18SEP2015
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	25JUN2014	1	1.91	51.2	20AUG2014
		2	2.00	54.1	20AUG2014
		3	1.87	54.4	20AUG2014
	07AUG2015	1	1.77	52.9	18SEP2015
		2	1.89	55.3	18SEP2015
		3	1.98	55.6	18SEP2015
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	1.12	29.4	18SEP2015
		2	1.15	30.2	18SEP2015
		3	1.12	29.9	18SEP2015
Natural American Spirit Mellow Taste	06JUL2015	1	3.26	53.8	18SEP2015
		2	3.40	57.8	18SEP2015
		3	3.22	51.9	18SEP2015

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	2.35	46.7	18SEP2015
		2	2.44	48.3	18SEP2015
		3	2.36	49.4	18SEP2015
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	4.56	95.3	21AUG2014
		2	4.27	96.0	21AUG2014
		3	4.24	90.2	21AUG2014
	11AUG2015	1	5.63	120.0	18SEP2015
		2	5.38	112.0	18SEP2015
		3	5.50	117.2	18SEP2015
Newport Box	06AUG2014	1	3.19	60.5	02SEP2014
		2	2.92	57.4	02SEP2014
		3	2.94	57.1	02SEP2014
	04AUG2015	1	3.57	56.8	14DEC2015
		2	3.76	58.1	14DEC2015
		3	3.81	60.2	14DEC2015
Newport Box 100s	06AUG2014	1	4.06	61.4	02SEP2014
		2	4.03	60.9	02SEP2014
		3	3.89	61.8	02SEP2014

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Newport Box 100s	30JUL2015	1	4.28	56.7	14DEC2015
		2	4.45	55.6	14DEC2015
		3	4.39	55.4	14DEC2015
Newport Menthol Gold Box	25MAY2015	1	2.34	33.8	23SEP2015
		2	2.19	32.1	23SEP2015
		3	2.28	32.2	23SEP2015
Newport Non-Menthol Box	06AUG2014	1	2.87	56.2	02SEP2014
		2	3.06	57.2	02SEP2014
		3	2.97	58.5	02SEP2014
Now Soft Pack	23APR2014	1	0.35	5.0	15AUG2014
		2	0.32*	4.4	15AUG2014
		3	0.33	4.7	15AUG2014
	15MAY2015	1	0.52	4.6	17SEP2015
		2	0.57	5.0	17SEP2015
		3	0.54	4.9	17SEP2015
Pall Mall Blue 100's Box	19JUN2014	1	2.62	41.0	16AUG2014
		2	2.60	40.4	16AUG2014
		3	2.78	42.1	16AUG2014

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Pall Mall Blue 100's Box	27JUL2015	1	2.46	35.4	18SEP2015
		2	2.36	32.5	18SEP2015
		3	2.53	35.1	18SEP2015
Pall Mall Menthol 100's Box	07JUL2015	1	3.18	37.8	17SEP2015
		2	3.14	38.9	17SEP2015
		3	3.25	39.7	17SEP2015
Pall Mall Menthol White 100's Box	20JUN2014	1	2.01	31.2	16AUG2014
		2	1.99	31.8	16AUG2014
		3	2.09	33.5	16AUG2014
Pall Mall Orange Box	07JUL2014	1	1.12	20.1	16AUG2014
		2	1.08	17.9	16AUG2014
		3	1.17	20.3	16AUG2014
	15AUG2015	1	1.17	23.8	23SEP2015
		2	1.22	20.9	23SEP2015
		3	1.18	19.5	23SEP2015
Pall Mall Red 100's Box	01JUL2014	1	3.73	47.3	15AUG2014
		2	3.57	45.5	15AUG2014
		3	3.57	45.0	15AUG2014

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Pall Mall Red 100's Box	05AUG2015	1	3.74	50.6	23SEP2015
		2	3.70	51.3	23SEP2015
		3	3.83	51.6	23SEP2015
Pall Mall Red Box	03AUG2015	1	3.49	47.5	23SEP2015
		2	3.48	49.5	23SEP2015
		3	3.54	51.2	23SEP2015
Parliament (White Pack) Box	06AUG2014	1	2.01	32.7	02SEP2014
		2	1.92	31.8	02SEP2014
		3	2.07	32.9	02SEP2014
Pyramid Blue 100s Box	31AUG2015	1	1.74	27.9	13OCT2015
		2	1.90	27.7	13OCT2015
		3	1.78	25.2	13OCT2015
Pyramid Menthol Silver 100s Box	06AUG2014	1	1.74	25.3	02SEP2014
		2	1.80	25.1	02SEP2014
		3	1.77	24.5	02SEP2014
	31AUG2015	1	2.07	N/A	09OCT2015
		2	1.93	N/A	09OCT2015

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Pyramid Menthol Silver 100s Box	31AUG2015	1	N/A	26.2	09DEC2015
		2	N/A	26.1	09DEC2015
		3	N/A	26.5	09DEC2015
		4	1.92	N/A	09DEC2015
		5	1.80	N/A	09DEC2015
		6	1.88	N/A	09DEC2015
Pyramid Orange 100s Box	06AUG2014	1	0.97	11.8	05SEP2014
		2	1.02	12.8	05SEP2014
		3	1.06	12.3	05SEP2014
Pyramid Red 100s Box	06AUG2014	1	2.58	37.0	02SEP2014
		2	2.56	39.3	02SEP2014
		3	2.48	36.1	02SEP2014
	31AUG2015	1	3.09	N/A	09OCT2015
		2	3.07	N/A	09OCT2015
		3	2.93	N/A	09OCT2015
		1	N/A	36.3	09DEC2015
		2	N/A	38.5	09DEC2015
		3	N/A	37.5	09DEC2015
Pyramid Red Box	06AUG2014	1	2.90	35.0	02SEP2014
		2	2.62	36.4	02SEP2014
		3	2.33	34.8	02SEP2014

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Sonoma Red Box	06AUG2014	1	4.53	50.5	05SEP2014
		2	4.66	52.3	05SEP2014
		3	4.77	52.2	05SEP2014
	31AUG2015	1	3.72	52.6	16DEC2015
		2	4.10	55.7	16DEC2015
		3	3.57	50.8	16DEC2015
Tareyton Soft Pack	23APR2014	1	3.03	14.0	15AUG2014
		2	3.06	14.2	15AUG2014
		3	3.13	15.5	15AUG2014
True Kings	13MAY2015	1	1.42	12.6	01OCT2015
		2	1.41	12.5	01OCT2015
		3	1.44	12.8	01OCT2015
USA Gold Red Box	06AUG2014	1	4.96	51.2	05SEP2014
		2	4.99	52.8	05SEP2014
		3	4.87	50.1	05SEP2014
	31AUG2015	1	3.70	50.8	16DEC2015
		2	3.65	49.7	16DEC2015
		3	3.63	51.0	16DEC2015

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Winston Red Box	12JUN2014	1	3.79	56.8	15AUG2014
		2	3.89	56.7	15AUG2014
		3	3.80	55.8	15AUG2014
	10JUL2015	1	3.47	51.0	16DEC2015
		2	3.36	51.8	16DEC2015
		3	3.27	50.4	16DEC2015

N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Camel Blue Hard Pack	25JUN2014	1	11.4	86.4	41.0	63.6	13AUG2014
		2	11.0	85.8	41.1	63.0	13AUG2014
		3	10.6	73.2	34.9	61.8	13AUG2014
	16JUL2015	1	8.4	80.4	38.8	57.8	30SEP2015
		2	8.4	90.6	40.8	59.9	30SEP2015
		3	8.5	93.6	41.0	63.0	30SEP2015
Camel Crush (crushed)	16JUN2014	1	11.2	89.4	43.6	63.0	18AUG2014
		2	12.5	94.8	47.0	69.6	18AUG2014
		3	12.2	99.6	46.2	68.4	18AUG2014
	17JUN2015	1	9.0	88.8	44.5	62.4	17SEP2015
		2	9.4	90.0	41.9	71.4	17SEP2015
		3	9.5	96.6	48.6	67.8	17SEP2015
Camel Crush (uncrushed)	16JUN2014	1	11.4	84.6	39.6	61.2	13AUG2014
		2	10.6	81.0	42.2	58.7	13AUG2014
		3	11.0	80.4	42.7	64.8	13AUG2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
Camel Crush (uncrushed)	17JUN2015	1	8.9	84.6	44.5	61.8	17SEP2015
		2	9.0	85.2	41.8	63.0	17SEP2015
		3	8.6	84.0	40.6	66.0	17SEP2015
Camel Filters Hard Pack	24JUN2014	1	13.0	100.0	55.0	72.0	18AUG2014
		3	14.8	116.0	75.0	88.2	18AUG2014
		1	13.2	107.0	54.7	72.0	09SEP2014
		2	14.1	119.0	59.6	87.0	09SEP2014
		3	13.2	107.0	46.7	72.6	09SEP2014
	15JUN2015	1	11.0	115.0	45.7	72.0	01OCT2015
		2	10.0	113.0	47.4	67.2	01OCT2015
		3	9.0	96.6	50.6	59.9	01OCT2015
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	11.0	88.8	42.9	65.4	18AUG2014
		2	11.8	98.4	53.2	66.6	18AUG2014
		3	12.2	97.8	50.0	67.2	18AUG2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
Camel Menthol Silver Hard Pack (crushed)	10AUG2015	1	7.0	83.4	39.3	55.6	01OCT2015
		2	8.4	88.2	36.7	56.8	01OCT2015
		3	8.3	85.8	38.2	58.7	01OCT2015
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	11.9	93.6	45.3	61.8	18AUG2014
		2	11.5	91.8	42.2	70.8	18AUG2014
		3	10.9	91.2	39.4	59.5	18AUG2014
	10AUG2015	1	7.1	75.0	40.7	52.8	01OCT2015
		2	7.7	79.8	40.1	56.1	01OCT2015
		3	7.0	84.6	38.5	51.3	01OCT2015
Kent Kings	01JUN2015	1	16.1	124.0	68.4	103.0	19OCT2015
		2	17.8	130.0	66.6	115.0	19OCT2015
		3	16.9	122.0	70.8	115.0	19OCT2015
Kool Box	02JUL2014	1	16.2	121.0	66.0	90.6	13AUG2014
		2	15.5	122.0	66.0	78.0	13AUG2014
		3	14.9	119.0	53.1	81.6	13AUG2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Kool Box	15JUL2015	1	9.4	107.0	56.8	82.2	07OCT2015
		2	9.7	105.0	52.2	78.0	07OCT2015
		3	9.6	111.0	52.2	78.6	07OCT2015
L&M Blue Pack Box	06AUG2014	1	15.1	136.0	81.0	111.0	12SEP2014
		2	14.2	136.0	79.8	107.0	12SEP2014
		3	15.3	137.0	83.4	116.0	12SEP2014
L&M Box	06AUG2014	1	16.4	137.0	89.4	127.0	01OCT2014
		2	15.8	139.0	82.8	115.0	01OCT2014
		3	14.4	124.0	88.2	114.0	01OCT2014
	31AUG2015	1	12.4	117.0	82.8	115.0	12OCT2015
		2	13.9	125.0	104.0	124.0	12OCT2015
		3	12.8	126.0	94.2	120.0	12OCT2015
L&M Menthol 100's Box	06AUG2014	1	16.7	151.0	109.0	131.0	12SEP2014
		2	16.8	146.0	105.0	125.0	12SEP2014
		3	17.0	152.0	106.0	128.0	12SEP2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Marlboro 100's Box	31AUG2015	1	21.2	210.0	181.0	196.0	20OCT2015
		2	20.0	196.0	125.0	165.0	20OCT2015
		3	19.6	191.0	124.0	163.0	20OCT2015
Marlboro 72s Blue Pack Box	06AUG2014	1	13.6	156.0	86.4	115.0	09SEP2014
		2	14.9	164.0	96.0	131.0	09SEP2014
		3	15.2	165.0	94.8	124.0	09SEP2014
Marlboro 72s Box	06AUG2014	1	18.1	174.0	88.8	128.0	29AUG2014
		2	17.9	199.0	99.0	124.0	29AUG2014
		3	17.8	170.0	90.0	127.0	29AUG2014
Marlboro Blend No. 27 Box	06AUG2014	1	11.3	102.0	80.4	96.0	01OCT2014
		2	11.9	104.0	79.2	93.0	01OCT2014
		3	12.0	117.0	90.6	105.0	01OCT2014
Marlboro Box	06AUG2014	1	18.7	170.0	94.2	131.0	18AUG2014
		2	18.4	175.0	103.0	133.0	18AUG2014
		3	18.5	174.0	106.0	128.0	18AUG2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Marlboro Box	31AUG2015	1	16.8	175.0	109.0	148.0	19OCT2015
		2	17.4	172.0	107.0	148.0	19OCT2015
		3	17.2	177.0	113.0	140.0	19OCT2015
Marlboro Edge Box	31AUG2015	1	11.8	171.0	110.0	139.0	07OCT2015
		2	11.7	187.0	111.0	141.0	07OCT2015
		3	12.7	173.0	102.0	133.0	07OCT2015
Marlboro Eighty Threes Box	31AUG2015	1	17.3	187.0	111.0	145.0	12OCT2015
		2	16.9	178.0	105.0	165.0	12OCT2015
		3	16.9	174.0	122.0	156.0	12OCT2015
Marlboro Gold Pack 100's Box	31AUG2015	1	15.4	155.0	95.4	133.0	19OCT2015
		2	15.0	148.0	99.0	124.0	19OCT2015
		3	14.4	149.0	87.0	120.0	19OCT2015
Marlboro Gold Pack Box	06AUG2014	1	14.8	134.0	76.2	108.0	18AUG2014
		2	13.9	130.0	80.4	99.0	18AUG2014
		3	15.0	139.0	73.8	106.0	18AUG2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosornicotine



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
Marlboro Gold Pack Box	31AUG2015	1	14.0	125.0	76.2	106.0	19OCT2015
		2	12.7	121.0	76.2	100.0	19OCT2015
		3	13.6	133.0	79.2	113.0	19OCT2015
Marlboro Menthol Box	06AUG2014	1	17.6	166.0	119.0	121.0	29AUG2014
		2	16.3	160.0	108.0	119.0	29AUG2014
		3	17.1	159.0	115.0	119.0	29AUG2014
	31AUG2015	1	16.8	197.0	125.0	157.0	20OCT2015
		2	15.8	181.0	116.0	157.0	20OCT2015
		3	17.0	182.0	130.0	165.0	20OCT2015
Marlboro Menthol Gold Pack Box	31AUG2015	1	10.1	103.0	73.8	84.6	16OCT2015
		2	9.8	97.8	70.2	90.0	16OCT2015
		3	11.6	104.0	76.2	87.0	16OCT2015
Marlboro Menthol Silver Pack Box	06AUG2014	1	9.7	80.4	41.0	67.2	01OCT2014
		2	9.5	77.4	39.0	57.6	01OCT2014
		3	9.8	77.4	37.1	60.6	01OCT2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	21.8	199.0	108.0	162.0	01OCT2014
		2	23.1	209.0	110.0	161.0	01OCT2014
		3	22.4	206.0	110.0	164.0	01OCT2014
	31AUG2015	1	18.1	184.0	106.0	154.0	19OCT2015
		2	18.4	177.0	105.0	154.0	19OCT2015
		3	18.7	194.0	119.0	154.0	19OCT2015
Marlboro NXT Box (crushed)	31AUG2015	1	13.6	137.0	88.2	112.0	20OCT2015
		2	11.8	127.0	91.8	127.0	20OCT2015
		3	12.4	134.0	94.2	124.0	20OCT2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	8.9	85.8	56.3	71.4	07OCT2015
		2	10.3	99.0	70.2	85.8	07OCT2015
		3	8.6	89.4	57.2	78.6	07OCT2015
Marlboro Silver Pack 100's Box	06AUG2014	1	10.5	88.2	44.0	63.6	29AUG2014
		2	10.7	93.6	43.7	66.6	29AUG2014
		3	11.3	91.8	47.0	69.0	29AUG2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Marlboro Silver Pack 100's Box	31AUG2015	1	9.8	88.2	52.5	70.8	16OCT2015
		2	8.7	86.4	51.1	73.2	16OCT2015
		3	9.2	91.2	49.1	69.6	16OCT2015
Marlboro Silver Pack Box	06AUG2014	1	10.6	88.8	45.6	64.8	29AUG2014
		2	9.8	85.8	45.0	67.2	29AUG2014
		3	9.7	79.2	47.6	62.4	29AUG2014
	31AUG2015	1	7.6	71.4	38.3	56.6	12OCT2015
		2	7.0	74.4	38.1	52.8	12OCT2015
		3	7.9	75.0	40.1	63.0	12OCT2015
Marlboro Special Blend (Black) Box	06AUG2014	1	17.8	164.0	90.0	142.0	01OCT2014
		2	19.1	170.0	97.8	138.0	01OCT2014
		3	19.4	181.0	111.0	152.0	01OCT2014
	31AUG2015	1	17.6	172.0	107.0	139.0	16OCT2015
		2	16.1	175.0	99.0	143.0	16OCT2015
		3	17.1	167.0	106.0	145.0	16OCT2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Marlboro Special Blend (Gold) Box	06AUG2014	1	16.0	147.0	78.6	104.0	29AUG2014
		2	14.9	134.0	72.0	100.0	29AUG2014
		3	15.7	149.0	72.0	107.0	29AUG2014
	31AUG2015	1	11.6	106.0	70.8	90.0	16OCT2015
		2	10.2	104.0	64.8	88.8	16OCT2015
		3	10.5	105.0	65.4	89.4	16OCT2015
Marlboro Special Blend (Red) Box	31AUG2015	1	13.6	133.0	87.6	110.0	20OCT2015
		2	12.6	134.0	84.6	109.0	20OCT2015
		3	12.8	137.0	84.0	111.0	20OCT2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	20.8	196.0	109.0	145.0	29AUG2014
		2	21.5	201.0	107.0	139.0	29AUG2014
		3	20.7	183.0	100.0	131.0	29AUG2014
	31AUG2015	1	18.1	165.0	102.0	147.0	16OCT2015
		2	17.2	161.0	104.0	138.0	16OCT2015
		3	17.4	162.0	100.0	142.0	16OCT2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	13.0	129.0	82.2	103.0	20OCT2015
		2	13.7	128.0	80.4	115.0	20OCT2015
		3	13.5	134.0	88.8	109.0	20OCT2015
Maverick 100s Box	31AUG2015	1	14.6	119.0	76.8	109.0	19OCT2015
		2	15.0	107.0	69.6	107.0	19OCT2015
		3	15.3	117.0	75.0	110.0	19OCT2015
Maverick Gold 100s Box	06AUG2014	1	11.2	80.4	53.4	75.6	01OCT2014
		2	11.1	81.6	57.4	74.4	01OCT2014
		3	11.1	79.8	54.8	76.8	01OCT2014
Maverick Menthol 100 Box	06AUG2014	1	19.7	144.0	97.8	140.0	12SEP2014
		2	19.6	145.0	94.8	130.0	12SEP2014
		3	20.2	150.0	100.0	134.0	12SEP2014
	31AUG2015	1	17.1	141.0	92.4	123.0	12NOV2015
		2	16.6	146.0	82.2	124.0	12NOV2015
		3	16.2	146.0	82.2	128.0	12NOV2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Misty Blue 120's Box	24JUL2015	1	10.7	96.0	58.7	73.8	01OCT2015
		2	9.4	95.4	61.2	66.6	01OCT2015
		3	10.1	99.6	61.8	73.8	01OCT2015
Misty Menthol Green 120's Box	27JUN2014	1	10.1	67.2	48.7	46.6	04AUG2014
		2	8.9	60.6	43.7	44.2	04AUG2014
		3	8.9	58.3	45.9	42.9	04AUG2014
More 120's Soft Pack	05JUN2014	1	11.0	79.8	58.7	67.8	13AUG2014
		2	10.2	73.8	47.0	59.2	13AUG2014
		3	8.6	64.2	40.7	55.9	13AUG2014
	10JUL2015	1	8.9	94.2	62.4	77.4	30SEP2015
		2	9.6	99.0	63.6	64.2	30SEP2015
		3	8.8	90.6	62.4	71.4	30SEP2015
Natural American Spirit Full- Bodied Taste	27JUN2014	1	3.3	17.9	15.7	14.6	18AUG2014
		2	3.3	17.4	18.4	15.9	18AUG2014
		3	2.8	17.8	16.8	14.8	18AUG2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
Natural American Spirit Full- Bodied Taste	05MAY2015	1	2.2	20.4	18.6	10.7	30SEP2015
		2	2.6	20.8	13.1	11.1	30SEP2015
		3	2.2	20.1	12.7	10.7	30SEP2015
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	25JUN2014	1	7.6	33.4	23.9	29.2	18AUG2014
		2	7.6	34.6	31.3	31.4	18AUG2014
		3	7.5	35.9	28.1	29.4	18AUG2014
	07AUG2015	1	5.2	29.4	21.9	24.7	30SEP2015
		2	5.2	33.2	21.2	22.6	30SEP2015
		3	5.9	33.7	23.3	22.9	30SEP2015
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	3.6	18.2	12.8	14.5	30SEP2015
		2	3.9	18.8	13.2	16.4	30SEP2015
		3	4.2	19.0	10.7	14.6	30SEP2015
Natural American Spirit Mellow Taste	06JUL2015	1	2.4	20.6	12.7	12.2	30SEP2015
		2	2.2	20.8	12.3	10.1	30SEP2015
		3	2.4	19.6	12.2	11.0	30SEP2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	3.9	22.9	16.3	18.0	30SEP2015
		2	3.8	22.5	20.8	16.1	30SEP2015
		3	3.9	24.5	16.9	16.7	30SEP2015
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	2.5	19.0	27.2	16.0	18AUG2014
		2	2.7	19.5	29.6	15.8	18AUG2014
		3	2.8	20.3	29.0	16.9	18AUG2014
	11AUG2015	1	6.6	52.2	23.9	50.3	01OCT2015
		2	6.7	54.7	23.5	46.5	01OCT2015
		3	6.0	54.0	22.7	46.3	01OCT2015
Newport Box	06AUG2014	1	16.6	140.0	75.0	93.6	12SEP2014
		2	17.1	139.0	75.6	99.0	12SEP2014
		3	17.0	130.0	65.4	93.0	12SEP2014
	04AUG2015	1	16.8	132.0	75.0	137.0	21OCT2015
		2	15.5	127.0	76.2	127.0	21OCT2015
		3	15.5	137.0	88.8	139.0	21OCT2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
Newport Box 100s	06AUG2014	1	21.2	169.0	88.8	116.0	12SEP2014
		2	21.1	172.0	88.8	112.0	12SEP2014
		3	21.6	167.0	83.4	113.0	12SEP2014
	30JUL2015	1	20.9	162.0	97.8	147.0	21OCT2015
		2	20.9	168.0	90.6	155.0	21OCT2015
		3	21.3	170.0	91.8	148.0	21OCT2015
Newport Menthol Gold Box	25MAY2015	1	8.5	81.6	41.7	68.4	07OCT2015
		2	8.4	76.2	38.1	71.4	07OCT2015
		3	9.4	85.8	41.2	75.0	07OCT2015
Newport Non-Menthol Box	06AUG2014	1	16.6	137.0	78.0	94.2	12SEP2014
		2	16.7	133.0	74.4	95.4	12SEP2014
		3	15.4	129.0	73.2	96.0	12SEP2014
Now Soft Pack	23APR2014	1	3.2	16.7	8.1	16.1	04AUG2014
		2	3.5	20.5	10.4	16.9	04AUG2014
		3	4.2	22.6	11.2	18.1	04AUG2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Now Soft Pack	15MAY2015	1	2.9	25.0	10.5	17.2	17SEP2015
		2	2.4	21.1	7.6	14.6	17SEP2015
		3	2.4	20.9	8.4	13.9	17SEP2015
Pall Mall Blue 100's Box	19JUN2014	1	11.6	98.4	59.2	70.8	18AUG2014
		2	11.4	90.0	61.2	67.8	18AUG2014
		3	12.4	102.0	67.2	83.4	18AUG2014
	27JUL2015	1	7.8	73.2	41.5	49.5	01OCT2015
		2	7.1	73.2	38.5	49.6	01OCT2015
		3	6.2	68.4	39.3	49.3	01OCT2015
Pall Mall Menthol 100's Box	07JUL2015	1	8.4	91.2	52.7	58.7	30SEP2015
		2	8.4	84.0	44.3	57.4	30SEP2015
		3	8.3	90.0	48.5	60.6	30SEP2015
Pall Mall Menthol White 100's Box	20JUN2014	1	10.0	83.4	38.9	55.9	09SEP2014
		2	10.5	79.8	34.8	60.0	09SEP2014
		3	10.0	79.2	35.3	57.7	09SEP2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Pall Mall Orange Box	07JUL2014	1	5.3	35.0	24.6	28.3	18AUG2014
		2	4.7	33.7	24.2	27.5	18AUG2014
		3	5.2	39.1	22.7	30.8	18AUG2014
	15AUG2015	1	3.4	33.0	18.7	25.9	30SEP2015
		2	3.8	39.4	25.9	27.5	30SEP2015
		3	3.6	37.0	20.6	22.9	30SEP2015
Pall Mall Red 100's Box	01JUL2014	1	13.4	99.6	72.6	77.4	13AUG2014
		2	12.4	99.6	62.4	76.2	13AUG2014
		3	11.9	96.0	61.2	72.6	13AUG2014
	05AUG2015	1	9.4	113.0	59.4	88.2	30SEP2015
		2	9.5	119.0	56.0	91.2	30SEP2015
		3	9.7	107.0	57.8	73.8	30SEP2015
Pall Mall Red Box	03AUG2015	1	9.5	104.0	55.7	79.8	12NOV2015
		2	9.2	99.6	60.0	75.0	12NOV2015
		3	9.5	92.4	55.3	71.4	12NOV2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Parliament (White Pack) Box	06AUG2014	1	14.0	119.0	69.6	90.6	09SEP2014
		2	13.0	120.0	64.2	83.4	09SEP2014
		3	13.4	118.0	60.6	85.8	09SEP2014
Pyramid Blue 100s Box	31AUG2015	1	11.5	90.6	45.4	59.6	12OCT2015
		2	11.8	93.6	41.7	59.5	12OCT2015
		3	12.6	97.2	50.1	75.0	12OCT2015
Pyramid Menthol Silver 100s Box	06AUG2014	1	11.3	80.4	59.7	56.5	12SEP2014
		2	10.7	77.4	58.9	58.8	12SEP2014
		3	12.5	87.0	58.1	59.3	12SEP2014
	31AUG2015	1	12.3	95.4	46.1	63.6	12OCT2015
		2	11.3	94.8	44.8	59.4	12OCT2015
		3	12.1	93.0	52.0	61.2	12OCT2015
Pyramid Orange 100s Box	06AUG2014	1	8.6	62.4	38.8	43.7	12SEP2014
		2	8.2	56.6	36.9	38.9	12SEP2014
		3	9.1	63.6	41.6	48.0	12SEP2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Pyramid Red 100s Box	06AUG2014	1	16.5	131.0	87.6	86.4	09SEP2014
		2	16.4	131.0	96.0	90.6	09SEP2014
		3	16.1	130.0	88.8	87.6	09SEP2014
	31AUG2015	1	16.8	121.0	71.4	92.4	16OCT2015
		2	18.7	136.0	71.4	95.4	16OCT2015
		3	16.9	131.0	80.4	97.8	16OCT2015
Pyramid Red Box	06AUG2014	1	14.2	105.0	67.2	72.0	09SEP2014
		2	14.0	104.0	69.0	66.0	09SEP2014
		3	13.9	100.0	66.0	75.6	09SEP2014
Sonoma Red Box	06AUG2014	2	19.6	161.0	94.8	131.0	12SEP2014
		3	19.4	154.0	97.2	132.0	12SEP2014
		1	21.0	170.0	121.0	144.0	29SEP2014
		2	20.8	166.0	101.0	142.0	29SEP2014
		3	19.7	166.0	106.0	151.0	29SEP2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Sonoma Red Box	31AUG2015	1	15.4	158.0	89.4	136.0	07OCT2015
		2	14.3	146.0	78.0	110.0	07OCT2015
		3	14.0	139.0	63.6	107.0	07OCT2015
Tareyton Soft Pack	23APR2014	1	9.8	77.4	61.8	56.2	04AUG2014
		2	8.2	70.2	49.5	50.0	04AUG2014
		3	8.6	69.0	47.2	48.1	04AUG2014
True Kings	13MAY2015	1	7.9	55.6	28.9	54.0	20OCT2015
		2	7.7	55.3	27.2	58.7	20OCT2015
		3	8.3	58.1	28.0	59.9	20OCT2015
USA Gold Red Box	06AUG2014	1	20.6	178.0	142.0	128.0	12SEP2014
		2	20.6	185.0	104.0	142.0	12SEP2014
		3	19.9	164.0	178.0	129.0	12SEP2014
		1	20.9	187.0	126.0	178.0	29SEP2014
		2	18.7	166.0	161.0	131.0	29SEP2014
		3	16.6	143.0	90.6	117.0	29SEP2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
USA Gold Red Box	06AUG2014	1	20.7	172.0	142.0	154.0	09OCT2014
		2	18.6	157.0	98.4	137.0	09OCT2014
		3	18.5	158.0	98.4	128.0	09OCT2014
	31AUG2015	1	13.5	157.0	72.0	115.0	07OCT2015
		2	14.5	164.0	82.8	127.0	07OCT2015
		3	13.6	169.0	78.0	122.0	07OCT2015
Winston Red Box	12JUN2014	1	22.1	140.0	84.0	116.0	04AUG2014
		2	21.8	133.0	76.8	110.0	04AUG2014
		3	20.3	132.0	73.2	106.0	04AUG2014
	10JUL2015	1	15.6	127.0	81.0	132.0	12OCT2015
		2	16.0	133.0	79.8	118.0	12OCT2015
		3	17.0	134.0	86.4	121.0	12OCT2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Camel Blue Hard Pack	25JUN2014	1	7.87	15.69	8.95	1.92*	2.88*	29AUG2014
		2	7.84	15.03	9.07	1.92*	2.88*	29AUG2014
		3	8.53	16.03	9.84	1.92*	2.88*	29AUG2014
	16JUL2015	1	7.61	16.91	7.31	1.92*	2.88*	18DEC2015
		2	7.46	16.72	6.36	1.92*	2.88*	18DEC2015
		3	8.62	17.62	8.26	1.92*	2.88*	18DEC2015
		1	8.80	19.34	9.02	2.29	2.88*	18DEC2015
		2	9.45	18.95	9.42	2.16	2.88*	18DEC2015
		3	8.38	20.80	8.44	1.92*	2.88*	18DEC2015
Camel Crush (crushed)	16JUN2014	1	11.38	18.55	10.57	2.11	2.88*	04SEP2014
		2	10.43	15.80	9.70	1.92*	2.88*	04SEP2014
		3	10.27	18.68	10.09	1.93	2.88*	04SEP2014
	17JUN2015	1	8.89	19.58	8.81	1.92*	2.88*	23DEC2015
		2	9.16	18.43	8.95	1.92*	2.88*	23DEC2015
		3	8.86	17.83	9.08	1.92*	2.88*	23DEC2015

B(a)P=benzo(a)pyrene B(a)A=Benzo(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Camel Crush (uncrushed)	16JUN2014	1	10.16	17.89	10.14	1.92*	2.88*	04SEP2014
		2	9.82	17.66	9.85	1.93	2.88*	04SEP2014
		3	10.25	17.78	9.79	1.92*	2.88*	04SEP2014
	17JUN2015	1	8.65	17.11	8.78	1.92*	2.88*	23DEC2015
		2	8.63	17.38	8.93	1.92*	2.88*	23DEC2015
		3	7.75	16.03	7.73	1.92*	2.88*	23DEC2015
Camel Filters Hard Pack	24JUN2014	1	11.44	21.82	10.46	1.92*	2.88*	03SEP2014
		2	12.34	25.25	11.48	1.92*	2.88*	03SEP2014
		3	11.70	22.25	10.94	1.92*	2.88*	03SEP2014
	15JUN2015	1	11.54	24.14	11.65	1.92*	2.88*	18DEC2015
		2	10.20	23.21	10.52	1.92*	2.88*	18DEC2015
		3	10.91	22.02	10.02	1.92*	2.88*	18DEC2015
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	9.18	15.86	9.32	1.92*	2.88*	04SEP2014
		2	9.77	17.51	9.81	1.92*	2.88*	04SEP2014
		3	9.40	16.70	9.31	1.92*	2.88*	04SEP2014

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Camel Menthol Silver Hard Pack (crushed)	10AUG2015	1	9.34	18.89	9.76	1.92*	2.88*	18DEC2015
		2	9.16	18.16	8.45	1.92*	2.88*	18DEC2015
		3	8.69	17.96	7.61	1.92*	2.88*	18DEC2015
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	10.23	17.17	9.58	1.92*	2.88*	04SEP2014
		2	10.31	16.79	9.97	1.92*	2.88*	04SEP2014
		3	9.14	15.62	8.95	1.92*	2.88*	04SEP2014
	10AUG2015	1	7.50	14.47	7.75	1.92*	2.88*	23DEC2015
		2	8.46	17.17	8.05	1.92*	2.88*	23DEC2015
		3	7.76	15.41	7.65	1.92*	2.88*	23DEC2015
Kent Kings	01JUN2015	1	8.14	16.65	8.18	1.92*	2.88*	18DEC2015
		2	9.11	19.30	9.10	1.92*	2.88*	18DEC2015
		3	8.60	17.65	9.10	1.92*	2.88*	18DEC2015
Kool Box	02JUL2014	1	11.29	22.35	11.19	1.92*	2.88*	03SEP2014
		2	11.27	22.34	10.93	1.92*	2.88*	03SEP2014
		3	11.35	23.14	10.68	1.92*	2.88*	03SEP2014

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Kool Box	15JUL2015	1	11.19	22.73	11.99	2.27	2.88*	17DEC2015
		2	11.55	22.07	11.78	2.00	2.88*	17DEC2015
		3	12.38	30.44	11.60	1.92*	2.88*	17DEC2015
L&M Blue Pack Box	06AUG2014	1	7.66	14.20	8.68	1.92*	2.88*	12SEP2014
		2	8.49	14.87	8.84	1.92*	2.88*	12SEP2014
		3	7.57	15.17	8.53	1.92*	2.88*	12SEP2014
L&M Box	06AUG2014	1	9.46	18.98	9.74	1.92*	2.88*	05SEP2014
		2	9.61	17.97	9.68	1.92*	2.88*	05SEP2014
		3	9.22	18.79	9.73	1.92*	2.88*	05SEP2014
	31AUG2015	1	7.61	17.06	7.84	1.92*	2.88*	18DEC2015
		2	8.71	18.54	9.16	1.92*	2.88*	18DEC2015
		3	9.21	17.35	9.35	2.12	2.88*	18DEC2015
L&M Menthol 100's Box	06AUG2014	1	9.08	18.57	9.60	1.92*	2.88*	12SEP2014
		2	8.90	18.01	9.26	1.92*	2.88*	12SEP2014
		3	8.89	18.74	9.32	1.92*	2.88*	12SEP2014

B(a)P=benzo(a)pyrene B(a)A=Benzo(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro 100's Box	31AUG2015	1	11.52	22.34	10.91	1.92*	2.88*	18DEC2015
		2	10.61	20.77	9.30	1.92*	2.88*	18DEC2015
		3	10.85	22.85	9.88	1.92*	2.88*	18DEC2015
Marlboro 72s Blue Pack Box	06AUG2014	1	7.52	13.54	7.31	1.92*	2.88*	12SEP2014
		2	6.66	13.74	7.57	1.92*	2.88*	12SEP2014
		3	7.58	14.61	8.15	1.92*	2.88*	12SEP2014
Marlboro 72s Box	06AUG2014	1	8.12	14.96	8.16	1.92*	2.88*	08SEP2014
		2	8.66	16.99	9.20	1.92*	2.88*	08SEP2014
		3	8.39	15.79	8.59	1.92*	2.88*	08SEP2014
Marlboro Blend No. 27 Box	06AUG2014	1	7.87	15.26	8.08	1.92*	2.88*	08SEP2014
		2	8.87	17.23	8.75	1.92*	2.88*	08SEP2014
		3	9.64	17.80	9.49	1.92*	2.88*	08SEP2014
Marlboro Box	06AUG2014	1	9.40	17.29	10.15	1.92*	2.88*	08SEP2014
		2	9.04	17.02	9.09	1.92*	2.88*	08SEP2014
		3	9.36	19.32	10.14	1.92*	2.88*	08SEP2014

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro Box	31AUG2015	1	9.91	19.82	8.77	1.92*	2.88*	18DEC2015
		2	8.64	19.24	8.03	1.92*	2.88*	18DEC2015
		3	9.06	18.33	9.16	1.92*	2.88*	18DEC2015
Marlboro Edge Box	31AUG2015	1	8.72	18.32	8.81	1.92*	2.88*	17DEC2015
		2	8.88	19.35	6.40	1.92*	2.88*	17DEC2015
		3	11.41	16.61	8.00	1.92*	2.88*	17DEC2015
Marlboro Eighty Threes Box	31AUG2015	1	9.62	20.50	9.29	2.06	2.88*	18DEC2015
		2	8.90	18.54	8.61	1.92*	2.88*	18DEC2015
		3	10.22	19.06	10.93	1.92*	2.88*	18DEC2015
Marlboro Gold Pack 100's Box	31AUG2015	1	7.11	15.07	6.41	1.92*	2.88*	18DEC2015
		2	6.37	17.06	6.70	1.92*	2.88*	18DEC2015
		3	7.87	16.16	7.21	1.92*	2.88*	18DEC2015
Marlboro Gold Pack Box	06AUG2014	1	7.09	13.35	7.61	1.92*	2.88*	08SEP2014
		2	7.40	14.87	7.89	1.92*	2.88*	08SEP2014
		3	7.48	15.16	8.12	1.92*	2.88*	08SEP2014

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro Gold Pack Box	31AUG2015	1	10.21	15.11	7.54	1.92*	2.88*	18DEC2015
		2	6.58	15.53	7.57	1.92*	2.88*	18DEC2015
		3	7.33	14.62	6.54	1.92*	2.88*	18DEC2015
Marlboro Menthol Box	06AUG2014	1	9.39	17.62	9.95	1.92*	2.88*	08SEP2014
		2	10.22	19.22	10.17	1.92*	2.88*	08SEP2014
		3	11.05	17.46	10.03	1.92*	2.88*	08SEP2014
	31AUG2015	1	9.22	16.41	8.98	1.92*	2.88*	21DEC2015
		2	9.53	16.72	9.28	1.92*	2.88*	21DEC2015
		3	8.68	15.66	8.80	1.92*	2.88*	21DEC2015
Marlboro Menthol Gold Pack Box	31AUG2015	1	5.85	12.59	5.38	1.92*	2.88*	18DEC2015
		2	6.29	14.39	5.44	1.92*	2.88*	18DEC2015
		3	6.34	16.40	6.28	1.92*	2.88*	18DEC2015
Marlboro Menthol Silver Pack Box	06AUG2014	1	4.51	9.01	4.44	1.92*	2.88*	05SEP2014
		2	4.35	8.96	4.50	1.92*	2.88*	05SEP2014
		3	4.25	8.67	4.42	1.92*	2.88*	05SEP2014

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	11.78	23.97	11.26	1.92*	2.88*	05SEP2014
		2	11.88	24.51	11.11	1.92*	2.88*	05SEP2014
		3	11.45	22.66	10.78	1.92*	2.88*	05SEP2014
	31AUG2015	1	11.41	19.10	11.05	1.92*	2.88*	18DEC2015
		2	11.54	19.56	10.92	1.92*	2.88*	18DEC2015
		3	11.50	18.91	10.64	1.92*	2.88*	18DEC2015
Marlboro NXT Box (crushed)	31AUG2015	1	7.57	13.99	7.52	1.92*	2.88*	21DEC2015
		2	6.92	13.09	7.10	1.92*	2.88*	21DEC2015
		3	7.17	13.55	7.47	1.92*	2.88*	21DEC2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	7.12	16.82	6.69	1.92*	2.88*	18DEC2015
		2	6.58	14.10	6.61	1.92*	2.88*	18DEC2015
		3	6.86	14.71	6.75	1.92*	2.88*	18DEC2015
Marlboro Silver Pack 100's Box	06AUG2014	1	4.33	8.37	4.91	1.92*	2.88*	08SEP2014
		2	4.34	8.00	4.77	1.92*	2.88*	08SEP2014
		3	4.54	8.50	4.92	1.92*	2.88*	08SEP2014

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro Silver Pack 100's Box	31AUG2015	1	5.32	9.85	4.50	1.92*	2.88*	18DEC2015
		2	5.23	10.99	4.78	1.92*	2.88*	18DEC2015
		3	4.87	11.39	6.15	1.92*	2.88*	18DEC2015
Marlboro Silver Pack Box	06AUG2014	1	4.07	7.36	4.37	1.92*	2.88*	08SEP2014
		2	4.48	8.42	4.73	1.92*	2.88*	08SEP2014
		3	4.54	8.59	5.06	1.92*	2.88*	08SEP2014
	31AUG2015	1	4.88	10.56	4.54	1.92*	2.88*	17DEC2015
		2	4.46	9.61	5.63	1.92*	2.88*	17DEC2015
		3	4.37	8.92	4.23	1.92*	2.88*	17DEC2015
Marlboro Special Blend (Black) Box	06AUG2014	1	10.22	18.15	9.40	1.92*	2.88*	08SEP2014
		2	10.51	17.61	10.61	1.92*	2.88*	08SEP2014
		3	9.97	19.21	10.31	1.92*	2.88*	08SEP2014
	31AUG2015	1	9.70	21.91	8.75	1.92*	2.88*	18DEC2015
		2	9.54	20.56	9.39	1.92*	2.88*	18DEC2015
		3	9.29	19.14	8.81	1.92*	2.88*	18DEC2015

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro Special Blend (Gold) Box	06AUG2014	1	7.59	14.15	7.64	1.92*	2.88*	08SEP2014
		2	7.22	13.82	7.63	1.92*	2.88*	08SEP2014
		3	7.78	14.18	7.44	1.92*	2.88*	08SEP2014
	31AUG2015	1	6.26	14.27	5.78	1.92*	2.88*	18DEC2015
		2	9.57	20.18	8.92	1.92*	2.88*	18DEC2015
		3	5.98	13.82	5.96	1.92*	2.88*	18DEC2015
		1	6.66	13.55	N/A	N/A	N/A	18DEC2015
		2	7.32	14.79	N/A	N/A	N/A	18DEC2015
		3	6.58	11.96	N/A	N/A	N/A	18DEC2015
		1	N/A	N/A	7.48	1.92*	2.88*	23DEC2015
		2	N/A	N/A	7.60	1.92*	2.88*	23DEC2015
		3	N/A	N/A	6.94	1.92*	2.88*	23DEC2015
Marlboro Special Blend (Red) Box	31AUG2015	1	8.02	14.61	7.67	1.92*	2.88*	21DEC2015
		2	8.46	15.34	8.03	1.92*	2.88*	21DEC2015
		3	8.17	14.66	7.77	1.92*	2.88*	21DEC2015

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	9.37	17.75	10.34	1.92*	2.88*	08SEP2014
		2	9.44	18.84	9.97	1.92*	2.88*	08SEP2014
		3	9.86	18.19	10.01	1.92*	2.88*	08SEP2014
	31AUG2015	1	9.12	20.74	9.28	1.92*	2.88*	18DEC2015
		2	9.06	19.16	7.45	1.92*	2.88*	18DEC2015
		3	8.89	18.05	8.12	1.92*	2.88*	18DEC2015
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	8.44	14.87	8.08	1.92*	2.88*	21DEC2015
		2	8.51	14.96	7.96	1.92*	2.88*	21DEC2015
		3	8.33	14.75	7.93	1.92*	2.88*	21DEC2015
Maverick 100s Box	31AUG2015	1	13.57	25.06	12.68	2.08	2.88*	18DEC2015
		2	11.14	22.81	11.69	2.22	2.88*	18DEC2015
		3	11.26	21.33	11.35	2.07	2.88*	18DEC2015
Maverick Gold 100s Box	06AUG2014	1	6.91	13.75	6.89	1.92*	2.88*	05SEP2014
		2	6.11	12.58	6.39	1.92*	2.88*	05SEP2014
		3	6.64	13.27	6.85	1.92*	2.88*	05SEP2014

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Maverick Menthol 100 Box	06AUG2014	1	9.79	19.64	12.89	1.92*	2.88*	08SEP2014
		2	11.02	19.92	14.33	2.23	2.88*	08SEP2014
		3	11.11	20.54	14.65	2.15	2.88*	08SEP2014
	31AUG2015	1	11.30	20.17	12.76	2.50	2.88*	21DEC2015
		2	11.93	20.81	13.48	2.78	2.88*	21DEC2015
		3	11.24	19.13	12.14	2.47	2.88*	21DEC2015
Misty Blue 120's Box	24JUL2015	1	10.40	20.50	10.70	1.92*	2.88*	18DEC2015
		2	11.14	26.41	11.81	2.26	2.88*	18DEC2015
		3	11.26	23.77	12.91	1.92*	2.88*	18DEC2015
Misty Menthol Green 120's Box	27JUN2014	1	9.65	19.10	11.58	1.92*	2.88*	29AUG2014
		2	8.77	17.44	10.32	2.07	2.88*	29AUG2014
		3	9.25	18.21	11.04	1.92*	2.88*	29AUG2014
More 120's Soft Pack	05JUN2014	1	13.55	21.40	14.01	2.38	2.88*	04SEP2014
		2	13.23	21.40	13.31	2.35	2.88*	04SEP2014
		3	13.37	22.70	14.27	2.41	2.88*	04SEP2014

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
More 120's Soft Pack	10JUL2015	1	10.28	20.32	10.93	2.43	2.88*	17DEC2015
		2	11.57	23.62	12.64	2.44	2.88*	17DEC2015
		3	10.67	18.82	9.89	2.39	2.88*	17DEC2015
Natural American Spirit Full-Bodied Taste	27JUN2014	1	14.17	27.57	11.28	1.92*	2.88*	03SEP2014
		2	14.48	26.73	11.28	1.92*	2.88*	03SEP2014
		3	15.13	29.20	11.75	1.92*	2.88*	03SEP2014
	05MAY2015	1	13.36	32.22	11.36	1.92*	2.88*	18DEC2015
		2	16.57	30.94	12.89	2.06	2.88*	18DEC2015
		3	15.05	33.04	12.75	1.92*	2.88*	18DEC2015
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	25JUN2014	1	10.55	18.49	9.02	1.92*	2.88*	08SEP2014
		2	10.42	19.46	9.16	1.92*	2.88*	08SEP2014
		3	10.18	19.34	8.87	1.92*	2.88*	08SEP2014
	07AUG2015	1	9.28	21.21	7.66	1.92*	2.88*	17DEC2015
		2	8.98	18.85	8.26	1.92*	2.88*	17DEC2015
		3	9.98	20.35	9.19	1.92*	2.88*	17DEC2015

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	6.76	12.66	6.67	1.92*	2.88*	17DEC2015
		2	5.35	12.17	4.99	1.92*	2.88*	17DEC2015
		3	5.30	12.92	4.85	1.92*	2.88*	17DEC2015
Natural American Spirit Mellow Taste	06JUL2015	1	12.53	24.88	13.46	2.47	2.88*	17DEC2015
		2	11.93	24.50	10.83	2.17	2.88*	17DEC2015
		3	11.88	26.06	9.98	2.32	2.88*	17DEC2015
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	11.07	22.67	12.07	2.41	2.88*	05OCT2015
		2	10.61	20.36	11.51	2.23	2.88*	05OCT2015
		3	11.33	22.00	12.58	2.12	2.88*	05OCT2015
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	10.00	19.76	9.50	1.92*	2.88*	08SEP2014
		2	11.27	20.57	9.76	1.92*	2.88*	08SEP2014
		3	10.89	20.41	9.99	1.92*	2.88*	08SEP2014
	11AUG2015	1	12.96	25.82	10.37	1.92*	2.88*	23DEC2015
		2	13.11	27.05	10.95	1.92*	2.88*	23DEC2015
		3	13.73	27.91	10.97	1.92*	2.88*	23DEC2015

B(a)P=benzo(a)pyrene B(a)A=Benzo(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Newport Box	06AUG2014	1	8.88	16.52	10.75	1.92*	2.88*	12SEP2014
		2	9.34	17.39	11.29	1.92*	2.88*	12SEP2014
		3	9.49	18.13	11.61	1.92*	2.88*	12SEP2014
	04AUG2015	1	9.40	17.19	11.26	1.92*	2.88*	23DEC2015
		2	9.14	17.21	11.21	1.92*	2.88*	23DEC2015
		3	10.50	19.16	12.67	2.09	2.88*	23DEC2015
Newport Box 100s	06AUG2014	1	13.55	25.23	15.06	2.51	2.88*	12SEP2014
		2	12.60	23.68	15.13	2.35	2.88*	12SEP2014
		3	12.87	23.41	14.29	2.00	2.88*	12SEP2014
	30JUL2015	1	12.14	23.12	14.95	2.15	2.88*	23DEC2015
		2	11.14	20.81	13.66	2.00	2.88*	23DEC2015
		3	11.38	21.10	13.28	2.32	2.88*	23DEC2015
Newport Menthol Gold Box	25MAY2015	1	5.77	10.66	7.52	1.92*	2.88*	05OCT2015
		2	5.39	10.45	7.30	1.92*	2.88*	05OCT2015
		3	6.04	11.30	7.87	2.05	2.88*	05OCT2015

B(a)P=benzo(a)pyrene B(a)A=Benzo(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Newport Non-Menthol Box	06AUG2014	1	9.24	16.45	13.16	2.11	2.88*	08SEP2014
		2	9.19	16.19	12.95	2.14	2.88*	08SEP2014
		3	9.41	17.64	12.88	2.23	2.88*	08SEP2014
Now Soft Pack	23APR2014	1	2.88*	3.09	3.84*	1.92*	2.88*	29AUG2014
		2	2.88*	2.88*	3.84*	1.92*	2.88*	29AUG2014
		3	2.88*	2.88*	3.84*	1.92*	2.88*	29AUG2014
	15MAY2015	1	2.88*	3.08	3.84*	1.92*	2.88*	30DEC2015
		2	2.88*	2.89*	3.84*	1.92*	2.88*	30DEC2015
		3	2.88*	2.89*	3.84*	1.92*	2.88*	30DEC2015
Pall Mall Blue 100's Box	19JUN2014	1	12.49	24.67	12.21	2.00	2.88*	03SEP2014
		2	11.66	21.56	11.35	1.92*	2.88*	03SEP2014
		3	10.98	20.89	11.00	1.92*	2.88*	03SEP2014
	27JUL2015	1	10.27	22.32	10.86	1.92*	2.88*	18DEC2015
		2	11.23	22.28	9.60	1.92*	2.88*	18DEC2015
		3	8.50	20.77	8.51	1.92*	2.88*	18DEC2015

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Pall Mall Menthol 100's Box	07JUL2015	1	12.52	24.49	12.71	1.92*	2.88*	23DEC2015
		2	13.29	25.25	12.94	1.93	2.88*	23DEC2015
		3	12.08	24.29	12.46	2.33	2.88*	23DEC2015
Pall Mall Menthol White 100's Box	20JUN2014	1	6.53	12.77	6.76	1.92*	2.88*	03SEP2014
		2	6.12	12.19	6.11	1.92*	2.88*	03SEP2014
		3	6.07	11.95	6.07	1.92*	2.88*	03SEP2014
Pall Mall Orange Box	07JUL2014	1	5.49	10.79	5.55	1.92*	2.88*	03SEP2014
		2	4.87	9.71	5.14	1.92*	2.88*	03SEP2014
		3	5.39	10.78	5.74	1.92*	2.88*	03SEP2014
	15AUG2015	1	4.99	10.45	5.44	1.92*	2.88*	17DEC2015
		2	5.09	9.95	5.61	1.92*	2.88*	17DEC2015
		3	4.59	9.23	5.14	1.92*	2.88*	17DEC2015
Pall Mall Red 100's Box	01JUL2014	1	12.54	24.28	14.41	2.27	2.88*	29AUG2014
		2	13.64	26.13	15.27	2.75	2.88*	29AUG2014
		3	13.06	25.97	15.14	2.34	2.88*	29AUG2014

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Pall Mall Red 100's Box	05AUG2015	1	13.00	23.92	16.06	3.48	2.88*	05OCT2015
		2	12.31	23.12	15.26	3.04	2.88*	05OCT2015
		3	12.62	22.46	15.20	3.13	2.88*	05OCT2015
Pall Mall Red Box	03AUG2015	1	11.71	22.58	14.57	3.07	2.88*	05OCT2015
		2	11.95	22.84	14.86	3.02	2.88*	05OCT2015
		3	11.91	21.89	14.51	2.95	2.88*	05OCT2015
Parliament (White Pack) Box	06AUG2014	1	7.45	14.74	8.44	1.92*	2.88*	12SEP2014
		2	7.60	14.84	8.56	1.92*	2.88*	12SEP2014
		3	7.99	15.49	9.08	1.92*	2.88*	12SEP2014
Pyramid Blue 100s Box	31AUG2015	1	7.30	17.33	10.15	1.92*	2.88*	17DEC2015
		2	7.15	15.10	7.66	1.92*	2.88*	17DEC2015
		3	7.05	13.88	7.60	1.92*	2.88*	17DEC2015
Pyramid Menthol Silver 100s Box	06AUG2014	1	6.62	12.20	9.19	1.92*	2.88*	08SEP2014
		2	6.63	12.26	8.86	1.92*	2.88*	08SEP2014
		3	6.74	11.78	9.21	1.92*	2.88*	08SEP2014

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Pyramid Menthol Silver 100s Box	31AUG2015	1	7.62	20.83	7.43	1.92*	2.88*	17DEC2015
		2	6.87	17.60	9.14	1.92*	2.88*	17DEC2015
		3	4.88	10.63	4.81	1.92*	2.88*	17DEC2015
		1	7.63	15.69	9.64	1.92*	2.88*	23DEC2015
		2	6.70	13.44	8.42	1.92*	2.88*	23DEC2015
		3	7.19	14.90	8.63	1.92*	2.88*	23DEC2015
Pyramid Orange 100s Box	06AUG2014	1	5.33	10.06	7.42	1.92*	2.88*	08SEP2014
		2	5.29	10.01	7.30	1.92*	2.88*	08SEP2014
		3	4.36	7.89	5.85	1.92*	2.88*	08SEP2014
Pyramid Red 100s Box	06AUG2014	1	12.23	24.95	12.70	2.30	2.88*	05SEP2014
		2	11.50	23.38	12.16	2.10	2.88*	05SEP2014
		3	11.54	23.74	12.45	1.92*	2.88*	05SEP2014
	31AUG2015	1	11.41	24.51	13.01	3.20	2.88*	18DEC2015
		2	9.64	19.57	10.57	2.01	2.88*	18DEC2015
		3	9.44	19.97	11.50	2.41	2.88*	18DEC2015

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Pyramid Red Box	06AUG2014	1	9.52	20.06	10.45	1.92*	2.88*	05SEP2014
		2	9.21	19.02	10.06	1.92*	2.88*	05SEP2014
		3	9.85	20.82	10.65	1.92*	2.88*	05SEP2014
Sonoma Red Box	06AUG2014	1	7.55	14.27	10.42	1.92*	2.88*	08SEP2014
		2	7.57	13.75	10.49	1.92*	2.88*	08SEP2014
		3	6.91	12.91	9.49	1.92*	2.88*	08SEP2014
	31AUG2015	1	7.66	15.62	9.83	2.21	2.88*	05OCT2015
		2	8.59	17.33	11.68	2.11	2.88*	05OCT2015
		3	7.03	14.67	9.32	2.05	2.88*	05OCT2015
Tareyton Soft Pack	23APR2014	1	10.64	20.73	13.21	2.51	2.88*	29AUG2014
		2	10.86	20.71	13.92	2.12	2.88*	29AUG2014
		3	10.42	19.96	12.86	2.51	2.88*	29AUG2014
True Kings	13MAY2015	1	4.26	7.26	4.11	1.92*	2.88*	21DEC2015
		2	3.88	6.83	3.84*	1.92*	2.88*	21DEC2015
		3	3.64	6.76	3.84*	1.92*	2.88*	21DEC2015

B(a)P=benzo(a)pyrene B(a)A=Benzo(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
USA Gold Red Box	06AUG2014	1	7.94	14.46	10.94	1.92*	2.88*	08SEP2014
		2	7.91	15.53	10.80	1.92*	2.88*	08SEP2014
		3	8.30	15.59	11.24	1.92*	2.88*	08SEP2014
	31AUG2015	1	6.74	13.86	9.34	1.92*	2.88*	05OCT2015
		2	7.46	14.77	9.85	1.92*	2.88*	05OCT2015
		3	7.52	15.04	9.89	1.92*	2.88*	05OCT2015
Winston Red Box	12JUN2014	1	11.23	22.37	13.60	2.21	2.88*	29AUG2014
		2	10.97	21.56	13.08	2.07	2.88*	29AUG2014
		3	11.06	22.60	13.30	2.12	2.88*	29AUG2014
	10JUL2015	1	10.09	23.62	13.81	3.04	2.88*	17DEC2015
		2	12.09	26.14	16.99	3.11	2.88*	17DEC2015
		3	11.86	25.75	15.48	2.27	2.88*	17DEC2015

B(a)P=benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Camel Blue Hard Pack	25JUN2014	1	4.39	394.3	29AUG2014
		2	4.52	350.4	29AUG2014
		3	4.73	347.6	29AUG2014
	16JUL2015	1	4.01	254.1	18DEC2015
		2	4.36	244.5	18DEC2015
		3	4.35	315.6	18DEC2015
		1	4.46	298.2	18DEC2015
		2	4.77	272.7	18DEC2015
		3	4.18	243.6	18DEC2015
Camel Crush (crushed)	16JUN2014	1	5.06	321.3	04SEP2014
		2	4.88	269.2	04SEP2014
		3	4.97	325.0	04SEP2014
	17JUN2015	1	5.36	204.0	23DEC2015
		2	4.29	206.4	23DEC2015
		3	4.26	174.7	23DEC2015
Camel Crush (uncrushed)	16JUN2014	1	4.72	247.8	04SEP2014
		2	4.60	269.7	04SEP2014
		3	4.87	244.6	04SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Camel Crush (uncrushed)	17JUN2015	1	3.98	285.3	23DEC2015
		2	4.06	262.0	23DEC2015
		3	3.94	221.8	23DEC2015
Camel Filters Hard Pack	24JUN2014	1	5.81	925.2	03SEP2014
		2	6.23	927.1	03SEP2014
		3	5.68	746.1	03SEP2014
	15JUN2015	1	5.52	483.3	18DEC2015
		2	5.59	531.6	18DEC2015
		3	5.48	442.0	18DEC2015
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	4.35	203.8	04SEP2014
		2	4.42	237.4	04SEP2014
		3	4.27	203.4	04SEP2014
	10AUG2015	1	4.51	95.4	18DEC2015
		2	4.31	124.4	18DEC2015
		3	4.11	90.0	18DEC2015
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	4.55	255.1	04SEP2014
		2	4.66	269.1	04SEP2014
		3	4.01	231.8	04SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Camel Menthol Silver Hard Pack (uncrushed)	10AUG2015	1	3.74	205.3	23DEC2015
		2	4.64	215.5	23DEC2015
		3	4.18	211.8	23DEC2015
Kent Kings	01JUN2015	1	4.15	448.0	18DEC2015
		2	4.68	528.2	18DEC2015
		3	4.32	473.8	18DEC2015
Kool Box	02JUL2014	1	5.60	769.9	03SEP2014
		2	5.83	751.8	03SEP2014
		3	5.60	759.0	03SEP2014
	15JUL2015	1	5.82	542.2	17DEC2015
		2	5.59	476.9	17DEC2015
		3	7.28	560.5	17DEC2015
L&M Blue Pack Box	06AUG2014	1	4.30	283.6	12SEP2014
		2	4.46	312.8	12SEP2014
		3	4.41	352.9	12SEP2014
L&M Box	06AUG2014	1	4.75	491.6	05SEP2014
		2	4.97	501.9	05SEP2014
		3	4.94	500.4	05SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
L&M Box	31AUG2015	1	4.19	387.4	18DEC2015
		2	4.93	408.4	18DEC2015
		3	4.60	415.9	18DEC2015
L&M Menthol 100's Box	06AUG2014	1	4.99	431.2	12SEP2014
		2	4.72	384.7	12SEP2014
		3	5.27	442.9	12SEP2014
Marlboro 100's Box	31AUG2015	1	6.12	467.4	18DEC2015
		2	4.75	543.4	18DEC2015
		3	5.05	467.0	18DEC2015
Marlboro 72s Blue Pack Box	06AUG2014	1	4.04	477.4	12SEP2014
		2	3.88	527.1	12SEP2014
		3	4.04	495.2	12SEP2014
Marlboro 72s Box	06AUG2014	1	4.46	566.8	08SEP2014
		2	4.72	532.6	08SEP2014
		3	4.57	458.6	08SEP2014
Marlboro Blend No. 27 Box	06AUG2014	1	4.40	322.8	08SEP2014
		2	4.46	392.7	08SEP2014
		3	4.85	381.2	08SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Marlboro Box	06AUG2014	1	5.44	500.1	08SEP2014
		2	4.98	465.3	08SEP2014
		3	5.44	598.2	08SEP2014
	31AUG2015	1	4.59	501.9	18DEC2015
		2	4.17	454.2	18DEC2015
		3	4.21	506.3	18DEC2015
Marlboro Edge Box	31AUG2015	1	4.24	447.1	17DEC2015
		2	4.56	456.4	17DEC2015
		3	4.66	491.1	17DEC2015
Marlboro Eighty Threes Box	31AUG2015	1	4.68	496.4	18DEC2015
		2	4.31	523.1	18DEC2015
		3	4.87	487.5	18DEC2015
Marlboro Gold Pack 100's Box	31AUG2015	1	3.89	331.6	18DEC2015
		2	3.58	315.6	18DEC2015
		3	3.83	321.9	18DEC2015
Marlboro Gold Pack Box	06AUG2014	1	4.09	245.3	08SEP2014
		2	3.95	266.0	08SEP2014
		3	4.15	272.3	08SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Marlboro Gold Pack Box	31AUG2015	1	3.47	268.4	18DEC2015
		2	4.42	237.9	18DEC2015
		3	3.44	277.4	18DEC2015
Marlboro Menthol Box	06AUG2014	1	5.30	533.0	08SEP2014
		2	5.33	557.6	08SEP2014
		3	5.81	590.3	08SEP2014
	31AUG2015	1	4.72	446.0	21DEC2015
		2	4.85	506.2	21DEC2015
		3	4.45	445.7	21DEC2015
Marlboro Menthol Gold Pack Box	31AUG2015	1	2.80	245.9	18DEC2015
		2	2.81	272.9	18DEC2015
		3	2.98	278.8	18DEC2015
Marlboro Menthol Silver Pack Box	06AUG2014	1	2.40	105.3	05SEP2014
		2	2.31	76.1	05SEP2014
		3	2.35	87.5	05SEP2014
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	5.80	587.5	05SEP2014
		2	5.65	546.0	05SEP2014
		3	5.54	505.9	05SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Marlboro Menthol Special Blend 100's (Black) Box	31AUG2015	1	4.98	361.1	18DEC2015
		2	5.54	445.8	18DEC2015
		3	5.23	468.1	18DEC2015
Marlboro NXT Box (crushed)	31AUG2015	1	4.09	101.2	21DEC2015
		2	3.74	101.5	21DEC2015
		3	3.91	133.5	21DEC2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	3.86	244.6	18DEC2015
		2	3.02	231.1	18DEC2015
		3	3.49	248.9	18DEC2015
Marlboro Silver Pack 100's Box	06AUG2014	1	2.43	65.3	08SEP2014
		2	2.60	63.8	08SEP2014
		3	2.63	88.8	08SEP2014
	31AUG2015	1	2.48	64.3	18DEC2015
		2	2.48	67.5	18DEC2015
		3	2.39	82.6	18DEC2015
Marlboro Silver Pack Box	06AUG2014	1	2.24	75.8	08SEP2014
		2	2.50	96.2	08SEP2014
		3	2.60	82.4	08SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Marlboro Silver Pack Box	31AUG2015	1	2.48	146.0	17DEC2015
		2	2.36	112.6	17DEC2015
		3	2.27	112.5	17DEC2015
Marlboro Special Blend (Black) Box	06AUG2014	1	4.72	517.8	08SEP2014
		2	5.20	475.2	08SEP2014
		3	5.41	493.0	08SEP2014
	31AUG2015	1	4.99	598.3	18DEC2015
		2	4.16	536.8	18DEC2015
		3	4.76	539.2	18DEC2015
Marlboro Special Blend (Gold) Box	06AUG2014	1	3.90	288.3	08SEP2014
		2	4.06	280.0	08SEP2014
		3	3.93	270.5	08SEP2014
	31AUG2015	1	3.85	266.6	18DEC2015
		2	4.77	507.2	18DEC2015
		3	3.49	300.3	18DEC2015
		1	3.29	328.9	23DEC2015
		2	3.40	343.1	23DEC2015
		3	3.31	305.2	23DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Marlboro Special Blend (Red) Box	31AUG2015	1	4.22	323.9	21DEC2015
		2	4.45	350.4	21DEC2015
		3	4.44	284.8	21DEC2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	5.23	503.7	08SEP2014
		2	5.09	464.8	08SEP2014
		3	5.09	486.1	08SEP2014
	31AUG2015	1	3.77	526.2	18DEC2015
		2	4.40	466.8	18DEC2015
		3	4.04	495.1	18DEC2015
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	4.72	266.8	21DEC2015
		2	4.40	234.9	21DEC2015
		3	4.51	237.8	21DEC2015
Maverick 100s Box	31AUG2015	1	6.07	522.7	18DEC2015
		2	5.64	495.4	18DEC2015
		3	5.54	416.8	18DEC2015
Maverick Gold 100s Box	06AUG2014	1	3.46	164.8	05SEP2014
		2	2.85	174.7	05SEP2014
		3	3.49	141.9	05SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Maverick Menthol 100 Box	06AUG2014	1	4.88	436.9	08SEP2014
		2	5.57	494.0	08SEP2014
		3	5.51	477.6	08SEP2014
	31AUG2015	1	6.08	439.2	21DEC2015
		2	6.60	458.9	21DEC2015
		3	6.05	397.4	21DEC2015
Misty Blue 120's Box	24JUL2015	1	5.48	212.7	18DEC2015
		2	6.54	242.6	18DEC2015
		3	6.32	239.7	18DEC2015
Misty Menthol Green 120's Box	27JUN2014	1	5.51	266.7	29AUG2014
		2	5.14	260.0	29AUG2014
		3	5.27	232.3	29AUG2014
More 120's Soft Pack	05JUN2014	1	6.19	381.7	04SEP2014
		2	6.10	312.0	04SEP2014
		3	6.58	335.7	04SEP2014
	10JUL2015	1	5.22	267.9	17DEC2015
		2	5.76	342.3	17DEC2015
		3	5.17	283.0	17DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Natural American Spirit Full-Bodied Taste	27JUN2014	1	6.08	1844.0	03SEP2014
		2	6.28	1842.0	03SEP2014
		3	6.76	1589.0	03SEP2014
	05MAY2015	1	6.01	876.0	18DEC2015
		2	7.10	952.4	18DEC2015
		3	6.61	968.1	18DEC2015
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	25JUN2014	1	4.79	689.0	08SEP2014
		2	5.05	779.5	08SEP2014
		3	4.72	699.3	08SEP2014
	07AUG2015	1	4.06	641.3	17DEC2015
		2	4.17	670.7	17DEC2015
		3	4.05	646.8	17DEC2015
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	2.78	324.2	17DEC2015
		2	2.36	283.3	17DEC2015
		3	2.40	275.4	17DEC2015
Natural American Spirit Mellow Taste	06JUL2015	1	5.33	711.9	17DEC2015
		2	5.50	684.5	17DEC2015
		3	5.33	669.5	17DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	5.29	659.1	05OCT2015
		2	4.99	644.6	05OCT2015
		3	5.41	631.8	05OCT2015
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	5.35	576.6	08SEP2014
		2	5.69	646.4	08SEP2014
		3	5.39	643.7	08SEP2014
	11AUG2015	1	5.21	886.2	23DEC2015
		2	5.54	947.1	23DEC2015
		3	5.24	991.3	23DEC2015
Newport Box	06AUG2014	1	5.14	447.9	12SEP2014
		2	5.33	421.6	12SEP2014
		3	5.68	482.8	12SEP2014
	04AUG2015	1	5.26	417.3	23DEC2015
		2	4.84	432.1	23DEC2015
		3	5.82	474.6	23DEC2015
Newport Box 100s	06AUG2014	1	8.00	525.5	12SEP2014
		2	7.63	446.5	12SEP2014
		3	6.95	461.6	12SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Newport Box 100s	30JUL2015	1	6.39	505.3	23DEC2015
		2	5.89	451.6	23DEC2015
		3	6.37	444.3	23DEC2015
Newport Menthol Gold Box	25MAY2015	1	3.08	157.6	05OCT2015
		2	3.00	137.9	05OCT2015
		3	3.33	137.2	05OCT2015
Newport Non-Menthol Box	06AUG2014	1	4.98	525.3	08SEP2014
		2	5.08	512.8	08SEP2014
		3	5.22	511.5	08SEP2014
Now Soft Pack	23APR2014	1	0.88	19.2*	29AUG2014
		2	0.74	19.2*	29AUG2014
		3	0.69	19.2*	29AUG2014
	15MAY2015	1	0.67	25.6	30DEC2015
		2	0.64	27.4	30DEC2015
		3	0.76	31.3	30DEC2015
Pall Mall Blue 100's Box	19JUN2014	1	6.22	349.8	03SEP2014
		2	5.94	341.0	03SEP2014
		3	5.48	297.1	03SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Pall Mall Blue 100's Box	27JUL2015	1	5.05	253.5	18DEC2015
		2	5.22	259.3	18DEC2015
		3	5.31	269.0	18DEC2015
Pall Mall Menthol 100's Box	07JUL2015	1	5.41	350.8	23DEC2015
		2	6.76	358.2	23DEC2015
		3	6.19	362.6	23DEC2015
Pall Mall Menthol White 100's Box	20JUN2014	1	3.40	96.4	03SEP2014
		2	3.20	94.5	03SEP2014
		3	3.14	87.3	03SEP2014
Pall Mall Orange Box	07JUL2014	1	2.78	95.2	03SEP2014
		2	2.48	74.6	03SEP2014
		3	2.77	86.3	03SEP2014
	15AUG2015	1	2.54	66.1	17DEC2015
		2	2.60	58.4	17DEC2015
		3	2.12	50.5	17DEC2015
Pall Mall Red 100's Box	01JUL2014	1	6.59	603.3	29AUG2014
		2	7.45	588.2	29AUG2014
		3	6.83	584.3	29AUG2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Pall Mall Red 100's Box	05AUG2015	1	6.81	431.2	05OCT2015
		2	6.50	368.6	05OCT2015
		3	6.44	417.3	05OCT2015
Pall Mall Red Box	03AUG2015	1	6.14	482.0	05OCT2015
		2	6.31	494.0	05OCT2015
		3	6.01	420.8	05OCT2015
Parliament (White Pack) Box	06AUG2014	1	4.25	333.1	12SEP2014
		2	4.30	317.5	12SEP2014
		3	4.43	321.1	12SEP2014
Pyramid Blue 100s Box	31AUG2015	1	3.73	286.5	17DEC2015
		2	3.76	253.8	17DEC2015
		3	3.70	258.7	17DEC2015
Pyramid Menthol Silver 100s Box	06AUG2014	1	3.55	244.0	08SEP2014
		2	3.40	273.3	08SEP2014
		3	3.46	259.0	08SEP2014
	31AUG2015	1	3.89	273.0	17DEC2015
		2	4.96	298.1	17DEC2015
		3	3.04	194.7	17DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Pyramid Menthol Silver 100s Box	31AUG2015	1	3.89	338.3	23DEC2015
		2	3.42	264.5	23DEC2015
		3	3.71	299.9	23DEC2015
Pyramid Orange 100s Box	06AUG2014	1	2.67	133.5	08SEP2014
		2	2.72	126.5	08SEP2014
		3	2.28	81.2	08SEP2014
Pyramid Red 100s Box	06AUG2014	1	6.10	622.6	05SEP2014
		2	5.86	635.5	05SEP2014
		3	5.85	697.6	05SEP2014
	31AUG2015	1	5.66	481.3	18DEC2015
		2	4.94	505.6	18DEC2015
		3	4.75	533.1	18DEC2015
Pyramid Red Box	06AUG2014	1	4.87	560.4	05SEP2014
		2	4.60	567.9	05SEP2014
		3	5.07	633.2	05SEP2014
Sonoma Red Box	06AUG2014	1	3.86	637.5	08SEP2014
		2	3.88	630.9	08SEP2014
		3	3.65	572.1	08SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Sonoma Red Box	31AUG2015	1	4.08	591.4	05OCT2015
		2	4.58	681.0	05OCT2015
		3	3.83	595.6	05OCT2015
Tareyton Soft Pack	23APR2014	1	6.04	371.7	29AUG2014
		2	6.17	327.1	29AUG2014
		3	5.99	301.4	29AUG2014
True Kings	13MAY2015	1	2.35	116.4	21DEC2015
		2	2.16	87.1	21DEC2015
		3	2.04	94.8	21DEC2015
USA Gold Red Box	06AUG2014	1	4.12	479.0	08SEP2014
		2	4.17	568.1	08SEP2014
		3	4.23	595.4	08SEP2014
	31AUG2015	1	3.77	549.0	05OCT2015
		2	4.06	575.4	05OCT2015
		3	4.09	557.5	05OCT2015
Winston Red Box	12JUN2014	1	6.11	1163.0	29AUG2014
		2	5.96	972.2	29AUG2014
		3	5.83	1012.0	29AUG2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Winston Red Box	10JUL2015	1	5.92	693.2	17DEC2015
		2	6.35	648.9	17DEC2015
		3	6.12	740.7	17DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Camel Blue Hard Pack	25JUN2014	1	3.56	04SEP2014
		2	3.70	04SEP2014
		3	3.94	04SEP2014
	16JUL2015	1	1.58	17SEP2015
		2	1.78	17SEP2015
		3	1.75	17SEP2015
Camel Crush (crushed)	16JUN2014	1	2.47	03SEP2014
		2	2.71	03SEP2014
		3	2.43	03SEP2014
	17JUN2015	1	2.29	10SEP2015
		2	2.21	10SEP2015
		3	2.26	10SEP2015
Camel Crush (uncrushed)	16JUN2014	1	2.79	03SEP2014
		2	2.59	03SEP2014
		3	2.77	03SEP2014
	17JUN2015	1	1.89	10SEP2015
		2	2.15	10SEP2015
		3	2.12	10SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Camel Filters Hard Pack	24JUN2014	1	3.74	09SEP2014
		2	4.74	09SEP2014
		3	5.36	09SEP2014
	15JUN2015	1	3.17	15SEP2015
		2	3.63	15SEP2015
		3	3.76	15SEP2015
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	2.22	09SEP2014
		2	2.50	09SEP2014
		3	2.36	09SEP2014
	10AUG2015	1	1.84	15SEP2015
		2	1.96	15SEP2015
		3	2.02	15SEP2015
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	2.32	03SEP2014
		2	2.63	03SEP2014
		3	2.39	03SEP2014
	10AUG2015	1	1.83	15SEP2015
		2	2.41	15SEP2015
		3	2.32	15SEP2015



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Kent Kings	01JUN2015	1	2.66	25SEP2015
		2	2.88	25SEP2015
		3	2.88	25SEP2015
Kool Box	02JUL2014	1	3.71	04SEP2014
		2	4.64	04SEP2014
		3	4.48	04SEP2014
	15JUL2015	1	2.92	18SEP2015
		2	2.78	18SEP2015
		3	3.03	18SEP2015
L&M Blue Pack Box	06AUG2014	1	2.14	22OCT2014
		2	2.17	22OCT2014
		3	1.91	22OCT2014
L&M Box	06AUG2014	1	2.36	03OCT2014
		2	2.30	03OCT2014
		3	2.35	03OCT2014
	31AUG2015	1	2.18	24SEP2015
		2	2.63	24SEP2015
		3	2.31	24SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
L&M Menthol 100's Box	06AUG2014	1	3.22	23OCT2014
		2	3.02	23OCT2014
		3	3.46	23OCT2014
Marlboro 100's Box	31AUG2015	1	2.70	30SEP2015
		2	2.67	30SEP2015
		3	3.06	30SEP2015
Marlboro 72s Blue Pack Box	06AUG2014	1	3.22	22OCT2014
		2	3.12	22OCT2014
		3	2.99	22OCT2014
Marlboro 72s Box	06AUG2014	1	3.56	01OCT2014
		2	3.84	01OCT2014
		3	3.86	01OCT2014
Marlboro Blend No. 27 Box	06AUG2014	1	2.05	03OCT2014
		2	2.51	03OCT2014
		3	2.40	03OCT2014
Marlboro Box	06AUG2014	1	3.46	10SEP2014
		2	3.52	10SEP2014
		3	3.24	10SEP2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Marlboro Box	31AUG2015	1	2.67	29SEP2015
		2	2.88	29SEP2015
		3	2.55	29SEP2015
Marlboro Edge Box	31AUG2015	1	2.61	22SEP2015
		2	2.54	22SEP2015
		3	2.75	22SEP2015
Marlboro Eighty Threes Box	31AUG2015	1	2.84	24SEP2015
		2	2.92	24SEP2015
		3	2.81	24SEP2015
Marlboro Gold Pack 100's Box	31AUG2015	1	1.35	29SEP2015
		2	1.37	29SEP2015
		3	1.45	29SEP2015
Marlboro Gold Pack Box	06AUG2014	1	2.26	10SEP2014
		2	2.29	10SEP2014
		3	2.22	10SEP2014
	31AUG2015	1	1.77	29SEP2015
		2	1.68	29SEP2015
		3	1.86	29SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Marlboro Menthol Box	06AUG2014	1	4.51	01OCT2014
		2	4.00	01OCT2014
		3	4.04	01OCT2014
	31AUG2015	1	3.78	14OCT2015
		2	3.49	14OCT2015
		3	3.44	14OCT2015
Marlboro Menthol Gold Pack Box	31AUG2015	1	1.54	25SEP2015
		2	1.69	25SEP2015
		3	1.64	25SEP2015
Marlboro Menthol Silver Pack Box	06AUG2014	1	1.21	03OCT2014
		2	1.06	03OCT2014
		3	1.14	03OCT2014
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	3.64	03OCT2014
		2	3.93	03OCT2014
		3	3.30	03OCT2014
	31AUG2015	1	2.59	29SEP2015
		2	2.80	29SEP2015
		3	2.96	29SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Marlboro NXT Box (crushed)	31AUG2015	1	1.82	30SEP2015
		2	1.80	30SEP2015
		3	1.89	30SEP2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	1.51	22SEP2015
		2	1.53	22SEP2015
		3	1.59	22SEP2015
Marlboro Silver Pack 100's Box	06AUG2014	1	1.26	01OCT2014
		2	1.07	01OCT2014
		3	1.06	01OCT2014
	31AUG2015	1	0.76	24SEP2015
		2	0.76	24SEP2015
		3	0.76	24SEP2015
Marlboro Silver Pack Box	06AUG2014	1	1.01	01OCT2014
		2	0.93	01OCT2014
		3	1.03	01OCT2014
	31AUG2015	1	0.94	24SEP2015
		2	0.90	24SEP2015
		3	0.95	24SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Marlboro Special Blend (Black) Box	06AUG2014	1	3.02	03OCT2014
		2	2.93	03OCT2014
		3	3.10	03OCT2014
	31AUG2015	1	2.81	25SEP2015
		2	2.56	25SEP2015
		3	2.89	25SEP2015
Marlboro Special Blend (Gold) Box	06AUG2014	1	1.85	10SEP2014
		2	2.12	10SEP2014
		3	2.10	10SEP2014
	31AUG2015	1	1.57	25SEP2015
		2	1.63	25SEP2015
		3	1.55	25SEP2015
Marlboro Special Blend (Red) Box	31AUG2015	1	2.17	30SEP2015
		2	2.03	30SEP2015
		3	1.99	30SEP2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	2.65	01OCT2014
		2	2.75	01OCT2014
		3	2.90	01OCT2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Marlboro Special Blend 100's (Red) Box	31AUG2015	1	2.15	25SEP2015
		2	2.29	25SEP2015
		3	2.19	25SEP2015
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	1.75	30SEP2015
		2	1.56	30SEP2015
		3	1.74	30SEP2015
Maverick 100s Box	31AUG2015	1	3.01	29SEP2015
		2	3.05	29SEP2015
		3	3.10	29SEP2015
Maverick Gold 100s Box	06AUG2014	1	1.52	22OCT2014
		2	1.50	22OCT2014
		3	1.78	22OCT2014
Maverick Menthol 100 Box	06AUG2014	1	3.69	23OCT2014
		2	4.14	23OCT2014
		3	4.10	23OCT2014
	31AUG2015	1	4.00	14OCT2015
		2	4.43	14OCT2015
		3	4.31	14OCT2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Misty Blue 120's Box	24JUL2015	1	2.56	15SEP2015
		2	2.69	15SEP2015
		3	2.53	15SEP2015
Misty Menthol Green 120's Box	27JUN2014	1	2.72	04SEP2014
		2	2.99	04SEP2014
		3	2.40	04SEP2014
More 120's Soft Pack	05JUN2014	1	2.69	03SEP2014
		2	2.69	03SEP2014
		3	2.66	03SEP2014
	10JUL2015	1	2.68	17SEP2015
		2	2.60	17SEP2015
		3	2.55	17SEP2015
Natural American Spirit Full-Bodied Taste	27JUN2014	1	3.89	10SEP2014
		2	3.75	10SEP2014
		3	4.36	10SEP2014
	05MAY2015	1	4.17	10SEP2015
		2	3.87	10SEP2015
		3	4.10	10SEP2015



Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	25JUN2014	1	3.81	10SEP2014
		2	3.91	10SEP2014
		3	4.62	10SEP2014
	07AUG2015	1	3.55	09SEP2015
		2	3.81	09SEP2015
		3	4.28	09SEP2015
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	1.81	09SEP2015
		2	1.86	09SEP2015
		3	1.76	09SEP2015
Natural American Spirit Mellow Taste	06JUL2015	1	2.44	09SEP2015
		2	2.50	09SEP2015
		3	3.24	09SEP2015
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	3.27	09SEP2015
		2	3.02	09SEP2015
		3	3.74	09SEP2015
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	2.77	10SEP2014
		2	3.19	10SEP2014
		3	3.34	10SEP2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Natural American Spirit Perique Blend Rich Robust Taste	11AUG2015	1	4.36	09SEP2015
		2	4.59	09SEP2015
		3	3.84	09SEP2015
Newport Box	06AUG2014	1	3.94	23OCT2014
		2	4.60	23OCT2014
		3	4.56	23OCT2014
	04AUG2015	1	3.45	14OCT2015
		2	3.54	14OCT2015
		3	4.07	14OCT2015
Newport Box 100s	06AUG2014	1	3.90	23OCT2014
		2	3.87	23OCT2014
		3	4.17	23OCT2014
	30JUL2015	1	4.14	14OCT2015
		2	4.15	14OCT2015
		3	3.80	14OCT2015
Newport Menthol Gold Box	25MAY2015	1	1.23	18SEP2015
		2	1.18	18SEP2015
		3	1.32	18SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Newport Non-Menthol Box	06AUG2014	1	3.65	23OCT2014
		2	3.77	23OCT2014
		3	3.42	23OCT2014
Now Soft Pack	23APR2014	1	0.83	04SEP2014
		2	0.58	04SEP2014
		3	0.55	04SEP2014
	15MAY2015	1	0.28	10SEP2015
		2	0.20	10SEP2015
		3	0.22	10SEP2015
Pall Mall Blue 100's Box	19JUN2014	1	2.47	09SEP2014
		2	2.65	09SEP2014
		3	2.34	09SEP2014
	27JUL2015	1	1.66	15SEP2015
		2	1.80	15SEP2015
		3	1.97	15SEP2015
Pall Mall Menthol 100's Box	07JUL2015	1	2.31	10SEP2015
		2	2.41	10SEP2015
		3	2.45	10SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Pall Mall Menthol White 100's Box	20JUN2014	1	1.44	09SEP2014
		2	1.18	09SEP2014
		3	1.14	09SEP2014
Pall Mall Orange Box	07JUL2014	1	0.73	09SEP2014
		2	0.83	09SEP2014
		3	0.84	09SEP2014
	15AUG2015	1	0.62	17SEP2015
		2	0.52	17SEP2015
		3	0.53	17SEP2015
Pall Mall Red 100's Box	01JUL2014	1	2.36	03SEP2014
		2	2.75	03SEP2014
		3	2.62	03SEP2014
	05AUG2015	1	2.16	17SEP2015
		2	2.29	17SEP2015
		3	2.47	17SEP2015
Pall Mall Red Box	03AUG2015	1	2.27	18SEP2015
		2	2.17	18SEP2015
		3	2.03	18SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Parliament (White Pack) Box	06AUG2014	1	2.12	22OCT2014
		2	2.23	22OCT2014
		3	2.18	22OCT2014
Pyramid Blue 100s Box	31AUG2015	1	1.62	22SEP2015
		2	1.48	22SEP2015
		3	1.53	22SEP2015
Pyramid Menthol Silver 100s Box	06AUG2014	1	1.64	27OCT2014
		2	1.82	27OCT2014
		3	1.75	27OCT2014
	31AUG2015	1	1.54	22SEP2015
		2	1.52	22SEP2015
		3	1.50	22SEP2015
Pyramid Orange 100s Box	06AUG2014	1	0.97	27OCT2014
		2	0.94	27OCT2014
		3	0.85	27OCT2014
Pyramid Red 100s Box	06AUG2014	1	3.62	04SEP2014
		2	3.77	04SEP2014
		3	4.28	04SEP2014

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Pyramid Red 100s Box	31AUG2015	1	2.57	24SEP2015
		2	2.73	24SEP2015
		3	2.80	24SEP2015
Pyramid Red Box	06AUG2014	1	2.99	22OCT2014
		2	3.15	22OCT2014
		3	2.86	22OCT2014
Sonoma Red Box	06AUG2014	1	3.62	27OCT2014
		2	3.58	27OCT2014
		3	3.63	27OCT2014
	31AUG2015	1	2.87	18SEP2015
		2	3.05	18SEP2015
		3	2.96	18SEP2015
Tareyton Soft Pack	23APR2014	1	3.61	09SEP2014
		2	4.19	09SEP2014
		3	4.01	09SEP2014
True Kings	13MAY2015	1	0.83	30SEP2015
		2	0.76	30SEP2015
		3	0.82	30SEP2015

Table 1. Cigarette Data Listing (ISO Smoking Regimen) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
USA Gold Red Box	06AUG2014	1	3.58	27OCT2014
		2	3.68	27OCT2014
		3	3.84	27OCT2014
	31AUG2015	1	2.92	18SEP2015
		2	3.01	18SEP2015
		3	2.98	18SEP2015
Winston Red Box	12JUN2014	1	4.29	04SEP2014
		2	5.13	04SEP2014
		3	3.82	04SEP2014
	10JUL2015	1	2.93	22SEP2015
		2	2.80	22SEP2015
		3	2.78	22SEP2015

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Camel Blue Hard Pack (2014)				Camel Blue Hard Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.9	0.8	0.9	8	0.9	0.9	0.9	7
Acetaldehyde (ug/cig)	627	614	645	3	671	643	689	3
Crotonaldehyde (ug/cig)	12	12	12	3	13	12	14	3
Formaldehyde (ug/cig)	21	21	22	3	19	18	20	3
Arsenic (ng/cig)	2.9	2.9	3.0	3	2.6	2.5	2.8	3
Cadmium (ng/cig)	43	42	43	3	41	39	43	3
NNN (ng/cig)	63	62	64	3	60	58	63	3
NNK (ng/cig)	39	35	41	3	40	39	41	3
NAT (ng/cig)	82	73	86	3	88	80	94	3
NAB (ng/cig)	11	11	11	3	8	8	8	3
B(a)P (ng/cig)	8.1	7.8	8.5	3	7.9	7.5	8.6	3
	N/A	N/A	N/A	N/A	8.9	8.4	9.5	3
B(a)A (ng/cig)	15.6	15.0	16.0	3	17.1	16.7	17.6	3
	N/A	N/A	N/A	N/A	19.7	19.0	20.8	3
B(b/j)FL (ng/cig)	9.3	8.9	9.8	3	7.3	6.4	8.3	3
	N/A	N/A	N/A	N/A	9.0	8.4	9.4	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
	N/A	N/A	N/A	N/A	2.1 <sup>†</sup>	1.9 <sup>*</sup>	2.3	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Camel Blue Hard Pack (2014)				Camel Blue Hard Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	4.5	4.4	4.7	3	4.5	4.2	4.8	3
	N/A	N/A	N/A	N/A	4.2	4.0	4.4	3
Acrylamide (ug/cig)	3.7	3.6	3.9	3	1.7	1.6	1.8	3
Naphthalene (ng/cig)	364	348	394	3	272	244	298	3
	N/A	N/A	N/A	N/A	271	245	316	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Camel Crush (crushed) (2014)				Camel Crush (crushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.9	0.9	1.0	8	1.0	1.0	1.1	8
Acetaldehyde (ug/cig)	588	560	621	3	606	605	607	3
Crotonaldehyde (ug/cig)	10	10	11	3	10	10	10	3
Formaldehyde (ug/cig)	23	22	25	3	21	21	21	3
Arsenic (ng/cig)	3.1	3.0	3.3	3	3.0	3.0	3.0	3
Cadmium (ng/cig)	37	36	38	3	36	35	37	3
NNN (ng/cig)	67	63	70	3	67	62	71	3
NNK (ng/cig)	46	44	47	3	45	42	49	3
NAT (ng/cig)	95	89	100	3	92	89	97	3
NAB (ng/cig)	12	11	13	3	9	9	9	3
B(a)P (ng/cig)	10.7	10.3	11.4	3	9.0	8.9	9.2	3
B(a)A (ng/cig)	17.7	15.8	18.7	3	18.6	17.8	19.6	3
B(b/j)FL (ng/cig)	10.1	9.7	10.6	3	8.9	8.8	9.1	3
B(k)FL (ng/cig)	2.0 <sup>†</sup>	1.9 <sup>*</sup>	2.1	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.0	4.9	5.1	3	4.6	4.3	5.4	3
Acrylamide (ug/cig)	2.5	2.4	2.7	3	2.3	2.2	2.3	3
Naphthalene (ng/cig)	305	269	325	3	195	175	206	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Camel Crush (uncrushed) (2014)				Camel Crush (uncrushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.9	0.8	0.9	8	0.9	0.9	1.0	8
Acetaldehyde (ug/cig)	539	521	570	3	609	581	625	3
Crotonaldehyde (ug/cig)	9	9	10	3	11	11	12	3
Formaldehyde (ug/cig)	21	21	22	3	19	18	20	3
Arsenic (ng/cig)	2.9	2.7	3.1	3	2.9	2.9	3.0	3
Cadmium (ng/cig)	39	37	41	3	39	38	40	3
NNN (ng/cig)	62	59	65	3	64	62	66	3
NNK (ng/cig)	42	40	43	3	42	41	45	3
NAT (ng/cig)	82	80	85	3	85	84	85	3
NAB (ng/cig)	11	11	11	3	9	9	9	3
B(a)P (ng/cig)	10.1	9.8	10.3	3	8.3	7.7	8.6	3
B(a)A (ng/cig)	17.8	17.7	17.9	3	16.8	16.0	17.4	3
B(b/j)FL (ng/cig)	9.9	9.8	10.1	3	8.5	7.7	8.9	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	4.7	4.6	4.9	3	4.0	3.9	4.1	3
Acrylamide (ug/cig)	2.7	2.6	2.8	3	2.1	1.9	2.1	3
Naphthalene (ng/cig)	254	245	270	3	256	222	285	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Camel Filters Hard Pack (2014)				Camel Filters Hard Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.9	0.6	1.0	8	1.1	1.0	1.1	8
Acetaldehyde (ug/cig)	696	688	710	3	696	684	703	3
Crotonaldehyde (ug/cig)	16	16	17	3	17	17	17	3
Formaldehyde (ug/cig)	32	31	33	3	27	27	28	3
Arsenic (ng/cig)	4.2	3.9	4.4	3	4.0	3.9	4.1	3
Cadmium (ng/cig)	61	57	66	3	51	49	55	3
NNN (ng/cig)	80	72	88	2	66	60	72	3
	77	72	87	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	65	55	75	2	48	46	51	3
	54	47	60	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	108	100	116	2	108	97	115	3
	111	107	119	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	14	13	15	2	10	9	11	3
	14	13	14	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	11.8	11.4	12.3	3	10.9	10.2	11.5	3
B(a)A (ng/cig)	23.1	21.8	25.3	3	23.1	22.0	24.1	3
B(b/j)FL (ng/cig)	11.0	10.5	11.5	3	10.7	10.0	11.7	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Camel Filters Hard Pack (2014)				Camel Filters Hard Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.9	5.7	6.2	3	5.5	5.5	5.6	3
Acrylamide (ug/cig)	4.6	3.7	5.4	3	3.5	3.2	3.8	3
Naphthalene (ng/cig)	866	746	927	3	486	442	532	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Camel Menthol Silver Hard Pack (crushed) (2014)				Camel Menthol Silver Hard Pack (crushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.8	0.8	0.9	8	0.9	0.9	0.9	8
Acetaldehyde (ug/cig)	492	459	527	3	519	506	525	3
Crotonaldehyde (ug/cig)	8	7	9	3	9	8	9	3
Formaldehyde (ug/cig)	20	18	23	3	17	13	19	3
Arsenic (ng/cig)	3.0	2.9	3.0	3	2.9	2.7	3.0	3
Cadmium (ng/cig)	32	31	32	3	35	33	37	3
NNN (ng/cig)	66	65	67	3	57	56	59	3
NNK (ng/cig)	49	43	53	3	38	37	39	3
NAT (ng/cig)	95	89	98	3	86	83	88	3
NAB (ng/cig)	12	11	12	3	8	7	8	3
B(a)P (ng/cig)	9.4	9.2	9.8	3	9.1	8.7	9.3	3
B(a)A (ng/cig)	16.7	15.9	17.5	3	18.3	18.0	18.9	3
B(b/j)FL (ng/cig)	9.5	9.3	9.8	3	8.6	7.6	9.8	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	4.3	4.3	4.4	3	4.3	4.1	4.5	3
Acrylamide (ug/cig)	2.4	2.2	2.5	3	1.9	1.8	2.0	3
Naphthalene (ng/cig)	215	203	237	3	103	90	124	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Camel Menthol Silver Hard Pack (uncrushed) (2014)				Camel Menthol Silver Hard Pack (uncrushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.9	0.8	0.9	8	0.8	0.7	0.9	8
Acetaldehyde (ug/cig)	565	534	585	3	565	533	582	3
Crotonaldehyde (ug/cig)	9	9	10	3	11	10	11	3
Formaldehyde (ug/cig)	23	22	25	3	16	16	17	3
Arsenic (ng/cig)	2.9	2.8	2.9	3	2.6	2.4	2.8	3
Cadmium (ng/cig)	37	36	38	3	36	33	38	3
NNN (ng/cig)	64	60	71	3	53	51	56	3
NNK (ng/cig)	42	39	45	3	40	39	41	3
NAT (ng/cig)	92	91	94	3	80	75	85	3
NAB (ng/cig)	11	11	12	3	7	7	8	3
B(a)P (ng/cig)	9.9	9.1	10.3	3	7.9	7.5	8.5	3
B(a)A (ng/cig)	16.5	15.6	17.2	3	15.7	14.5	17.2	3
B(b/j)FL (ng/cig)	9.5	9.0	10.0	3	7.8	7.7	8.0	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	4.4	4.0	4.7	3	4.2	3.7	4.6	3
Acrylamide (ug/cig)	2.4	2.3	2.6	3	2.2	1.8	2.4	3
Naphthalene (ng/cig)	252	232	269	3	211	205	216	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Kent Kings (2014)				Kent Kings (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	0.9	0.8	1.0	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	678	677	679	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	13	13	13	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	17	17	18	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	3.3	3.1	3.6	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	44	44	44	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	111	103	115	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	69	67	71	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	125	122	130	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	17	16	18	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	8.6	8.1	9.1	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	17.9	16.7	19.3	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	8.8	8.2	9.1	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	4.4	4.1	4.7	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	2.8	2.7	2.9	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	483	448	528	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Kool Box (2014)				Kool Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.2	1.1	1.2	7	1.1	1.1	1.2	8
Acetaldehyde (ug/cig)	677	651	716	3	702	674	718	3
Crotonaldehyde (ug/cig)	15	14	17	3	15	15	16	3
Formaldehyde (ug/cig)	26	20	31	3	21	20	22	3
Arsenic (ng/cig)	3.7	3.6	3.7	3	3.8	3.6	3.9	3
Cadmium (ng/cig)	47	46	49	3	50	49	53	3
NNN (ng/cig)	83	78	91	3	80	78	82	3
NNK (ng/cig)	62	53	66	3	54	52	57	3
NAT (ng/cig)	121	119	122	3	108	105	111	3
NAB (ng/cig)	16	15	16	3	10	9	10	3
B(a)P (ng/cig)	11.3	11.3	11.4	3	11.7	11.2	12.4	3
B(a)A (ng/cig)	22.6	22.3	23.1	3	25.1	22.1	30.4	3
B(b/j)FL (ng/cig)	10.9	10.7	11.2	3	11.8	11.6	12.0	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	2.1 <sup>†</sup>	1.9 <sup>*</sup>	2.3	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.7	5.6	5.8	3	6.2	5.6	7.3	3
Acrylamide (ug/cig)	4.3	3.7	4.6	3	2.9	2.8	3.0	3
Naphthalene (ng/cig)	760	752	770	3	527	477	561	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	L&M Blue Pack Box (2014)				L&M Blue Pack Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.6	0.6	0.7	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	537	533	541	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	12	12	13	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	21	19	22	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	2.4	2.3	2.6	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	39	38	40	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	111	107	116	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	81	80	83	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	136	136	137	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	15	14	15	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	7.9	7.6	8.5	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	14.7	14.2	15.2	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	8.7	8.5	8.8	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	4.4	4.3	4.5	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	2.1	1.9	2.2	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	316	284	353	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	L&M Box (2014)				L&M Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.8	0.7	0.8	8	0.8	0.7	0.8	8
Acetaldehyde (ug/cig)	706	676	730	3	727	720	731	3
Crotonaldehyde (ug/cig)	18	17	18	3	17	17	18	3
Formaldehyde (ug/cig)	31	30	32	3	27	23	29	3
Arsenic (ng/cig)	3.0	2.8	3.1	3	2.5	2.5	2.5	3
Cadmium (ng/cig)	39	37	40	3	31	31	31	3
NNN (ng/cig)	119	114	127	3	120	115	124	3
NNK (ng/cig)	87	83	89	3	94	83	104	3
NAT (ng/cig)	133	124	139	3	123	117	126	3
NAB (ng/cig)	16	14	16	3	13	12	14	3
B(a)P (ng/cig)	9.4	9.2	9.6	3	8.5	7.6	9.2	3
B(a)A (ng/cig)	18.6	18.0	19.0	3	17.7	17.1	18.5	3
B(b/j)FL (ng/cig)	9.7	9.7	9.7	3	8.8	7.8	9.3	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	2.0 <sup>†</sup>	1.9 <sup>*</sup>	2.1	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	4.9	4.7	5.0	3	4.6	4.2	4.9	3
Acrylamide (ug/cig)	2.3	2.3	2.4	3	2.4	2.2	2.6	3
Naphthalene (ng/cig)	498	492	502	3	404	387	416	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	L&M Menthol 100's Box (2014)				L&M Menthol 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.0	1.0	1.0	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	793	775	806	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	18	18	18	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	41	39	43	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	3.9	3.7	4.0	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	59	59	60	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	128	125	131	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	107	105	109	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	150	146	152	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	17	17	17	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	9.0	8.9	9.1	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	18.4	18.0	18.7	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	9.4	9.3	9.6	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	5.0	4.7	5.3	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	3.2	3.0	3.5	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	420	385	443	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro 100's Box (2014)				Marlboro 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.1	1.0	1.1	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	742	741	744	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	16	16	16	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	30	30	30	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	5.1	4.9	5.3	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	55	55	56	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	175	163	196	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	143	124	181	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	199	191	210	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	20	20	21	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	11.0	10.6	11.5	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	22.0	20.8	22.9	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	10.0	9.3	10.9	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	5.3	4.7	6.1	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	2.8	2.7	3.1	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	493	467	543	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro 72s Blue Pack Box (2014)				Marlboro 72s Blue Pack Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.8	0.8	0.9	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	654	652	659	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	16	16	16	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	37	35	39	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	3.2	3.2	3.3	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	47	45	48	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	123	115	131	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	92	86	96	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	162	156	165	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	15	14	15	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	7.3	6.7	7.6	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	14.0	13.5	14.6	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	7.7	7.3	8.2	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	4.0	3.9	4.0	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	3.1	3.0	3.2	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	500	477	527	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro 72s Box (2014)				Marlboro 72s Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.9	0.9	1.0	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	636	599	667	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	16	15	17	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	29	29	30	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	3.8	3.7	3.9	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	47	45	49	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	126	124	128	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	93	89	99	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	181	170	199	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	18	18	18	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	8.4	8.1	8.7	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	15.9	15.0	17.0	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	8.6	8.2	9.2	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	4.6	4.5	4.7	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	3.8	3.6	3.9	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	519	459	567	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Blend No. 27 Box (2014)				Marlboro Blend No. 27 Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.8	0.7	0.8	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	634	611	663	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	15	14	15	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	35	33	36	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	3.7	3.5	3.9	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	45	44	46	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	98	93	105	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	83	79	91	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	108	102	117	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	12	11	12	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	8.8	7.9	9.6	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	16.8	15.3	17.8	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	8.8	8.1	9.5	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	4.6	4.4	4.8	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	2.3	2.1	2.5	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	366	323	393	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Box (2014)				Marlboro Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.0	1.0	1.1	8	0.9	0.9	1.0	8
Acetaldehyde (ug/cig)	679	663	694	3	715	715	716	3
Crotonaldehyde (ug/cig)	16	16	16	3	18	18	18	3
Formaldehyde (ug/cig)	27	27	28	3	33	33	34	3
Arsenic (ng/cig)	4.2	4.1	4.4	3	4.5	4.5	4.6	3
Cadmium (ng/cig)	55	54	56	3	51	51	52	3
NNN (ng/cig)	131	128	133	3	145	140	148	3
NNK (ng/cig)	101	94	106	3	110	107	113	3
NAT (ng/cig)	173	170	175	3	175	172	177	3
NAB (ng/cig)	19	18	19	3	17	17	17	3
B(a)P (ng/cig)	9.3	9.0	9.4	3	9.2	8.6	9.9	3
B(a)A (ng/cig)	17.9	17.0	19.3	3	19.1	18.3	19.8	3
B(b/j)FL (ng/cig)	9.8	9.1	10.2	3	8.7	8.0	9.2	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.3	5.0	5.4	3	4.3	4.2	4.6	3
Acrylamide (ug/cig)	3.4	3.2	3.5	3	2.7	2.5	2.9	3
Naphthalene (ng/cig)	521	465	598	3	487	454	506	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Edge Box (2014)				Marlboro Edge Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	0.9	0.8	1.0	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	718	699	753	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	16	15	18	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	38	36	39	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	3.2	3.1	3.2	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	40	39	41	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	138	133	141	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	108	102	111	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	177	171	187	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	12	12	13	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	9.7	8.7	11.4	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	18.1	16.6	19.4	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	7.7	6.4	8.8	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	4.5	4.2	4.7	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	2.6	2.5	2.7	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	465	447	491	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Eighty Threes Box (2014)				Marlboro Eighty Threes Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.0	0.9	1.1	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	662	660	665	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	15	15	15	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	24	24	25	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	4.5	4.4	4.8	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	54	52	55	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	155	145	165	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	113	105	122	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	180	174	187	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	17	17	17	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	9.6	8.9	10.2	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	19.4	18.5	20.5	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	9.6	8.6	10.9	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	2.0 <sup>†</sup>	1.9 <sup>*</sup>	2.1	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	4.6	4.3	4.9	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	2.9	2.8	2.9	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	502	488	523	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Gold Pack 100's Box (2014)				Marlboro Gold Pack 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	0.7	0.7	0.8	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	599	563	623	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	11	9	11	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	16	15	18	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	3.1	3.0	3.2	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	35	35	36	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	126	120	133	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	94	87	99	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	151	148	155	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	15	14	15	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	7.1	6.4	7.9	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	16.1	15.1	17.1	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	6.8	6.4	7.2	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	3.8	3.6	3.9	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	1.4	1.3	1.5	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	323	316	332	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Gold Pack Box (2014)				Marlboro Gold Pack Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.8	0.7	0.8	8	0.7	0.7	0.8	8
Acetaldehyde (ug/cig)	555	535	588	3	614	598	627	3
Crotonaldehyde (ug/cig)	11	10	11	3	12	11	12	3
Formaldehyde (ug/cig)	21	20	22	3	23	22	24	3
Arsenic (ng/cig)	3.3	3.1	3.3	3	3.2	3.0	3.4	3
Cadmium (ng/cig)	47	46	47	3	41	39	42	3
NNN (ng/cig)	104	99	108	3	106	100	113	3
NNK (ng/cig)	77	74	80	3	77	76	79	3
NAT (ng/cig)	134	130	139	3	126	121	133	3
NAB (ng/cig)	15	14	15	3	13	13	14	3
B(a)P (ng/cig)	7.3	7.1	7.5	3	8.0	6.6	10.2	3
B(a)A (ng/cig)	14.5	13.4	15.2	3	15.1	14.6	15.5	3
B(b/j)FL (ng/cig)	7.9	7.6	8.1	3	7.2	6.5	7.6	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	4.1	4.0	4.2	3	3.8	3.4	4.4	3
Acrylamide (ug/cig)	2.3	2.2	2.3	3	1.8	1.7	1.9	3
Naphthalene (ng/cig)	261	245	272	3	261	238	277	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Menthol Box (2014)				Marlboro Menthol Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.0	0.9	1.2	8	1.0	1.0	1.1	8
Acetaldehyde (ug/cig)	726	706	758	3	705	688	730	3
Crotonaldehyde (ug/cig)	17	17	18	3	15	14	15	3
Formaldehyde (ug/cig)	42	41	44	3	36	35	39	3
Arsenic (ng/cig)	4.1	3.9	4.3	3	3.9	3.9	4.0	3
Cadmium (ng/cig)	60	58	62	3	52	51	53	3
NNN (ng/cig)	120	119	121	3	160	157	165	3
NNK (ng/cig)	114	108	119	3	124	116	130	3
NAT (ng/cig)	162	159	166	3	187	181	197	3
NAB (ng/cig)	17	16	18	3	17	16	17	3
B(a)P (ng/cig)	10.2	9.4	11.1	3	9.1	8.7	9.5	3
B(a)A (ng/cig)	18.1	17.5	19.2	3	16.3	15.7	16.7	3
B(b/j)FL (ng/cig)	10.1	10.0	10.2	3	9.0	8.8	9.3	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.5	5.3	5.8	3	4.7	4.5	4.9	3
Acrylamide (ug/cig)	4.2	4.0	4.5	3	3.6	3.4	3.8	3
Naphthalene (ng/cig)	560	533	590	3	466	446	506	3

NNN = N'-nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'-nitrosoanatabine  
 NAB= N'-nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

	Marlboro Menthol Gold Pack Box (2014)				Marlboro Menthol Gold Pack Box (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	0.7	0.6	0.8	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	492	470	510	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	9	8	9	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	22	21	22	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	2.3	2.2	2.4	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	31	30	32	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	87	85	90	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	73	70	76	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	102	98	104	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	10	10	12	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	6.2	5.9	6.3	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	14.5	12.6	16.4	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	5.7	5.4	6.3	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	2.9	2.8	3.0	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	1.6	1.5	1.7	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	266	246	279	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Menthol Silver Pack Box (2014)				Marlboro Menthol Silver Pack Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.5	0.5	0.5	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	371	362	386	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	7	7	8	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	10	10	11	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	1.7	1.7	1.8	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	23	22	24	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	62	58	67	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	39	37	41	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	78	77	80	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	10	10	10	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	4.4	4.3	4.5	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	8.9	8.7	9.0	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	4.5	4.4	4.5	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	2.4	2.3	2.4	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	1.1	1.1	1.2	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	90	76	105	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

	Marlboro Menthol Special Blend 100's (Black) Box (2014)				Marlboro Menthol Special Blend 100's (Black) Box (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.1	1.0	1.1	8	1.1	1.0	1.2	8
Acetaldehyde (ug/cig)	829	815	841	3	796	785	816	3
Crotonaldehyde (ug/cig)	18	18	19	3	16	15	17	3
Formaldehyde (ug/cig)	30	28	31	3	35	35	35	3
Arsenic (ng/cig)	5.3	5.1	5.5	3	5.0	4.9	5.2	3
Cadmium (ng/cig)	72	71	72	3	61	60	63	3
NNN (ng/cig)	162	161	164	3	154	154	154	3
NNK (ng/cig)	109	108	110	3	110	105	119	3
NAT (ng/cig)	205	199	209	3	185	177	194	3
NAB (ng/cig)	22	22	23	3	18	18	19	3
B(a)P (ng/cig)	11.7	11.5	11.9	3	11.5	11.4	11.5	3
B(a)A (ng/cig)	23.7	22.7	24.5	3	19.2	18.9	19.6	3
B(b/j)FL (ng/cig)	11.1	10.8	11.3	3	10.9	10.6	11.1	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.7	5.5	5.8	3	5.3	5.0	5.5	3
Acrylamide (ug/cig)	3.6	3.3	3.9	3	2.8	2.6	3.0	3
Naphthalene (ng/cig)	546	506	588	3	425	361	468	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro NXT Box (crushed) (2014)				Marlboro NXT Box (crushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	0.7	0.7	0.8	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	450	436	458	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	7	6	7	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	18	15	20	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	2.2	2.0	2.3	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	27	26	28	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	121	112	127	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	91	88	94	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	133	127	137	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	13	12	14	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	7.2	6.9	7.6	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	13.5	13.1	14.0	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	7.4	7.1	7.5	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	3.9	3.7	4.1	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	1.8	1.8	1.9	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	112	101	134	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro NXT Box (uncrushed) (2014)				Marlboro NXT Box (uncrushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	0.7	0.6	0.7	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	398	389	403	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	8	8	8	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	15	15	15	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	1.8	1.7	1.8	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	25	23	25	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	79	71	86	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	61	56	70	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	91	86	99	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	9	9	10	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	6.9	6.6	7.1	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	15.2	14.1	16.8	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	6.7	6.6	6.8	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	3.5	3.0	3.9	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	1.5	1.5	1.6	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	242	231	249	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Silver Pack 100's Box (2014)				Marlboro Silver Pack 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.5	0.5	0.5	8	0.5	0.4	0.5	8
Acetaldehyde (ug/cig)	372	334	391	3	329	318	343	3
Crotonaldehyde (ug/cig)	6	6	7	3	4	4	4	3
Formaldehyde (ug/cig)	8	7	8	3	7	6	7	3
Arsenic (ng/cig)	1.5	1.4	1.5	3	1.3	1.3	1.4	3
Cadmium (ng/cig)	20	19	21	3	17	16	18	3
NNN (ng/cig)	66	64	69	3	71	70	73	3
NNK (ng/cig)	45	44	47	3	51	49	53	3
NAT (ng/cig)	91	88	94	3	89	86	91	3
NAB (ng/cig)	11	11	11	3	9	9	10	3
B(a)P (ng/cig)	4.4	4.3	4.5	3	5.1	4.9	5.3	3
B(a)A (ng/cig)	8.3	8.0	8.5	3	10.7	9.8	11.4	3
B(b/j)FL (ng/cig)	4.9	4.8	4.9	3	5.1	4.5	6.2	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	2.6	2.4	2.6	3	2.5	2.4	2.5	3
Acrylamide (ug/cig)	1.1	1.1	1.3	3	0.8	0.8	0.8	3
Naphthalene (ng/cig)	73	64	89	3	71	64	83	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Silver Pack Box (2014)				Marlboro Silver Pack Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.5	0.4	0.5	8	0.4	0.4	0.5	8
Acetaldehyde (ug/cig)	344	328	361	3	352	321	368	3
Crotonaldehyde (ug/cig)	7	7	7	3	5	4	5	3
Formaldehyde (ug/cig)	9	8	9	3	8	8	8	3
Arsenic (ng/cig)	1.4	1.4	1.4	3	1.6	1.5	1.6	3
Cadmium (ng/cig)	21	20	22	3	20	19	21	3
NNN (ng/cig)	65	62	67	3	57	53	63	3
NNK (ng/cig)	46	45	48	3	39	38	40	3
NAT (ng/cig)	85	79	89	3	74	71	75	3
NAB (ng/cig)	10	10	11	3	8	7	8	3
B(a)P (ng/cig)	4.4	4.1	4.5	3	4.6	4.4	4.9	3
B(a)A (ng/cig)	8.1	7.4	8.6	3	9.7	8.9	10.6	3
B(b/j)FL (ng/cig)	4.7	4.4	5.1	3	4.8	4.2	5.6	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	2.5	2.2	2.6	3	2.4	2.3	2.5	3
Acrylamide (ug/cig)	1.0	0.9	1.0	3	0.9	0.9	0.9	3
Naphthalene (ng/cig)	85	76	96	3	124	113	146	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Special Blend (Black) Box (2014)				Marlboro Special Blend (Black) Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.9	0.9	1.0	8	0.9	0.9	1.0	8
Acetaldehyde (ug/cig)	666	635	684	3	748	722	762	3
Crotonaldehyde (ug/cig)	16	15	17	3	18	17	18	3
Formaldehyde (ug/cig)	30	29	31	3	34	32	35	3
Arsenic (ng/cig)	4.8	4.5	5.1	3	4.5	4.4	4.6	3
Cadmium (ng/cig)	63	61	66	3	55	55	56	3
NNN (ng/cig)	144	138	152	3	142	139	145	3
NNK (ng/cig)	100	90	111	3	104	99	107	3
NAT (ng/cig)	172	164	181	3	171	167	175	3
NAB (ng/cig)	19	18	19	3	17	16	18	3
B(a)P (ng/cig)	10.2	10.0	10.5	3	9.5	9.3	9.7	3
B(a)A (ng/cig)	18.3	17.6	19.2	3	20.5	19.1	21.9	3
B(b/j)FL (ng/cig)	10.1	9.4	10.6	3	9.0	8.8	9.4	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.1	4.7	5.4	3	4.6	4.2	5.0	3
Acrylamide (ug/cig)	3.0	2.9	3.1	3	2.8	2.6	2.9	3
Naphthalene (ng/cig)	495	475	518	3	558	537	598	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Special Blend (Gold) Box (2014)				Marlboro Special Blend (Gold) Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.7	0.7	0.8	8	0.7	0.7	0.7	8
Acetaldehyde (ug/cig)	522	511	534	3	506	497	516	3
Crotonaldehyde (ug/cig)	10	9	11	3	9	9	10	3
Formaldehyde (ug/cig)	18	16	21	3	16	15	16	3
Arsenic (ng/cig)	2.8	2.8	2.9	3	2.7	2.6	2.8	3
Cadmium (ng/cig)	42	42	43	3	33	33	34	3
NNN (ng/cig)	104	100	107	3	89	89	90	3
NNK (ng/cig)	74	72	79	3	67	65	71	3
NAT (ng/cig)	143	134	149	3	105	104	106	3
NAB (ng/cig)	16	15	16	3	11	10	12	3
B(a)P (ng/cig)	7.5	7.2	7.8	3	7.3	6.0	9.6	3
	N/A	N/A	N/A	N/A	6.9	6.6	7.3	3
B(a)A (ng/cig)	14.1	13.8	14.2	3	16.1	13.8	20.2	3
	N/A	N/A	N/A	N/A	13.4	12.0	14.8	3
B(b/j)FL (ng/cig)	7.6	7.4	7.6	3	6.9	5.8	8.9	3
	N/A	N/A	N/A	N/A	7.3	6.9	7.6	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

	Marlboro Special Blend (Gold) Box (2014)				Marlboro Special Blend (Gold) Box (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9*	2.9*	3	2.9 <sup>†</sup>	2.9*	2.9*	3
	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9*	2.9*	3
Indeno(c,d)P (ng/cig)	4.0	3.9	4.1	3	4.0	3.5	4.8	3
	N/A	N/A	N/A	N/A	3.3	3.3	3.4	3
Acrylamide (ug/cig)	2.0	1.9	2.1	3	1.6	1.6	1.6	3
Naphthalene (ng/cig)	280	271	288	3	358	267	507	3
	N/A	N/A	N/A	N/A	326	305	343	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Marlboro Special Blend (Red) Box (2014)				Marlboro Special Blend (Red) Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	0.8	0.7	0.9	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	607	601	611	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	13	13	13	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	21	20	22	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	3.5	3.4	3.6	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	42	41	43	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	110	109	111	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	85	84	88	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	135	133	137	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	13	13	14	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	8.2	8.0	8.5	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	14.9	14.6	15.3	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	7.8	7.7	8.0	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	4.4	4.2	4.5	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	2.1	2.0	2.2	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	320	285	350	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

	Marlboro Special Blend 100's (Red) Box (2014)				Marlboro Special Blend 100's (Red) Box (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.0	0.8	1.0	8	0.9	0.8	1.0	8
Acetaldehyde (ug/cig)	653	633	683	3	690	689	691	3
Crotonaldehyde (ug/cig)	15	14	16	3	14	14	15	3
Formaldehyde (ug/cig)	23	23	25	3	19	19	20	3
Arsenic (ng/cig)	3.7	3.5	3.9	3	3.3	3.2	3.4	3
Cadmium (ng/cig)	53	51	55	3	40	40	41	3
NNN (ng/cig)	138	131	145	3	142	138	147	3
NNK (ng/cig)	105	100	109	3	102	100	104	3
NAT (ng/cig)	193	183	201	3	163	161	165	3
NAB (ng/cig)	21	21	22	3	18	17	18	3
B(a)P (ng/cig)	9.6	9.4	9.9	3	9.0	8.9	9.1	3
B(a)A (ng/cig)	18.3	17.8	18.8	3	19.3	18.1	20.7	3
B(b/j)FL (ng/cig)	10.1	10.0	10.3	3	8.3	7.5	9.3	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.1	5.1	5.2	3	4.1	3.8	4.4	3
Acrylamide (ug/cig)	2.8	2.6	2.9	3	2.2	2.1	2.3	3
Naphthalene (ng/cig)	485	465	504	3	496	467	526	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

	Marlboro Special Blend 100's Box (Gold Pack) (2014)				Marlboro Special Blend 100's Box (Gold Pack) (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	0.8	0.7	0.8	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	554	530	566	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	9	8	9	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	14	13	15	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	2.8	2.6	3.0	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	36	36	37	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	109	103	115	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	84	80	89	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	130	128	134	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	13	13	14	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	8.4	8.3	8.5	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	14.9	14.8	15.0	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	8.0	7.9	8.1	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	4.5	4.4	4.7	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	1.7	1.6	1.7	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	246	235	267	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Maverick 100s Box (2014)				Maverick 100s Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.0	0.9	1.1	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	788	772	809	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	15	15	15	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	23	21	24	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	4.6	4.4	4.8	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	45	43	46	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	109	107	110	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	74	70	77	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	114	107	119	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	15	15	15	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	12.0	11.1	13.6	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	23.1	21.3	25.1	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	11.9	11.4	12.7	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	2.1	2.1	2.2	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	5.8	5.5	6.1	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	3.1	3.0	3.1	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	478	417	523	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Maverick Gold 100s Box (2014)				Maverick Gold 100s Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.6	0.6	0.7	7	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	507	490	522	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	7	7	7	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	13	12	14	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	2.5	2.4	2.5	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	22	21	22	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	76	74	77	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	55	53	57	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	81	80	82	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	11	11	11	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	6.6	6.1	6.9	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	13.2	12.6	13.8	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	6.7	6.4	6.9	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	3.3	2.9	3.5	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	1.6	1.5	1.8	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	160	142	175	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Maverick Menthol 100 Box (2014)				Maverick Menthol 100 Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.1	1.1	1.1	8	1.1	1.1	1.2	8
Acetaldehyde (ug/cig)	813	791	832	3	872	855	904	3
Crotonaldehyde (ug/cig)	18	17	18	3	16	16	16	3
Formaldehyde (ug/cig)	31	31	32	3	29	29	30	3
Arsenic (ng/cig)	4.2	4.2	4.2	3	4.7	4.5	4.8	3
Cadmium (ng/cig)	50	50	50	3	51	51	52	3
NNN (ng/cig)	135	130	140	3	125	123	128	3
NNK (ng/cig)	98	95	100	3	86	82	92	3
NAT (ng/cig)	146	144	150	3	144	141	146	3
NAB (ng/cig)	20	20	20	3	17	16	17	3
B(a)P (ng/cig)	10.6	9.8	11.1	3	11.5	11.2	11.9	3
B(a)A (ng/cig)	20.0	19.6	20.5	3	20.0	19.1	20.8	3
B(b/j)FL (ng/cig)	14.0	12.9	14.7	3	12.8	12.1	13.5	3
B(k)FL (ng/cig)	2.1 <sup>†</sup>	1.9 <sup>*</sup>	2.2	3	2.6	2.5	2.8	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.3	4.9	5.6	3	6.2	6.0	6.6	3
Acrylamide (ug/cig)	4.0	3.7	4.1	3	4.2	4.0	4.4	3
Naphthalene (ng/cig)	470	437	494	3	432	397	459	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Misty Blue 120's Box (2014)				Misty Blue 120's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.0	0.9	1.1	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	530	520	546	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	9	9	9	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	14	13	15	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	2.7	2.5	2.9	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	28	27	29	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	71	67	74	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	61	59	62	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	97	95	100	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	10	9	11	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	10.9	10.4	11.3	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	23.6	20.5	26.4	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	11.8	10.7	12.9	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	2.0 <sup>†</sup>	1.9 <sup>*</sup>	2.3	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	6.1	5.5	6.5	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	2.6	2.5	2.7	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	232	213	243	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Misty Menthol Green 120's Box (2014)				Misty Menthol Green 120's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.8	0.7	0.8	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	478	453	505	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	10	9	10	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	14	12	16	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	2.6	2.4	2.8	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	25	22	26	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	45	43	47	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	46	44	49	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	62	58	67	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	9	9	10	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	9.2	8.8	9.6	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	18.3	17.4	19.1	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	11.0	10.3	11.6	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	2.0 <sup>†</sup>	1.9 <sup>*</sup>	2.1	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	5.3	5.1	5.5	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	2.7	2.4	3.0	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	253	232	267	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	More 120's Soft Pack (2014)				More 120's Soft Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.9	0.9	1.0	8	0.9	0.8	1.0	8
Acetaldehyde (ug/cig)	637	574	686	3	738	736	740	3
Crotonaldehyde (ug/cig)	12	10	13	3	15	15	15	3
Formaldehyde (ug/cig)	16	13	18	3	19	19	19	3
Arsenic (ng/cig)	6.2	5.9	6.5	3	4.1	4.0	4.2	3
Cadmium (ng/cig)	34	33	35	3	43	41	44	3
NNN (ng/cig)	61	56	68	3	71	64	77	3
NNK (ng/cig)	49	41	59	3	63	62	64	3
NAT (ng/cig)	73	64	80	3	95	91	99	3
NAB (ng/cig)	10	9	11	3	9	9	10	3
B(a)P (ng/cig)	13.4	13.2	13.6	3	10.8	10.3	11.6	3
B(a)A (ng/cig)	21.8	21.4	22.7	3	20.9	18.8	23.6	3
B(b/j)FL (ng/cig)	13.9	13.3	14.3	3	11.2	9.9	12.6	3
B(k)FL (ng/cig)	2.4	2.3	2.4	3	2.4	2.4	2.4	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	6.3	6.1	6.6	3	5.4	5.2	5.8	3
Acrylamide (ug/cig)	2.7	2.7	2.7	3	2.6	2.5	2.7	3
Naphthalene (ng/cig)	343	312	382	3	298	268	342	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Natural American Spirit Full-Bodied Taste (2014)				Natural American Spirit Full-Bodied Taste (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.9	1.9	2.0	8	1.9	1.7	2.0	8
Acetaldehyde (ug/cig)	686	673	707	3	722	693	750	3
Crotonaldehyde (ug/cig)	18	17	19	3	21	20	22	3
Formaldehyde (ug/cig)	38	36	41	3	47	44	49	3
Arsenic (ng/cig)	4.4	4.3	4.6	3	4.5	4.1	4.8	3
Cadmium (ng/cig)	71	67	74	3	75	68	80	3
NNN (ng/cig)	15	15	16	3	11	11	11	3
NNK (ng/cig)	17	16	18	3	15	13	19	3
NAT (ng/cig)	18	17	18	3	20	20	21	3
NAB (ng/cig)	3	3	3	3	2	2	3	3
B(a)P (ng/cig)	14.6	14.2	15.1	3	15.0	13.4	16.6	3
B(a)A (ng/cig)	27.8	26.7	29.2	3	32.1	30.9	33.0	3
B(b/j)FL (ng/cig)	11.4	11.3	11.8	3	12.3	11.4	12.9	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	2.0 <sup>†</sup>	1.9 <sup>*</sup>	2.1	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	6.4	6.1	6.8	3	6.6	6.0	7.1	3
Acrylamide (ug/cig)	4.0	3.8	4.4	3	4.0	3.9	4.2	3
Naphthalene (ng/cig)	1758	1589	1844	3	932	876	968	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

	Natural American Spirit Made With Organic Tobacco Full-Bodied Taste (2014)				Natural American Spirit Made With Organic Tobacco Full-Bodied Taste (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.9	1.7	2.0	8	1.9	1.8	2.0	8
Acetaldehyde (ug/cig)	610	568	646	3	609	608	609	3
Crotonaldehyde (ug/cig)	16	14	16	3	15	15	15	3
Formaldehyde (ug/cig)	24	23	25	3	22	22	22	3
Arsenic (ng/cig)	1.9	1.9	2.0	3	1.9	1.8	2.0	3
Cadmium (ng/cig)	53	51	54	3	55	53	56	3
NNN (ng/cig)	30	29	31	3	23	23	25	3
NNK (ng/cig)	28	24	31	3	22	21	23	3
NAT (ng/cig)	35	33	36	3	32	29	34	3
NAB (ng/cig)	8	8	8	3	5	5	6	3
B(a)P (ng/cig)	10.4	10.2	10.6	3	9.4	9.0	10.0	3
B(a)A (ng/cig)	19.1	18.5	19.5	3	20.1	18.9	21.2	3
B(b/j)FL (ng/cig)	9.0	8.9	9.2	3	8.4	7.7	9.2	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	4.9	4.7	5.0	3	4.1	4.1	4.2	3
Acrylamide (ug/cig)	4.1	3.8	4.6	3	3.9	3.5	4.3	3
Naphthalene (ng/cig)	723	689	780	3	653	641	671	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

	Natural American Spirit Made With Organic Tobacco Mellow Taste (2014)				Natural American Spirit Made With Organic Tobacco Mellow Taste (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.1	1.1	1.3	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	436	421	451	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	10	10	10	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	12	11	13	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	1.1	1.1	1.1	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	30	29	30	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	15	15	16	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	12	11	13	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	19	18	19	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	4	4	4	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	5.8	5.3	6.8	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	12.6	12.2	12.9	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	5.5	4.9	6.7	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	2.5	2.4	2.8	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	1.8	1.8	1.9	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	294	275	324	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

	Natural American Spirit Mellow Taste (2014)				Natural American Spirit Mellow Taste (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.5	1.4	1.6	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	595	593	597	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	16	15	16	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	27	26	28	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	3.3	3.2	3.4	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	54	52	58	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	11	10	12	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	12	12	13	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	20	20	21	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	2	2	2	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	12.1	11.9	12.5	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	25.1	24.5	26.1	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	11.4	10.0	13.5	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	2.3	2.2	2.5	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	5.4	5.3	5.5	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	2.7	2.4	3.2	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	689	670	712	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

	Natural American Spirit Menthol Mellow Taste (2014)				Natural American Spirit Menthol Mellow Taste (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.8	1.7	1.9	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	502	457	588	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	11	10	14	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	18	16	22	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	2.4	2.3	2.4	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	48	47	49	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	17	16	18	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	18	16	21	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	23	23	25	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	4	4	4	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	11.0	10.6	11.3	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	21.7	20.4	22.7	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	12.1	11.5	12.6	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	2.3	2.1	2.4	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	5.2	5.0	5.4	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	3.3	3.0	3.7	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	645	632	659	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

	Natural American Spirit Perique Blend Rich Robust Taste (2014)				Natural American Spirit Perique Blend Rich Robust Taste (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.6	1.5	1.6	8	2.1	2.1	2.3	8
Acetaldehyde (ug/cig)	673	657	687	3	715	695	741	3
Crotonaldehyde (ug/cig)	17	16	17	3	19	18	21	3
Formaldehyde (ug/cig)	33	33	34	3	33	28	40	3
Arsenic (ng/cig)	4.4	4.2	4.6	3	5.5	5.4	5.6	3
Cadmium (ng/cig)	94	90	96	3	116	112	120	3
NNN (ng/cig)	16	16	17	3	48	46	50	3
NNK (ng/cig)	29	27	30	3	23	23	24	3
NAT (ng/cig)	20	19	20	3	54	52	55	3
NAB (ng/cig)	3	3	3	3	6	6	7	3
B(a)P (ng/cig)	10.7	10.0	11.3	3	13.3	13.0	13.7	3
B(a)A (ng/cig)	20.2	19.8	20.6	3	26.9	25.8	27.9	3
B(b/j)FL (ng/cig)	9.8	9.5	10.0	3	10.8	10.4	11.0	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.5	5.4	5.7	3	5.3	5.2	5.5	3
Acrylamide (ug/cig)	3.1	2.8	3.3	3	4.3	3.8	4.6	3
Naphthalene (ng/cig)	622	577	646	3	942	886	991	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Newport Box (2014)				Newport Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.9	0.9	1.0	8	0.9	0.9	1.0	8
Acetaldehyde (ug/cig)	869	792	940	3	892	842	932	3
Crotonaldehyde (ug/cig)	20	18	22	3	18	17	19	3
Formaldehyde (ug/cig)	38	38	39	3	36	34	38	3
Arsenic (ng/cig)	3.0	2.9	3.2	3	3.7	3.6	3.8	3
Cadmium (ng/cig)	58	57	60	3	58	57	60	3
NNN (ng/cig)	95	93	99	3	134	127	139	3
NNK (ng/cig)	72	65	76	3	80	75	89	3
NAT (ng/cig)	136	130	140	3	132	127	137	3
NAB (ng/cig)	17	17	17	3	16	16	17	3
B(a)P (ng/cig)	9.2	8.9	9.5	3	9.7	9.1	10.5	3
B(a)A (ng/cig)	17.3	16.5	18.1	3	17.9	17.2	19.2	3
B(b/j)FL (ng/cig)	11.2	10.8	11.6	3	11.7	11.2	12.7	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	2.0 <sup>†</sup>	1.9 <sup>*</sup>	2.1	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.4	5.1	5.7	3	5.3	4.8	5.8	3
Acrylamide (ug/cig)	4.4	3.9	4.6	3	3.7	3.4	4.1	3
Naphthalene (ng/cig)	451	422	483	3	441	417	475	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Newport Box 100s (2014)				Newport Box 100s (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.2	1.2	1.3	8	1.2	1.0	1.2	8
Acetaldehyde (ug/cig)	717	691	738	3	826	823	828	3
Crotonaldehyde (ug/cig)	15	15	15	3	17	17	17	3
Formaldehyde (ug/cig)	30	27	33	3	27	27	27	3
Arsenic (ng/cig)	4.0	3.9	4.1	3	4.4	4.3	4.4	3
Cadmium (ng/cig)	61	61	62	3	56	55	57	3
NNN (ng/cig)	114	112	116	3	150	147	155	3
NNK (ng/cig)	87	83	89	3	93	91	98	3
NAT (ng/cig)	169	167	172	3	167	162	170	3
NAB (ng/cig)	21	21	22	3	21	21	21	3
B(a)P (ng/cig)	13.0	12.6	13.6	3	11.6	11.1	12.1	3
B(a)A (ng/cig)	24.1	23.4	25.2	3	21.7	20.8	23.1	3
B(b/j)FL (ng/cig)	14.8	14.3	15.1	3	14.0	13.3	15.0	3
B(k)FL (ng/cig)	2.3	2.0	2.5	3	2.2	2.0	2.3	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	7.5	7.0	8.0	3	6.2	5.9	6.4	3
Acrylamide (ug/cig)	4.0	3.9	4.2	3	4.0	3.8	4.1	3
Naphthalene (ng/cig)	478	447	526	3	467	444	505	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Newport Menthol Gold Box (2014)				Newport Menthol Gold Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	0.6	0.6	0.6	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	485	473	494	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	7	7	8	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	11	10	11	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	2.3	2.2	2.3	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	33	32	34	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	72	68	75	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	40	38	42	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	81	76	86	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	9	8	9	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	5.7	5.4	6.0	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	10.8	10.5	11.3	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	7.6	7.3	7.9	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	2.0 <sup>†</sup>	1.9 <sup>*</sup>	2.0	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	3.1	3.0	3.3	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	1.2	1.2	1.3	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	144	137	158	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Newport Non-Menthol Box (2014)				Newport Non-Menthol Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.0	0.9	1.0	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	846	798	908	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	20	18	22	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	39	36	41	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	3.0	2.9	3.1	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	57	56	59	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	95	94	96	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	75	73	78	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	133	129	137	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	16	15	17	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	9.3	9.2	9.4	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	16.8	16.2	17.6	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	13.0	12.9	13.2	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	2.2	2.1	2.2	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	5.1	5.0	5.2	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	3.6	3.4	3.8	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	517	512	525	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Now Soft Pack (2014)				Now Soft Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.1	0.1	0.2	8	0.1	0.1	0.2	8
Acetaldehyde (ug/cig)	137	131	141	3	81	69	87	3
Crotonaldehyde (ug/cig)	3	3	3	3	2 <sup>†</sup>	2 <sup>*</sup>	2 <sup>*</sup>	3
Formaldehyde (ug/cig)	2	2	2	3	2 <sup>†</sup>	1 <sup>*</sup>	2	3
Arsenic (ng/cig)	0.3 <sup>†</sup>	0.3 <sup>*</sup>	0.3	3	0.5	0.5	0.6	3
Cadmium (ng/cig)	5	4	5	3	5	5	5	3
NNN (ng/cig)	17	16	18	3	15	14	17	3
NNK (ng/cig)	10	8	11	3	9	8	11	3
NAT (ng/cig)	20	17	23	3	22	21	25	3
NAB (ng/cig)	4	3	4	3	3	2	3	3
B(a)P (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
B(a)A (ng/cig)	3.0 <sup>†</sup>	2.9 <sup>*</sup>	3.1	3	3.0 <sup>†</sup>	2.9 <sup>*</sup>	3.1	3
B(b/j)FL (ng/cig)	3.8 <sup>†</sup>	3.8 <sup>*</sup>	3.8 <sup>*</sup>	3	3.8 <sup>†</sup>	3.8 <sup>*</sup>	3.8 <sup>*</sup>	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	0.8	0.7	0.9	3	0.7	0.6	0.8	3
Acrylamide (ug/cig)	0.7	0.5	0.8	3	0.2	0.2	0.3	3
Naphthalene (ng/cig)	19 <sup>†</sup>	19 <sup>*</sup>	19 <sup>*</sup>	3	28	26	31	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Pall Mall Blue 100's Box (2014)				Pall Mall Blue 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.9	0.8	1.0	8	0.8	0.8	0.9	8
Acetaldehyde (ug/cig)	555	549	564	3	506	417	570	6
Crotonaldehyde (ug/cig)	10	10	11	3	8	6	10	6
Formaldehyde (ug/cig)	18	16	19	3	12	9	14	6
Arsenic (ng/cig)	2.7	2.6	2.8	3	2.4	2.4	2.5	3
Cadmium (ng/cig)	41	40	42	3	34	33	35	3
NNN (ng/cig)	74	68	83	3	49	49	50	3
NNK (ng/cig)	63	59	67	3	40	39	42	3
NAT (ng/cig)	97	90	102	3	72	68	73	3
NAB (ng/cig)	12	11	12	3	7	6	8	3
B(a)P (ng/cig)	11.7	11.0	12.5	3	10.0	8.5	11.2	3
B(a)A (ng/cig)	22.4	20.9	24.7	3	21.8	20.8	22.3	3
B(b/j)FL (ng/cig)	11.5	11.0	12.2	3	9.7	8.5	10.9	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	2.0	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.9	5.5	6.2	3	5.2	5.1	5.3	3
Acrylamide (ug/cig)	2.5	2.3	2.7	3	1.8	1.7	2.0	3
Naphthalene (ng/cig)	329	297	350	3	261	254	269	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Pall Mall Menthol 100's Box (2014)				Pall Mall Menthol 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.0	0.9	1.0	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	594	579	606	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	11	11	11	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	19	18	20	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	3.2	3.1	3.2	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	39	38	40	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	59	57	61	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	49	44	53	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	88	84	91	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	8	8	8	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	12.6	12.1	13.3	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	24.7	24.3	25.3	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	12.7	12.5	12.9	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	2.1 <sup>†</sup>	1.9 <sup>*</sup>	2.3	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	6.1	5.4	6.8	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	2.4	2.3	2.5	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	357	351	363	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Pall Mall Menthol White 100's Box (2014)				Pall Mall Menthol White 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.6	0.5	0.7	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	505	480	519	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	9	9	9	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	12	11	13	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	2.0	2.0	2.1	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	32	31	34	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	58	56	60	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	36	35	39	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	81	79	83	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	10	10	11	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	6.2	6.1	6.5	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	12.3	12.0	12.8	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	6.3	6.1	6.8	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	3.2	3.1	3.4	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	1.3	1.1	1.4	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	93	87	96	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Pall Mall Orange Box (2014)				Pall Mall Orange Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.4	0.4	0.4	8	0.4	0.3	0.4	8
Acetaldehyde (ug/cig)	358	329	375	3	347	335	354	3
Crotonaldehyde (ug/cig)	6	5	7	3	5	5	5	3
Formaldehyde (ug/cig)	9	7	10	3	7	6	7	3
Arsenic (ng/cig)	1.1	1.1	1.2	3	1.2	1.2	1.2	3
Cadmium (ng/cig)	19	18	20	3	21	19	24	3
NNN (ng/cig)	29	28	31	3	25	23	28	3
NNK (ng/cig)	24	23	25	3	22	19	26	3
NAT (ng/cig)	36	34	39	3	36	33	39	3
NAB (ng/cig)	5	5	5	3	4	3	4	3
B(a)P (ng/cig)	5.3	4.9	5.5	3	4.9	4.6	5.1	3
B(a)A (ng/cig)	10.4	9.7	10.8	3	9.9	9.2	10.5	3
B(b/j)FL (ng/cig)	5.5	5.1	5.7	3	5.4	5.1	5.6	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	2.7	2.5	2.8	3	2.4	2.1	2.6	3
Acrylamide (ug/cig)	0.8	0.7	0.8	3	0.6	0.5	0.6	3
Naphthalene (ng/cig)	85	75	95	3	58	51	66	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Pall Mall Red 100's Box (2014)				Pall Mall Red 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.0	0.9	1.1	8	1.2	1.1	1.2	8
Acetaldehyde (ug/cig)	665	636	720	3	741	709	766	3
Crotonaldehyde (ug/cig)	14	13	16	3	15	14	16	3
Formaldehyde (ug/cig)	24	20	29	3	23	20	24	3
Arsenic (ng/cig)	3.6	3.6	3.7	3	3.8	3.7	3.8	3
Cadmium (ng/cig)	46	45	47	3	51	51	52	3
NNN (ng/cig)	75	73	77	3	84	74	91	3
NNK (ng/cig)	65	61	73	3	58	56	59	3
NAT (ng/cig)	98	96	100	3	113	107	119	3
NAB (ng/cig)	13	12	13	3	10	9	10	3
B(a)P (ng/cig)	13.1	12.5	13.6	3	12.6	12.3	13.0	3
B(a)A (ng/cig)	25.5	24.3	26.1	3	23.2	22.5	23.9	3
B(b/j)FL (ng/cig)	14.9	14.4	15.3	3	15.5	15.2	16.1	3
B(k)FL (ng/cig)	2.5	2.3	2.7	3	3.2	3.0	3.5	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	7.0	6.6	7.4	3	6.6	6.4	6.8	3
Acrylamide (ug/cig)	2.6	2.4	2.7	3	2.3	2.2	2.5	3
Naphthalene (ng/cig)	592	584	603	3	406	369	431	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Pall Mall Red Box (2014)				Pall Mall Red Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.0	0.9	1.1	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	592	589	595	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	13	13	14	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	20	20	21	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	3.5	3.5	3.5	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	49	47	51	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	75	71	80	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	57	55	60	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	99	92	104	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	9	9	10	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	11.9	11.7	12.0	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	22.4	21.9	22.8	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	14.6	14.5	14.9	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	3.0	3.0	3.1	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	6.2	6.0	6.3	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	2.2	2.0	2.3	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	466	421	494	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Parliament (White Pack) Box (2014)				Parliament (White Pack) Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.6	0.6	0.7	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	534	525	549	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	13	12	13	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	17	16	19	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	2.0	1.9	2.1	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	32	32	33	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	87	83	91	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	65	61	70	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	119	118	120	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	13	13	14	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	7.7	7.5	8.0	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	15.0	14.7	15.5	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	8.7	8.4	9.1	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	4.3	4.3	4.4	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	2.2	2.1	2.2	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	324	318	333	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Pyramid Blue 100s Box (2014)				Pyramid Blue 100s Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	0.7	0.7	0.7	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	592	578	613	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	12	11	13	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	18	17	18	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	1.8	1.7	1.9	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	27	25	28	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	65	60	75	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	46	42	50	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	94	91	97	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	12	12	13	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	7.2	7.1	7.3	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	15.4	13.9	17.3	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	8.5	7.6	10.2	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	3.7	3.7	3.8	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	1.5	1.5	1.6	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	266	254	287	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

	Pyramid Menthol Silver 100s Box (2014)				Pyramid Menthol Silver 100s Box (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.7	0.6	0.8	8	0.7	0.6	0.8	7
Acetaldehyde (ug/cig)	569	533	619	3	607	599	623	3
Crotonaldehyde (ug/cig)	12	12	14	3	12	12	12	3
Formaldehyde (ug/cig)	20	18	23	3	18	18	19	3
Arsenic (ng/cig)	1.8	1.7	1.8	3	1.9	1.8	2.1	5
Cadmium (ng/cig)	25	24	25	3	26	26	26	3
NNN (ng/cig)	58	57	59	3	61	59	64	3
NNK (ng/cig)	59	58	60	3	48	45	52	3
NAT (ng/cig)	82	77	87	3	94	93	95	3
NAB (ng/cig)	12	11	13	3	12	11	12	3
B(a)P (ng/cig)	6.7	6.6	6.7	3	6.5	4.9	7.6	3
	N/A	N/A	N/A	N/A	7.2	6.7	7.6	3
B(a)A (ng/cig)	12.1	11.8	12.3	3	16.4	10.6	20.8	3
	N/A	N/A	N/A	N/A	14.7	13.4	15.7	3
B(b/j)FL (ng/cig)	9.1	8.9	9.2	3	7.1	4.8	9.1	3
	N/A	N/A	N/A	N/A	8.9	8.4	9.6	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

	Pyramid Menthol Silver 100s Box (2014)				Pyramid Menthol Silver 100s Box (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	3.5	3.4	3.5	3	4.0	3.0	5.0	3
	N/A	N/A	N/A	N/A	3.7	3.4	3.9	3
Acrylamide (ug/cig)	1.7	1.6	1.8	3	1.5	1.5	1.5	3
Naphthalene (ng/cig)	259	244	273	3	255	195	298	3
	N/A	N/A	N/A	N/A	301	265	338	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Pyramid Orange 100s Box (2014)				Pyramid Orange 100s Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.5	0.5	0.5	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	393	368	417	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	8	8	8	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	8	7	8	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	1.0	1.0	1.1	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	12	12	13	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	44	39	48	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	39	37	42	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	61	57	64	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	9	8	9	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	5.0	4.4	5.3	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	9.3	7.9	10.1	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	6.9	5.9	7.4	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	2.6	2.3	2.7	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	0.9	0.9	1.0	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	114	81	134	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Pyramid Red 100s Box (2014)				Pyramid Red 100s Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.8	0.8	0.9	8	0.9	0.8	1.0	8
Acetaldehyde (ug/cig)	860	818	882	3	841	820	865	3
Crotonaldehyde (ug/cig)	18	17	19	3	20	20	21	3
Formaldehyde (ug/cig)	41	37	45	3	41	39	42	3
Arsenic (ng/cig)	2.5	2.5	2.6	3	3.0	2.9	3.1	3
Cadmium (ng/cig)	37	36	39	3	37	36	39	3
NNN (ng/cig)	88	86	91	3	95	92	98	3
NNK (ng/cig)	91	88	96	3	74	71	80	3
NAT (ng/cig)	131	130	131	3	129	121	136	3
NAB (ng/cig)	16	16	17	3	17	17	19	3
B(a)P (ng/cig)	11.8	11.5	12.2	3	10.2	9.4	11.4	3
B(a)A (ng/cig)	24.0	23.4	25.0	3	21.4	19.6	24.5	3
B(b/j)FL (ng/cig)	12.4	12.2	12.7	3	11.7	10.6	13.0	3
B(k)FL (ng/cig)	2.1 <sup>†</sup>	1.9 <sup>*</sup>	2.3	3	2.5	2.0	3.2	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.9	5.9	6.1	3	5.1	4.8	5.7	3
Acrylamide (ug/cig)	3.9	3.6	4.3	3	2.7	2.6	2.8	3
Naphthalene (ng/cig)	652	623	698	3	507	481	533	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Pyramid Red Box (2014)				Pyramid Red Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.8	0.7	0.9	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	720	668	773	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	18	17	20	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	38	36	40	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	2.6	2.3	2.9	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	35	35	36	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	71	66	76	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	67	66	69	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	103	100	105	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	14	14	14	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	9.5	9.2	9.9	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	20.0	19.0	20.8	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	10.4	10.1	10.7	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	4.8	4.6	5.1	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	3.0	2.9	3.1	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	587	560	633	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Sonoma Red Box (2014)				Sonoma Red Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.8	0.8	0.9	8	1.0	0.9	1.0	8
Acetaldehyde (ug/cig)	648	612	678	3	691	688	693	3
Crotonaldehyde (ug/cig)	16	15	18	3	18	18	18	3
Formaldehyde (ug/cig)	33	28	38	3	38	37	41	3
Arsenic (ng/cig)	4.7	4.5	4.8	3	3.8	3.6	4.1	3
Cadmium (ng/cig)	52	51	52	3	53	51	56	3
NNN (ng/cig)	132	131	132	2	118	107	136	3
	146	142	151	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	96	95	97	2	77	64	89	3
	109	101	121	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	158	154	161	2	148	139	158	3
	167	166	170	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	20	19	20	2	15	14	15	3
	21	20	21	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	7.3	6.9	7.6	3	7.8	7.0	8.6	3
B(a)A (ng/cig)	13.6	12.9	14.3	3	15.9	14.7	17.3	3
B(b/j)FL (ng/cig)	10.1	9.5	10.5	3	10.3	9.3	11.7	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9*	1.9*	3	2.1	2.0	2.2	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Sonoma Red Box (2014)				Sonoma Red Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	3.8	3.6	3.9	3	4.2	3.8	4.6	3
Acrylamide (ug/cig)	3.6	3.6	3.6	3	3.0	2.9	3.0	3
Naphthalene (ng/cig)	614	572	638	3	623	591	681	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Tareyton Soft Pack (2014)				Tareyton Soft Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.8	0.7	0.8	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	622	607	642	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	10	10	11	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	34	32	35	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	3.1	3.0	3.1	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	15	14	16	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	51	48	56	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	53	47	62	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	72	69	77	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	9	8	10	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	10.6	10.4	10.9	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	20.5	20.0	20.7	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	13.3	12.9	13.9	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	2.4	2.1	2.5	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	6.1	6.0	6.2	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	3.9	3.6	4.2	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	333	301	372	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	True Kings (2014)				True Kings (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	0.4	0.4	0.4	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	262	229	280	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	3	3	4	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	4	4	5	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	1.4	1.4	1.4	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	13	13	13	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	58	54	60	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	28	27	29	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	56	55	58	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	8	8	8	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	3.9	3.6	4.3	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	7.0	6.8	7.3	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	3.9 <sup>†</sup>	3.8 <sup>*</sup>	4.1	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	2.2	2.0	2.4	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	0.8	0.8	0.8	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	99	87	116	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	USA Gold Red Box (2014)				USA Gold Red Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.8	0.8	1.0	8	0.9	0.8	1.0	7
Acetaldehyde (ug/cig)	639	628	648	3	671	648	708	3
Crotonaldehyde (ug/cig)	16	16	17	3	17	16	18	3
Formaldehyde (ug/cig)	39	38	40	3	39	36	45	3
Arsenic (ng/cig)	4.9	4.9	5.0	3	3.7	3.6	3.7	3
Cadmium (ng/cig)	51	50	53	3	51	50	51	3
NNN (ng/cig)	133	128	142	3	121	115	127	3
	142	117	178	3	N/A	N/A	N/A	N/A
	140	128	154	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	141	104	178	3	78	72	83	3
	126	91	161	3	N/A	N/A	N/A	N/A
	113	98	142	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	176	164	185	3	163	157	169	3
	165	143	187	3	N/A	N/A	N/A	N/A
	162	157	172	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	20	20	21	3	14	14	15	3
	19	17	21	3	N/A	N/A	N/A	N/A
	19	19	21	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	USA Gold Red Box (2014)				USA Gold Red Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
B(a)P (ng/cig)	8.1	7.9	8.3	3	7.2	6.7	7.5	3
B(a)A (ng/cig)	15.2	14.5	15.6	3	14.6	13.9	15.0	3
B(b/j)FL (ng/cig)	11.0	10.8	11.2	3	9.7	9.3	9.9	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	4.2	4.1	4.2	3	4.0	3.8	4.1	3
Acrylamide (ug/cig)	3.7	3.6	3.8	3	3.0	2.9	3.0	3
Naphthalene (ng/cig)	548	479	595	3	561	549	575	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 2. Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	Winston Red Box (2014)				Winston Red Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.1	1.0	1.2	8	1.1	1.1	1.1	8
Acetaldehyde (ug/cig)	761	714	805	3	815	809	825	3
Crotonaldehyde (ug/cig)	18	17	19	3	20	20	21	3
Formaldehyde (ug/cig)	31	29	33	3	33	31	35	3
Arsenic (ng/cig)	3.8	3.8	3.9	3	3.4	3.3	3.5	3
Cadmium (ng/cig)	56	56	57	3	51	50	52	3
NNN (ng/cig)	111	106	116	3	124	118	132	3
NNK (ng/cig)	78	73	84	3	82	80	86	3
NAT (ng/cig)	135	132	140	3	131	127	134	3
NAB (ng/cig)	21	20	22	3	16	16	17	3
B(a)P (ng/cig)	11.1	11.0	11.2	3	11.3	10.1	12.1	3
B(a)A (ng/cig)	22.2	21.6	22.6	3	25.2	23.6	26.1	3
B(b/j)FL (ng/cig)	13.3	13.1	13.6	3	15.4	13.8	17.0	3
B(k)FL (ng/cig)	2.1	2.1	2.2	3	2.8	2.3	3.1	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	6.0	5.8	6.1	3	6.1	5.9	6.3	3
Acrylamide (ug/cig)	4.4	3.8	5.1	3	2.8	2.8	2.9	3
Naphthalene (ng/cig)	1049	972	1163	3	694	649	741	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 3. Range of Product Means Observed for the 2014-2015 Cigarette Market Survey Dataset-ISO Smoking

Analyte	Product Means	
	Minimum	Maximum
Acetaldehyde (ug/cig)	81	892
Acrylamide (ug/cig)	0.2	4.6
Arsenic (ng/cig)	0.3 <sup>†</sup>	6.2
B(a)A (ng/cig)	3.0 <sup>†</sup>	32.1
B(a)P (ng/cig)	2.9 <sup>†</sup>	15.0
B(b/j)FL (ng/cig)	3.8 <sup>†</sup>	15.5
B(k)FL (ng/cig)	1.9 <sup>†</sup>	3.2
Cadmium (ng/cig)	5	116
Crotonaldehyde (ug/cig)	2 <sup>†</sup>	21
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>†</sup>
Formaldehyde (ug/cig)	2 <sup>†</sup>	47
Indeno(c,d)P (ng/cig)	0.7	7.5
NAB (ng/cig)	2	22
Naphthalene (ng/cig)	19 <sup>†</sup>	1758
NAT (ng/cig)	18	205
Nicotine (mg/cig)	0.1	2.1
NNK (ng/cig)	9	143
NNN (ng/cig)	11	175

B(a)A= Benz(a)anthracene B(a)P= Benzo(a)pyrene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL=Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN =  
 N'nitrosonornicotine

† Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean and the corresponding minimum and maximum values.

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Camel Blue Hard Pack	25JUN2014	1	1.94	06AUG2014
		2	1.92	06AUG2014
		3	1.75	07AUG2014
		4	1.88	07AUG2014
		5	2.21	08AUG2014
		6	2.00	08AUG2014
		7	2.14	08AUG2014
		8	1.86	08AUG2014
	16JUL2015	1	1.95	08SEP2015
		2	2.08	08SEP2015
		3	2.03	08SEP2015
		4	2.03	08SEP2015
		5	2.08	09SEP2015
		6	2.02	09SEP2015
		7	1.99	09SEP2015
		8	2.02	09SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Camel Crush (crushed)	16JUN2014	1	2.20	06AUG2014
		2	2.18	06AUG2014
		3	2.14	06AUG2014
		4	1.94	06AUG2014
		5	2.18	07AUG2014
		6	2.06	07AUG2014
		7	2.12	07AUG2014
		8	2.19	07AUG2014
	17JUN2015	1	2.04	08SEP2015
		2	1.98	08SEP2015
		3	2.19	08SEP2015
		4	2.09	08SEP2015
		5	2.08	08SEP2015
		6	2.10	08SEP2015
		7	2.07	08SEP2015
		8	2.27	08SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Camel Crush (uncrushed)	16JUN2014	1	2.04	06AUG2014
		2	2.18	06AUG2014
		3	2.02	07AUG2014
		4	1.87	07AUG2014
		5	2.09	08AUG2014
		6	2.15	08AUG2014
		7	2.21	08AUG2014
		8	2.27	08AUG2014
	17JUN2015	1	2.12	08SEP2015
		2	2.03	08SEP2015
		3	2.01	08SEP2015
		4	2.18	08SEP2015
		5	2.06	09SEP2015
		6	2.07	09SEP2015
		7	2.04	09SEP2015
		8	2.07	09SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Camel Filters Hard Pack	24JUN2014	1	1.96	08AUG2014
		2	2.24	08AUG2014
		3	1.90	08AUG2014
		4	2.20	08AUG2014
		5	2.06	08AUG2014
		6	1.79	08AUG2014
		7	1.91	08AUG2014
		8	2.10	08AUG2014
	15JUN2015	1	2.32	23SEP2015
		2	2.26	23SEP2015
		3	2.45	23SEP2015
		4	2.39	23SEP2015
		5	2.28	23SEP2015
		6	2.65	23SEP2015
		7	2.52	23SEP2015
		8	2.63	23SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	2.05	06AUG2014
		2	1.93	06AUG2014
		3	1.71	06AUG2014
		4	1.92	06AUG2014
		5	1.83	07AUG2014
		6	1.68	07AUG2014
		7	1.79	07AUG2014
		8	1.70	07AUG2014
	10AUG2015	1	1.90	08SEP2015
		2	1.81	08SEP2015
		3	1.90	08SEP2015
		4	1.87	08SEP2015
		5	1.98	08SEP2015
		6	1.96	08SEP2015
		7	1.98	08SEP2015
		8	1.92	08SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	1.99	08AUG2014
		2	1.99	08AUG2014
		3	2.08	08AUG2014
		4	1.96	08AUG2014
		5	1.63	08AUG2014
		6	1.54	08AUG2014
		7	2.01	08AUG2014
		8	1.92	08AUG2014
	10AUG2015	3	1.87	09SEP2015
		4	1.95	09SEP2015
		5	2.09	09SEP2015
		7	1.96	09SEP2015
		8	1.92	09SEP2015
		1	1.79	10SEP2015
		2	1.75	10SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Kent Kings	01JUN2015	1	2.10	23SEP2015
		2	2.25	23SEP2015
		3	2.51	23SEP2015
		4	2.18	23SEP2015
		5	2.19	24SEP2015
		6	2.31	24SEP2015
		7	2.24	24SEP2015
		8	2.34	24SEP2015
Kool Box	02JUL2014	1	2.41	08AUG2014
		2	2.32	08AUG2014
		3	2.33	08AUG2014
		4	2.48	08AUG2014
		5	1.26	08AUG2014
		6	1.42	08AUG2014
		7	2.37	08AUG2014
		8	2.60	08AUG2014



Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Kool Box	15JUL2015	1	2.29	11SEP2015
		2	2.43	11SEP2015
		3	2.44	11SEP2015
		4	2.04	11SEP2015
		5	2.34	15SEP2015
		6	2.15	15SEP2015
		7	2.41	15SEP2015
		8	2.23	15SEP2015
L&M Blue Pack Box	06AUG2014	3	1.41	26AUG2014
		4	1.45	26AUG2014
		5	1.49	26AUG2014
		6	1.40	26AUG2014
		7	1.37	26AUG2014
		8	1.44	26AUG2014
		1	1.43	27AUG2014
		2	1.45	27AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
L&M Box	06AUG2014	1	1.82	19AUG2014
		2	1.55	19AUG2014
		3	1.84	19AUG2014
		4	1.69	19AUG2014
		5	1.64	20AUG2014
		6	1.61	20AUG2014
		7	1.72	20AUG2014
		8	1.94	20AUG2014
	31AUG2015	1	1.74	22SEP2015
		2	1.67	22SEP2015
		3	1.80	23SEP2015
		4	1.85	23SEP2015
		5	1.72	23SEP2015
		6	1.70	23SEP2015
		7	1.72	23SEP2015
		8	1.84	23SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
L&M Menthol 100's Box	06AUG2014	1	2.28	19AUG2014
		2	2.05	19AUG2014
		3	2.13	19AUG2014
		4	2.43	19AUG2014
		5	2.16	20AUG2014
		6	2.23	20AUG2014
		7	2.39	20AUG2014
		8	2.04	20AUG2014
Marlboro 100's Box	31AUG2015	1	2.36	23SEP2015
		2	2.41	23SEP2015
		3	2.31	23SEP2015
		4	2.49	23SEP2015
		5	2.39	24SEP2015
		6	2.46	24SEP2015
		7	2.53	24SEP2015
		8	2.52	24SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro 72s Blue Pack Box	06AUG2014	3	1.79	26AUG2014
		4	1.95	26AUG2014
		5	1.82	26AUG2014
		6	1.85	26AUG2014
		7	1.83	26AUG2014
		8	1.89	26AUG2014
		1	1.94	27AUG2014
		2	1.93	27AUG2014
Marlboro 72s Box	06AUG2014	1	1.80	14AUG2014
		2	1.77	14AUG2014
		3	1.89	14AUG2014
		4	1.92	14AUG2014
		5	1.84	14AUG2014
		6	1.90	14AUG2014
		7	1.82	14AUG2014
		8	1.94	14AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Blend No. 27 Box	06AUG2014	3	1.89	26AUG2014
		4	1.80	26AUG2014
		5	1.81	26AUG2014
		6	1.72	26AUG2014
		7	1.73	26AUG2014
		8	1.81	26AUG2014
		1	1.78	27AUG2014
		2	1.95	27AUG2014
Marlboro Box	06AUG2014	1	2.19	14AUG2014
		2	2.23	14AUG2014
		3	1.96	14AUG2014
		4	2.04	14AUG2014
		5	1.99	14AUG2014
		6	1.97	14AUG2014
		7	2.10	14AUG2014
		8	2.01	14AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Box	31AUG2015	1	2.13	23SEP2015
		2	2.08	23SEP2015
		3	2.21	23SEP2015
		4	2.28	23SEP2015
		5	2.18	23SEP2015
		6	2.18	23SEP2015
		7	2.20	23SEP2015
		8	2.23	23SEP2015
Marlboro Edge Box	31AUG2015	1	2.07	15SEP2015
		2	2.26	15SEP2015
		3	2.14	15SEP2015
		4	1.99	15SEP2015
		5	1.73	15SEP2015
		6	1.84	15SEP2015
		7	1.89	15SEP2015
		8	2.18	15SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Eighty Threes Box	31AUG2015	1	2.31	15SEP2015
		2	2.20	15SEP2015
		3	2.37	15SEP2015
		4	2.33	15SEP2015
		5	2.18	15SEP2015
		6	2.27	15SEP2015
		7	2.15	15SEP2015
		8	2.13	15SEP2015
Marlboro Gold Pack 100's Box	31AUG2015	1	1.75	23SEP2015
		2	1.80	23SEP2015
		3	2.13	23SEP2015
		4	1.90	23SEP2015
		5	2.08	24SEP2015
		6	2.03	24SEP2015
		7	2.11	24SEP2015
		8	1.94	24SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Gold Pack Box	06AUG2014	1	1.75	14AUG2014
		2	1.77	14AUG2014
		3	1.55	14AUG2014
		4	1.64	14AUG2014
		5	1.69	14AUG2014
		6	1.73	14AUG2014
		7	1.69	14AUG2014
		8	1.84	14AUG2014
	31AUG2015	1	1.79	23SEP2015
		2	1.70	23SEP2015
		3	1.89	23SEP2015
		4	1.90	23SEP2015
		5	1.85	24SEP2015
		6	1.85	24SEP2015
		7	1.91	24SEP2015
		8	1.88	24SEP2015



Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Menthol Box	06AUG2014	1	2.29	14AUG2014
		2	2.22	14AUG2014
		3	2.25	14AUG2014
		4	2.36	14AUG2014
		5	2.22	14AUG2014
		6	2.09	14AUG2014
		7	2.39	14AUG2014
		8	2.26	14AUG2014
	31AUG2015	1	2.34	24SEP2015
		2	2.34	24SEP2015
		3	2.15	24SEP2015
		4	2.34	24SEP2015
		5	2.10	24SEP2015
		6	2.44	24SEP2015
		8	2.27	24SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Menthol Gold Pack Box	31AUG2015	1	1.89	22SEP2015
		2	1.87	22SEP2015
		3	1.83	23SEP2015
		4	1.82	23SEP2015
		5	1.83	23SEP2015
		6	1.80	23SEP2015
		7	1.86	23SEP2015
		8	1.87	23SEP2015
Marlboro Menthol Silver Pack Box	06AUG2014	3	1.41	26AUG2014
		4	1.49	26AUG2014
		5	1.54	26AUG2014
		6	1.36	26AUG2014
		7	1.43	26AUG2014
		8	1.52	26AUG2014
		1	1.46	27AUG2014
		2	1.52	27AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	3	2.22	26AUG2014
		4	2.20	26AUG2014
		5	2.32	26AUG2014
		6	2.43	26AUG2014
		7	2.42	26AUG2014
		8	2.32	26AUG2014
		1	2.41	27AUG2014
		2	2.34	27AUG2014
	31AUG2015	1	2.27	23SEP2015
		2	2.35	23SEP2015
		3	2.41	23SEP2015
		4	2.57	23SEP2015
		5	2.35	24SEP2015
		6	2.22	24SEP2015
		7	2.18	24SEP2015
		8	2.56	24SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro NXT Box (crushed)	31AUG2015	1	1.86	24SEP2015
		2	1.71	24SEP2015
		3	1.87	24SEP2015
		4	1.78	24SEP2015
		5	1.99	24SEP2015
		6	1.84	24SEP2015
		7	1.91	24SEP2015
		8	1.86	24SEP2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	1.97	15SEP2015
		2	1.98	15SEP2015
		3	2.04	15SEP2015
		4	1.85	15SEP2015
		5	1.72	15SEP2015
		6	1.83	15SEP2015
		7	1.67	15SEP2015
		8	1.79	15SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Silver Pack 100's Box	06AUG2014	1	1.81	14AUG2014
		2	1.68	14AUG2014
		3	1.66	14AUG2014
		4	1.65	14AUG2014
		5	1.75	14AUG2014
		6	1.74	14AUG2014
		7	1.67	14AUG2014
		8	1.59	14AUG2014
	31AUG2015	1	1.69	23SEP2015
		2	1.70	23SEP2015
		3	1.73	23SEP2015
		4	1.84	23SEP2015
		5	1.82	23SEP2015
		6	1.54	23SEP2015
		7	1.85	23SEP2015
		8	1.72	23SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Silver Pack Box	06AUG2014	1	1.43	14AUG2014
		2	1.39	14AUG2014
		3	1.44	14AUG2014
		4	1.48	14AUG2014
		5	1.47	14AUG2014
		6	1.48	14AUG2014
		7	1.49	14AUG2014
		8	1.37	14AUG2014
	31AUG2015	1	1.47	15SEP2015
		2	1.51	15SEP2015
		3	1.71	15SEP2015
		4	1.54	15SEP2015
		5	1.42	15SEP2015
		6	1.48	15SEP2015
		7	1.40	15SEP2015
		8	1.37	15SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Special Blend (Black) Box	06AUG2014	1	1.93	14AUG2014
		2	2.16	14AUG2014
		3	1.98	14AUG2014
		4	1.92	14AUG2014
		5	2.07	14AUG2014
		6	2.10	14AUG2014
		7	1.90	14AUG2014
		8	1.87	14AUG2014
	31AUG2015	1	1.83	23SEP2015
		2	2.32	23SEP2015
		3	2.06	23SEP2015
		4	2.18	23SEP2015
		5	2.09	23SEP2015
		6	1.99	23SEP2015
		7	1.90	23SEP2015
		8	2.05	23SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Special Blend (Gold) Box	06AUG2014	1	1.70	14AUG2014
		2	1.77	14AUG2014
		3	1.69	14AUG2014
		4	1.62	14AUG2014
		5	1.74	14AUG2014
		6	1.75	14AUG2014
		7	1.82	14AUG2014
		8	1.72	14AUG2014
	31AUG2015	1	1.77	23SEP2015
		2	1.80	23SEP2015
		3	1.76	23SEP2015
		4	1.91	23SEP2015
		5	1.93	24SEP2015
		6	1.73	24SEP2015
		7	1.90	24SEP2015
		8	1.88	24SEP2015



Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Special Blend (Red) Box	31AUG2015	1	1.86	22SEP2015
		2	1.94	22SEP2015
		7	1.97	23SEP2015
		8	2.02	23SEP2015
		3	1.96	25SEP2015
		4	1.88	25SEP2015
		5	1.87	28SEP2015
		6	1.68	28SEP2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	2.17	14AUG2014
		2	2.31	14AUG2014
		3	2.15	14AUG2014
		4	2.29	14AUG2014
		5	1.89	14AUG2014
		6	2.36	14AUG2014
		7	2.24	14AUG2014
		8	2.19	14AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Marlboro Special Blend 100's (Red) Box	31AUG2015	1	2.23	23SEP2015
		2	2.34	23SEP2015
		3	2.36	23SEP2015
		4	2.17	23SEP2015
		5	2.29	23SEP2015
		6	2.28	23SEP2015
		7	2.35	23SEP2015
		8	2.35	23SEP2015
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	2.02	23SEP2015
		2	2.04	23SEP2015
		3	1.92	23SEP2015
		4	1.98	23SEP2015
		5	1.86	24SEP2015
		6	2.07	24SEP2015
		7	2.04	24SEP2015
		8	2.06	24SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Maverick 100s Box	31AUG2015	1	2.34	23SEP2015
		2	2.16	23SEP2015
		3	2.31	23SEP2015
		4	2.42	23SEP2015
		5	2.41	24SEP2015
		6	2.39	24SEP2015
		7	2.54	24SEP2015
		8	2.26	24SEP2015
Maverick Gold 100s Box	06AUG2014	3	1.80	26AUG2014
		4	1.81	26AUG2014
		5	1.83	26AUG2014
		6	1.78	26AUG2014
		7	1.77	26AUG2014
		8	1.89	26AUG2014
		1	1.75	27AUG2014
		2	1.82	27AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Maverick Menthol 100 Box	06AUG2014	1	2.41	19AUG2014
		2	2.33	19AUG2014
		3	2.22	19AUG2014
		4	2.28	19AUG2014
		5	2.20	20AUG2014
		6	2.54	20AUG2014
		7	2.32	20AUG2014
		8	2.23	20AUG2014
	31AUG2015	1	2.74	24SEP2015
		2	2.55	24SEP2015
		3	2.74	24SEP2015
		4	2.58	24SEP2015
		5	2.43	24SEP2015
		6	2.44	24SEP2015
		7	2.42	24SEP2015
		8	2.53	24SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Misty Blue 120's Box	24JUL2015	3	2.92	09SEP2015
		4	3.01	09SEP2015
		5	3.14	09SEP2015
		6	2.95	09SEP2015
		7	2.91	09SEP2015
		8	3.05	09SEP2015
		1	2.39	10SEP2015
		2	2.66	10SEP2015
Misty Menthol Green 120's Box	27JUN2014	1	2.16	06AUG2014
		2	2.29	06AUG2014
		3	2.18	07AUG2014
		4	1.89	07AUG2014
		6	2.21	07AUG2014
		5	2.18	08AUG2014
		7	2.37	08AUG2014
		8	2.41	08AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
More 120's Soft Pack	05JUN2014	1	2.46	06AUG2014
		2	2.56	06AUG2014
		3	2.44	07AUG2014
		4	2.43	07AUG2014
		5	2.76	08AUG2014
		6	2.76	08AUG2014
		7	2.76	08AUG2014
		8	2.71	08AUG2014
	10JUL2015	1	2.37	11SEP2015
		2	2.42	11SEP2015
		3	2.36	11SEP2015
		4	2.22	11SEP2015
		5	2.30	15SEP2015
		6	2.01	15SEP2015
		7	2.28	15SEP2015
		8	2.34	15SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Natural American Spirit Full-Bodied Taste	27JUN2014	1	3.90	12AUG2014
		2	4.27	12AUG2014
		3	4.26	12AUG2014
		4	4.11	12AUG2014
		5	3.55	12AUG2014
		6	3.59	12AUG2014
		7	3.50	12AUG2014
		8	3.42	12AUG2014
	05MAY2015	1	3.61	08SEP2015
		2	3.49	08SEP2015
		3	3.79	08SEP2015
		4	3.59	08SEP2015
		5	3.65	09SEP2015
		6	3.40	09SEP2015
		7	3.35	09SEP2015
		8	3.65	09SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	25JUN2014	1	4.30	12AUG2014
		2	4.25	12AUG2014
		3	4.44	12AUG2014
		4	4.22	12AUG2014
		5	3.62	12AUG2014
		6	3.78	12AUG2014
		7	3.77	12AUG2014
		8	3.92	12AUG2014
	07AUG2015	3	4.24	09SEP2015
		4	4.36	09SEP2015
		5	3.98	09SEP2015
		6	4.41	09SEP2015
		7	4.15	09SEP2015
		8	4.16	09SEP2015
		1	3.86	10SEP2015
		2	4.13	10SEP2015



Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	3	3.38	09SEP2015
		4	3.77	09SEP2015
		5	3.37	09SEP2015
		6	3.53	09SEP2015
		7	3.66	09SEP2015
		8	3.37	09SEP2015
		1	3.28	10SEP2015
		2	3.34	10SEP2015
Natural American Spirit Mellow Taste	06JUL2015	3	3.32	09SEP2015
		4	3.54	09SEP2015
		5	3.53	09SEP2015
		6	3.32	09SEP2015
		7	3.50	09SEP2015
		8	3.25	09SEP2015
		1	3.27	10SEP2015
		2	3.27	10SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	4.11	08SEP2015
		2	4.14	08SEP2015
		3	3.67	08SEP2015
		4	3.92	08SEP2015
		5	4.17	09SEP2015
		6	4.48	09SEP2015
		7	4.02	09SEP2015
		8	4.23	09SEP2015
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	3.50	12AUG2014
		2	3.78	12AUG2014
		3	3.55	12AUG2014
		4	3.75	12AUG2014
		5	2.68	12AUG2014
		6	3.04	12AUG2014
		7	3.19	12AUG2014
		8	3.10	12AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Natural American Spirit Perique Blend Rich Robust Taste	11AUG2015	1	4.24	22SEP2015
		2	4.13	22SEP2015
		3	4.32	23SEP2015
		4	4.12	23SEP2015
		5	3.96	23SEP2015
		6	4.55	23SEP2015
		7	4.26	23SEP2015
		8	4.08	23SEP2015
Newport Box	06AUG2014	1	2.07	19AUG2014
		2	1.92	19AUG2014
		3	1.92	19AUG2014
		4	2.21	19AUG2014
		5	2.11	20AUG2014
		6	1.95	20AUG2014
		7	2.04	20AUG2014
		8	1.98	20AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Newport Box	04AUG2015	1	2.03	24SEP2015
		2	2.17	24SEP2015
		3	1.85	24SEP2015
		4	1.88	24SEP2015
		5	2.26	24SEP2015
		6	2.18	24SEP2015
		7	1.99	24SEP2015
		8	2.10	24SEP2015
Newport Box 100s	06AUG2014	1	2.69	19AUG2014
		2	2.54	19AUG2014
		3	2.47	19AUG2014
		4	2.72	19AUG2014
		5	2.79	20AUG2014
		6	2.65	20AUG2014
		7	2.68	20AUG2014
		8	2.66	20AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Newport Box 100s	30JUL2015	1	2.71	24SEP2015
		2	2.88	24SEP2015
		3	2.69	24SEP2015
		4	2.66	24SEP2015
		5	2.75	24SEP2015
		6	2.79	24SEP2015
		7	2.89	24SEP2015
		8	2.82	24SEP2015
Newport Menthol Gold Box	25MAY2015	1	1.62	15SEP2015
		2	1.52	15SEP2015
		3	1.83	15SEP2015
		4	1.72	15SEP2015
		5	1.55	15SEP2015
		7	1.58	15SEP2015
		8	1.52	15SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Newport Non-Menthol Box	06AUG2014	1	2.00	19AUG2014
		2	1.94	19AUG2014
		3	2.01	19AUG2014
		4	1.69	19AUG2014
		5	2.12	20AUG2014
		6	2.06	20AUG2014
		7	2.12	20AUG2014
		8	1.90	20AUG2014
Now Soft Pack	23APR2014	1	1.43	06AUG2014
		2	1.45	06AUG2014
		3	1.41	07AUG2014
		4	1.39	07AUG2014
		5	1.54	08AUG2014
		6	1.61	08AUG2014
		7	1.59	08AUG2014
		8	1.41	08AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Now Soft Pack	15MAY2015	1	1.49	22SEP2015
		2	1.41	22SEP2015
		3	1.44	23SEP2015
		4	1.52	23SEP2015
		5	1.40	23SEP2015
		6	1.46	23SEP2015
		7	1.32	23SEP2015
		8	1.41	23SEP2015
Pall Mall Blue 100's Box	19JUN2014	1	2.40	08AUG2014
		2	2.51	08AUG2014
		3	2.24	08AUG2014
		4	2.52	08AUG2014
		5	2.30	08AUG2014
		6	2.40	08AUG2014
		7	2.30	08AUG2014
		8	2.43	08AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pall Mall Blue 100's Box	27JUL2015	3	2.29	09SEP2015
		4	2.36	09SEP2015
		5	2.25	09SEP2015
		6	2.31	09SEP2015
		7	2.44	09SEP2015
		8	2.46	09SEP2015
		1	2.19	10SEP2015
		2	2.30	10SEP2015
Pall Mall Menthol 100's Box	07JUL2015	1	2.38	23SEP2015
		2	2.71	23SEP2015
		3	2.56	23SEP2015
		4	2.47	23SEP2015
		5	2.54	23SEP2015
		6	2.54	23SEP2015
		7	2.56	23SEP2015
		8	2.32	23SEP2015



Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pall Mall Menthol White 100's Box	20JUN2014	1	2.02	08AUG2014
		2	1.97	08AUG2014
		3	1.97	08AUG2014
		4	2.05	08AUG2014
		5	1.79	08AUG2014
		6	1.69	08AUG2014
		7	2.18	08AUG2014
		8	2.04	08AUG2014
Pall Mall Orange Box	07JUL2014	1	1.58	08AUG2014
		2	1.66	08AUG2014
		3	1.68	08AUG2014
		4	1.54	08AUG2014
		5	1.39	08AUG2014
		6	1.44	08AUG2014
		7	1.69	08AUG2014
		8	1.60	08AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pall Mall Orange Box	15AUG2015	1	1.55	08SEP2015
		2	1.63	08SEP2015
		3	1.58	08SEP2015
		4	1.64	08SEP2015
		5	1.57	09SEP2015
		6	1.57	09SEP2015
		7	1.64	09SEP2015
		8	1.70	09SEP2015
Pall Mall Red 100's Box	01JUL2014	1	2.42	06AUG2014
		2	2.49	06AUG2014
		3	1.93	07AUG2014
		4	2.40	07AUG2014
		5	2.45	08AUG2014
		6	2.48	08AUG2014
		7	2.42	08AUG2014
		8	2.42	08AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pall Mall Red 100's Box	05AUG2015	1	2.63	08SEP2015
		2	2.52	08SEP2015
		3	2.47	08SEP2015
		4	2.32	08SEP2015
		5	2.52	09SEP2015
		6	2.53	09SEP2015
		7	2.71	09SEP2015
		8	2.76	09SEP2015
Pall Mall Red Box	03AUG2015	1	2.41	08SEP2015
		2	2.52	08SEP2015
		3	2.52	08SEP2015
		4	2.44	08SEP2015
		5	2.53	09SEP2015
		6	2.48	09SEP2015
		7	2.54	09SEP2015
		8	2.47	09SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Parliament (White Pack) Box	06AUG2014	3	1.77	26AUG2014
		4	1.63	26AUG2014
		5	1.88	26AUG2014
		6	1.54	26AUG2014
		7	1.64	26AUG2014
		8	1.65	26AUG2014
		1	1.74	27AUG2014
		2	1.75	27AUG2014
Pyramid Blue 100s Box	31AUG2015	1	1.86	15SEP2015
		2	1.74	15SEP2015
		3	1.80	15SEP2015
		4	1.93	15SEP2015
		5	1.72	15SEP2015
		6	1.92	15SEP2015
		7	1.59	15SEP2015
		8	1.68	15SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pyramid Menthol Silver 100s Box	06AUG2014	1	1.72	19AUG2014
		2	1.64	19AUG2014
		3	1.73	19AUG2014
		4	1.74	19AUG2014
		5	1.66	20AUG2014
		6	1.66	20AUG2014
		7	1.48	20AUG2014
		8	1.60	20AUG2014
	31AUG2015	1	1.92	15SEP2015
		2	1.80	15SEP2015
		3	1.86	15SEP2015
		4	1.89	15SEP2015
		5	1.65	15SEP2015
		6	1.61	15SEP2015
		7	1.68	15SEP2015
		8	1.61	15SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pyramid Orange 100s Box	06AUG2014	1	1.62	19AUG2014
		2	1.54	19AUG2014
		3	1.67	19AUG2014
		4	1.67	19AUG2014
		5	1.67	20AUG2014
		6	1.59	20AUG2014
		7	1.52	20AUG2014
		8	1.48	20AUG2014
Pyramid Red 100s Box	06AUG2014	3	1.88	26AUG2014
		4	1.99	26AUG2014
		5	2.06	26AUG2014
		6	1.97	26AUG2014
		7	1.90	26AUG2014
		8	1.83	26AUG2014
		1	1.87	27AUG2014
		2	1.79	27AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Pyramid Red 100s Box	31AUG2015	1	2.01	23SEP2015
		2	1.91	23SEP2015
		3	2.22	23SEP2015
		4	1.91	23SEP2015
		5	2.29	23SEP2015
		6	1.78	23SEP2015
		7	2.23	23SEP2015
		8	2.24	23SEP2015
Pyramid Red Box	06AUG2014	3	1.65	26AUG2014
		4	1.54	26AUG2014
		5	1.80	26AUG2014
		6	1.66	26AUG2014
		7	1.62	26AUG2014
		8	1.71	26AUG2014
		1	1.68	27AUG2014
		2	1.62	27AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Sonoma Red Box	06AUG2014	1	1.79	20AUG2014
		2	1.93	20AUG2014
		3	1.91	20AUG2014
		4	1.66	20AUG2014
		5	1.83	20AUG2014
		6	1.74	20AUG2014
		7	1.84	20AUG2014
		8	1.80	20AUG2014
	31AUG2015	1	1.92	11SEP2015
		2	2.21	11SEP2015
		3	2.05	11SEP2015
		4	2.08	11SEP2015
		5	1.85	15SEP2015
		6	1.94	15SEP2015
		7	2.00	15SEP2015
		8	2.05	15SEP2015



Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Tareyton Soft Pack	23APR2014	1	1.85	06AUG2014
		2	1.87	06AUG2014
		3	1.82	07AUG2014
		4	1.76	07AUG2014
		8	1.73	07AUG2014
		5	1.83	08AUG2014
		6	1.77	08AUG2014
		7	1.76	08AUG2014
True Kings	13MAY2015	1	1.88	23SEP2015
		2	1.76	23SEP2015
		3	1.96	23SEP2015
		4	1.91	23SEP2015
		5	1.84	24SEP2015
		6	1.90	24SEP2015
		7	1.88	24SEP2015
		8	1.97	24SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
USA Gold Red Box	06AUG2014	1	1.74	19AUG2014
		2	1.77	19AUG2014
		3	1.78	19AUG2014
		4	1.72	19AUG2014
		5	1.94	20AUG2014
		6	1.67	20AUG2014
		7	1.96	20AUG2014
		8	1.83	20AUG2014
	31AUG2015	1	1.96	15SEP2015
		2	2.15	15SEP2015
		3	2.32	15SEP2015
		4	2.06	15SEP2015
		5	2.01	15SEP2015
		6	1.92	15SEP2015
		7	1.97	15SEP2015
		8	1.94	15SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Nicotine Analysis	
			Nicotine (mg/cig)	Completed Analysis Date
Winston Red Box	12JUN2014	1	2.28	06AUG2014
		2	2.46	06AUG2014
		3	2.14	07AUG2014
		4	2.08	07AUG2014
		5	2.30	08AUG2014
		6	2.25	08AUG2014
		7	2.33	08AUG2014
		8	2.42	08AUG2014
	10JUL2015	1	2.20	11SEP2015
		2	2.06	11SEP2015
		3	2.16	11SEP2015
		4	2.21	11SEP2015
		5	2.20	15SEP2015
		6	2.19	15SEP2015
		7	1.99	15SEP2015
		8	2.17	15SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Camel Blue Hard Pack	25JUN2014	1	1385.9	36.9	68.7	15AUG2014
		2	1461.2	39.6	83.7	15AUG2014
		3	1497.7	40.0	62.5	15AUG2014
	16JUL2015	1	1713.2	49.9	64.2	19SEP2015
		2	1803.7	52.8	70.6	19SEP2015
		3	1822.2	54.2	84.8	19SEP2015
Camel Crush (crushed)	16JUN2014	1	1522.4	39.3	93.5	15AUG2014
		2	1553.8	39.8	82.4	15AUG2014
		3	1517.2	40.3	94.3	15AUG2014
	17JUN2015	1	1656.8	46.1	79.9	17SEP2015
		2	1720.2	49.6	87.2	17SEP2015
		3	1763.2	50.8	89.6	17SEP2015
Camel Crush (uncrushed)	16JUN2014	1	1418.1	37.2	90.1	15AUG2014
		2	1573.7	41.5	85.9	15AUG2014
		3	1392.0	34.2	63.5	15AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Camel Crush (uncrushed)	17JUN2015	1	1741.8	51.6	81.0	17SEP2015
		2	1734.7	51.9	79.6	17SEP2015
		3	1650.5	48.8	73.2	17SEP2015
Camel Filters Hard Pack	24JUN2014	1	1685.0	49.6	113.5	15AUG2014
		2	1741.5	52.5	104.9	15AUG2014
		3	1910.1	55.8	107.5	15AUG2014
	15JUN2015	1	1900.2	59.0	120.6	19SEP2015
		2	1915.4	61.4	130.1	19SEP2015
		3	1913.7	60.9	128.8	19SEP2015
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	1680.8	44.6	92.0	15AUG2014
		2	1589.4	42.1	99.7	15AUG2014
		3	1435.3	36.3	80.5	15AUG2014
	10AUG2015	1	1742.8	49.2	106.8	17SEP2015
		2	1765.5	51.2	100.3	17SEP2015
		3	1864.2	53.8	119.0	17SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	1558.2	40.1	101.3	15AUG2014
		2	1534.4	41.1	90.6	15AUG2014
		3	1579.3	42.4	103.2	15AUG2014
	10AUG2015	1	1671.2	50.5	102.9	17SEP2015
		2	1628.2	48.6	114.4	17SEP2015
		3	1717.1	49.9	91.8	17SEP2015
Kent Kings	01JUN2015	1	1866.5	54.8	74.5	22SEP2015
		2	1958.7	56.2	83.5	22SEP2015
		3	1870.8	54.8	79.7	22SEP2015
Kool Box	02JUL2014	1	1652.2	47.9	108.1	15AUG2014
		2	1692.9	48.3	101.5	15AUG2014
		3	1602.2	45.4	82.7	15AUG2014
	15JUL2015	1	1859.3	60.4	99.1	14SEP2015
		2	1914.1	61.6	97.8	14SEP2015
		3	1915.1	62.1	119.5	14SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
L&M Blue Pack Box	06AUG2014	1	1442.5	39.5	75.9	29AUG2014
		2	1472.4	41.7	66.8	29AUG2014
		3	1546.3	43.0	72.5	29AUG2014
L&M Box	06AUG2014	1	1496.9	43.7	91.7	25AUG2014
		2	1564.1	46.6	99.8	25AUG2014
		3	1464.9	43.2	97.2	25AUG2014
	31AUG2015	1	1823.7	55.8	99.2	22SEP2015
		2	1739.6	52.9	89.5	22SEP2015
		3	1869.4	56.4	95.0	22SEP2015
L&M Menthol 100's Box	06AUG2014	1	1621.9	43.3	98.3	29AUG2014
		2	1760.0	47.8	99.9	29AUG2014
		3	1600.6	41.9	86.6	29AUG2014
Marlboro 100's Box	31AUG2015	1	1826.2	55.4	88.6	22SEP2015
		2	1806.4	54.3	82.4	22SEP2015
		3	1784.9	55.7	88.3	22SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Marlboro 72s Blue Pack Box	06AUG2014	1	1399.5	40.7	122.0	29AUG2014
		2	1280.2	36.6	111.0	29AUG2014
		3	1393.2	40.5	121.3	29AUG2014
Marlboro 72s Box	06AUG2014	1	1333.6	37.4	77.3	27AUG2014
		2	1461.0	41.6	77.5	27AUG2014
		3	1356.0	38.8	82.3	27AUG2014
Marlboro Blend No. 27 Box	06AUG2014	1	1518.1	43.0	126.7	28AUG2014
		2	1511.6	42.2	119.7	28AUG2014
		3	1508.8	42.3	132.1	28AUG2014
Marlboro Box	06AUG2014	1	1579.6	45.8	90.0	28AUG2014
		2	1490.2	42.4	82.3	28AUG2014
		3	1399.4	40.2	76.6	28AUG2014
	31AUG2015	1	1604.8	50.8	83.1	21SEP2015
		2	1653.6	53.2	105.2	21SEP2015
		3	1671.1	53.1	89.9	21SEP2015



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	Completed Analysis Date
Marlboro Edge Box	31AUG2015	1	1819.1	59.4	153.8	14SEP2015
		2	1825.3	59.4	142.1	14SEP2015
		3	1857.2	60.0	136.8	14SEP2015
Marlboro Eighty Threes Box	31AUG2015	1	1746.0	56.0	93.6	22SEP2015
		2	1679.6	52.6	80.7	22SEP2015
		3	1721.5	53.9	88.6	22SEP2015
Marlboro Gold Pack 100's Box	31AUG2015	1	1733.1	50.1	66.4	21SEP2015
		2	1778.0	53.1	67.6	21SEP2015
		3	1831.0	54.1	61.4	21SEP2015
Marlboro Gold Pack Box	06AUG2014	1	1366.2	38.3	66.7	28AUG2014
		2	1420.8	40.1	76.6	28AUG2014
		3	1522.8	43.6	75.7	28AUG2014
	31AUG2015	1	1526.0	46.3	86.3	22SEP2015
		2	1671.5	50.2	79.2	22SEP2015
		3	1642.0	50.9	79.0	22SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Marlboro Menthol Box	06AUG2014	1	1646.7	49.8	128.8	25AUG2014
		2	1651.7	49.4	123.2	25AUG2014
		3	1702.5	52.6	132.0	25AUG2014
	31AUG2015	1	1746.0	48.4	133.6	25SEP2015
		2	1729.2	48.2	133.2	25SEP2015
		3	1713.5	47.5	132.4	25SEP2015
Marlboro Menthol Gold Pack Box	31AUG2015	1	1630.7	49.2	129.5	20OCT2015
		2	1509.7	45.9	122.2	20OCT2015
		3	1565.8	47.3	138.8	20OCT2015
Marlboro Menthol Silver Pack Box	06AUG2014	1	1294.4	34.9	53.2	28AUG2014
		2	1286.1	33.7	48.4	28AUG2014
		3	1345.4	35.3	52.8	28AUG2014
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	1593.1	45.1	75.5	28AUG2014
		2	1588.5	44.7	63.3	28AUG2014
		3	1760.7	49.3	64.0	28AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Marlboro Menthol Special Blend 100's (Black) Box	31AUG2015	1	1847.9	56.6	82.1	21SEP2015
		2	1718.8	53.3	80.7	21SEP2015
		3	1849.0	57.0	91.5	21SEP2015
Marlboro NXT Box (crushed)	31AUG2015	1	1583.2	47.1	128.5	22SEP2015
		2	1539.6	46.3	121.7	22SEP2015
		3	1476.4	42.9	126.1	22SEP2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	1567.3	45.2	115.9	22SEP2015
		2	1411.1	42.8	91.9	22SEP2015
		3	1605.9	49.5	125.6	22SEP2015
Marlboro Silver Pack 100's Box	06AUG2014	1	1576.0	42.8	47.6	28AUG2014
		2	1664.4	44.2	48.0	28AUG2014
		3	1566.7	40.8	43.5	28AUG2014
	31AUG2015	1	1655.6	47.3	58.2	22SEP2015
		2	1762.0	51.7	60.0	22SEP2015
		3	1611.2	47.0	55.0	22SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Marlboro Silver Pack Box	06AUG2014	1	1419.3	38.1	48.5	27AUG2014
		2	1452.7	39.7	49.7	27AUG2014
		3	1331.4	35.7	53.4	27AUG2014
	31AUG2015	1	1492.1	44.5	65.5	17SEP2015
		2	1545.0	46.2	59.8	17SEP2015
		3	1551.4	47.4	80.1	17SEP2015
Marlboro Special Blend (Black) Box	06AUG2014	1	1433.9	41.5	73.6	15AUG2014
		2	1397.0	40.6	80.0	15AUG2014
		3	1330.9	37.3	74.0	15AUG2014
	31AUG2015	1	1549.2	49.2	88.9	20OCT2015
		2	1556.4	49.6	91.8	20OCT2015
		3	1713.4	53.7	82.0	20OCT2015
Marlboro Special Blend (Gold) Box	06AUG2014	1	1395.8	38.6	61.7	27AUG2014
		2	1456.6	41.1	63.0	27AUG2014
		3	1437.9	40.6	72.9	27AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Marlboro Special Blend (Gold) Box	31AUG2015	1	1555.0	44.7	63.2	22SEP2015
		2	1442.1	43.1	74.1	22SEP2015
		3	1506.7	45.0	76.3	22SEP2015
Marlboro Special Blend (Red) Box	31AUG2015	1	1662.5	53.7	90.6	21SEP2015
		2	1601.7	49.9	75.6	21SEP2015
		3	1574.8	48.5	85.3	21SEP2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	1591.9	46.3	74.9	25AUG2014
		2	1623.1	45.8	69.8	25AUG2014
		3	1638.1	46.6	68.2	25AUG2014
	31AUG2015	1	1818.9	52.8	78.0	24SEP2015
		2	1722.4	48.6	71.1	24SEP2015
		3	1746.1	49.0	71.3	24SEP2015
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	1694.2	50.9	72.6	21SEP2015
		2	1851.0	55.9	65.8	21SEP2015
		3	1667.5	49.7	60.8	21SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	Completed Analysis Date
Maverick 100s Box	31AUG2015	1	2133.0	59.8	82.1	22SEP2015
		2	2074.6	58.3	80.3	22SEP2015
		3	2203.3	61.7	80.9	22SEP2015
Maverick Gold 100s Box	06AUG2014	1	1725.8	43.8	64.9	27AUG2014
		2	1832.1	47.6	72.5	27AUG2014
		3	1739.6	44.2	64.4	27AUG2014
Maverick Menthol 100 Box	06AUG2014	1	2010.1	54.6	94.5	05SEP2014
		2	1955.3	52.1	95.9	05SEP2014
		3	1948.1	51.2	93.0	05SEP2014
	31AUG2015	1	2096.3	52.0	73.2	25SEP2015
		2	2050.8	53.1	93.6	25SEP2015
		3	2032.7	52.7	102.7	25SEP2015
Misty Blue 120's Box	24JUL2015	1	2169.0	65.5	87.1	14SEP2015
		2	2300.9	69.7	103.9	14SEP2015
		3	2031.8	63.3	89.9	14SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Misty Menthol Green 120's Box	27JUN2014	1	1924.7	55.1	87.8	14AUG2014
		2	1851.7	54.1	110.0	14AUG2014
		3	2009.0	56.3	105.9	14AUG2014
More 120's Soft Pack	05JUN2014	1	2097.4	57.6	77.1	15AUG2014
		2	1967.1	53.2	74.8	15AUG2014
		3	2090.6	57.7	91.9	15AUG2014
	10JUL2015	1	2384.9	74.2	110.1	17SEP2015
		2	2435.8	75.3	88.5	17SEP2015
		3	2323.4	69.7	85.5	17SEP2015
Natural American Spirit Full- Bodied Taste	27JUN2014	1	1566.7	50.1	127.4	25AUG2014
		2	1500.8	48.1	113.9	25AUG2014
		3	1556.8	50.0	127.5	25AUG2014
	05MAY2015	1	1519.9	52.6	163.6	14SEP2015
		2	1572.2	54.2	166.9	14SEP2015
		3	1495.1	50.5	143.2	14SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Natural American Spirit Made With Organic Tobacco Full- Bodied Taste	25JUN2014	1	1535.6	48.5	88.0	25AUG2014
		2	1525.5	47.7	84.3	25AUG2014
		3	1683.2	52.9	85.3	25AUG2014
	07AUG2015	1	1644.7	53.8	102.1	14SEP2015
		2	1397.7	45.5	77.7	15SEP2015
		3	1441.4	45.9	85.0	15SEP2015
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	1532.0	48.6	73.9	15SEP2015
		2	1746.9	63.9	95.1	15SEP2015
		3	1532.2	49.1	76.2	15SEP2015
Natural American Spirit Mellow Taste	06JUL2015	1	1494.7	50.2	123.3	15SEP2015
		2	1614.7	55.2	128.2	15SEP2015
		3	1542.9	52.3	138.5	15SEP2015
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	1589.4	51.5	102.5	14SEP2015
		2	1563.2	50.0	101.3	14SEP2015
		3	1661.7	53.3	116.6	14SEP2015



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	1567.1	49.8	109.0	25AUG2014
		2	1608.9	52.0	123.5	25AUG2014
		3	1664.2	51.6	105.1	25AUG2014
	11AUG2015	1	1507.0	52.1	135.4	15SEP2015
		2	1532.8	51.9	118.4	15SEP2015
		3	1486.3	49.8	104.6	15SEP2015
Newport Box	06AUG2014	1	1587.3	44.6	103.7	05SEP2014
		2	1693.7	46.3	97.2	05SEP2014
		3	1711.1	47.6	96.0	05SEP2014
	04AUG2015	1	1750.0	45.7	73.5	25SEP2015
		2	1739.8	45.2	93.3	25SEP2015
		3	1815.1	47.0	92.2	25SEP2015
Newport Box 100s	06AUG2014	1	1735.7	46.7	104.8	29AUG2014
		2	1788.7	48.1	105.5	29AUG2014
		3	1641.5	42.2	89.4	29AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Newport Box 100s	30JUL2015	1	1969.0	50.6	93.6	25SEP2015
		2	1954.3	50.2	93.6	25SEP2015
		3	1944.5	50.1	93.0	25SEP2015
Newport Menthol Gold Box	25MAY2015	1	1640.5	47.8	69.8	14SEP2015
		2	1666.5	48.4	68.3	14SEP2015
		3	1582.7	44.5	58.8	14SEP2015
Newport Non-Menthol Box	06AUG2014	1	1606.4	44.7	103.2	05SEP2014
		2	1562.1	43.7	101.6	05SEP2014
		3	1568.7	42.7	93.2	05SEP2014
Now Soft Pack	23APR2014	1	1270.4	34.5	50.8	14AUG2014
		2	1232.4	31.9	48.1	14AUG2014
		3	1297.9	33.6	48.3	14AUG2014
	15MAY2015	1	1440.9	41.2	47.9	17SEP2015
		2	1434.5	42.2	55.9	17SEP2015
		3	1338.6	38.1	61.0	17SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Pall Mall Blue 100's Box	19JUN2014	1	1893.9	51.6	108.1	14AUG2014
		2	1748.9	47.7	103.7	14AUG2014
		3	1756.3	48.8	100.6	14AUG2014
	27JUL2015	1	2266.6	67.6	124.3	17SEP2015
		2	2008.2	58.9	93.0	17SEP2015
		3	2168.3	62.7	97.6	17SEP2015
Pall Mall Menthol 100's Box	07JUL2015	1	2206.5	63.9	109.4	17SEP2015
		2	2029.0	58.4	109.4	17SEP2015
		3	2046.0	60.4	128.5	17SEP2015
Pall Mall Menthol White 100's Box	20JUN2014	1	1700.3	46.5	77.9	14AUG2014
		2	1741.2	47.6	81.1	14AUG2014
		3	1800.8	50.5	71.9	14AUG2014
Pall Mall Orange Box	07JUL2014	1	1656.0	43.3	73.1	15AUG2014
		2	1564.3	40.9	72.1	15AUG2014
		3	1442.8	37.8	73.8	15AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Pall Mall Orange Box	15AUG2015	1	1637.3	43.4	70.0	25SEP2015
		2	1573.8	42.3	77.6	25SEP2015
		3	1650.1	42.5	70.1	25SEP2015
Pall Mall Red 100's Box	01JUL2014	1	1805.9	47.9	97.9	15AUG2014
		2	1822.2	49.9	108.7	15AUG2014
		3	1779.0	49.0	92.3	15AUG2014
	05AUG2015	1	2043.5	61.0	107.9	17SEP2015
		2	2149.1	64.5	127.3	17SEP2015
		3	2133.6	63.7	118.5	17SEP2015
Pall Mall Red Box	03AUG2015	1	1955.0	61.4	120.7	19SEP2015
		2	1885.9	59.5	124.5	19SEP2015
		3	1778.1	56.8	114.4	19SEP2015
Parliament (White Pack) Box	06AUG2014	1	1441.8	41.5	69.2	29AUG2014
		2	1440.4	41.2	63.3	29AUG2014
		3	1404.2	40.1	59.0	29AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Pyramid Blue 100s Box	31AUG2015	1	1707.4	51.3	77.0	14SEP2015
		2	1808.7	54.4	74.7	14SEP2015
		3	1768.0	51.8	79.9	14SEP2015
Pyramid Menthol Silver 100s Box	06AUG2014	1	1745.8	45.3	91.5	29AUG2014
		2	1714.5	45.9	79.4	29AUG2014
		3	1848.6	47.4	84.1	29AUG2014
	31AUG2015	1	1829.4	53.7	90.9	17SEP2015
		2	1759.3	52.8	86.5	17SEP2015
		3	1880.6	54.8	85.0	17SEP2015
Pyramid Orange 100s Box	06AUG2014	1	1873.9	51.5	93.9	05SEP2014
		2	1716.8	45.7	86.8	05SEP2014
		3	1686.2	45.8	95.4	05SEP2014
Pyramid Red 100s Box	06AUG2014	1	1722.7	47.4	92.9	27AUG2014
		2	1808.8	48.6	105.4	27AUG2014
		3	1914.8	52.5	103.4	27AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Pyramid Red 100s Box	31AUG2015	1	1661.2	44.0	112.2	25SEP2015
		2	1684.5	45.6	115.2	25SEP2015
		3	1687.1	45.5	114.8	25SEP2015
Pyramid Red Box	06AUG2014	1	1439.3	40.1	107.8	27AUG2014
		2	1674.9	46.7	122.8	27AUG2014
		3	1577.0	44.0	109.6	27AUG2014
Sonoma Red Box	06AUG2014	1	1514.5	44.0	109.1	05SEP2014
		2	1631.8	46.7	122.6	05SEP2014
		3	1484.8	42.3	113.1	05SEP2014
	31AUG2015	1	1662.8	51.6	120.6	19SEP2015
		2	1552.3	47.0	118.3	19SEP2015
		3	1659.6	49.9	104.2	19SEP2015
Tareyton Soft Pack	23APR2014	1	1501.7	36.7	142.1	14AUG2014
		2	1395.3	32.8	125.6	14AUG2014
		3	1522.5	33.9	118.3	14AUG2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	Completed Analysis Date
True Kings	13MAY2015	1	1780.6	52.0	65.2	21SEP2015
		2	1697.6	49.1	63.9	21SEP2015
		3	1696.3	51.1	62.7	21SEP2015
USA Gold Red Box	06AUG2014	1	1509.3	42.5	123.3	05SEP2014
		2	1584.8	46.3	119.5	05SEP2014
		3	1558.8	44.4	110.1	05SEP2014
	31AUG2015	1	1523.1	44.8	100.0	19SEP2015
		2	1738.9	53.2	128.3	19SEP2015
		3	1463.3	44.5	122.3	19SEP2015
Winston Red Box	12JUN2014	1	1682.8	51.5	100.0	14AUG2014
		2	1654.0	49.6	89.4	14AUG2014
		3	1575.9	47.5	90.5	14AUG2014
	10JUL2015	1	1909.8	62.3	100.2	14SEP2015
		2	1856.4	59.6	93.8	14SEP2015
		3	1569.8	45.1	59.4	14SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
			Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
Winston Red Box	10JUL2015	4	1972.9	62.6	111.0	22SEP2015
		5	1927.5	60.9	110.3	22SEP2015
		6	1844.0	58.4	98.2	22SEP2015



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Camel Blue Hard Pack	25JUN2014	1	8.36	103.9	13AUG2014
		2	8.81	110.9	13AUG2014
		3	8.12	114.6	13AUG2014
	16JUL2015	1	7.19	106.0	18SEP2015
		2	7.40	109.4	18SEP2015
		3	7.07	106.7	18SEP2015
Camel Crush (crushed)	16JUN2014	1	8.10	107.9	15AUG2014
		2	8.01	106.9	15AUG2014
		3	8.20	101.9	15AUG2014
	17JUN2015	1	7.14	N/A	18SEP2015
		2	7.08	N/A	18SEP2015
		3	6.94	N/A	18SEP2015
		1	N/A	102.8	09OCT2015
		2	N/A	99.2	09OCT2015
		3	N/A	101.8	09OCT2015
Camel Crush (uncrushed)	16JUN2014	1	7.75	104.3	15AUG2014
		2	7.90	109.4	15AUG2014
		3	7.98	101.7	15AUG2014

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Camel Crush (uncrushed)	17JUN2015	1	7.07	N/A	18SEP2015
		2	6.77	N/A	18SEP2015
		3	6.79	N/A	18SEP2015
		1	N/A	105.0	09OCT2015
		2	N/A	105.9	09OCT2015
		3	N/A	105.4	09OCT2015
Camel Filters Hard Pack	24JUN2014	1	10.34	134.1	15AUG2014
		2	11.36	132.8	15AUG2014
		3	10.63	132.1	15AUG2014
	15JUN2015	1	8.82	N/A	18SEP2015
		2	10.43	N/A	18SEP2015
		3	10.20	N/A	18SEP2015
		1	N/A	120.3	09OCT2015
		2	N/A	128.7	09OCT2015
		3	N/A	126.9	09OCT2015
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	8.47	96.0	15AUG2014
		2	8.46	94.2	15AUG2014
		3	8.88	97.0	15AUG2014

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Camel Menthol Silver Hard Pack (crushed)	10AUG2015	1	8.74	N/A	18SEP2015
		2	8.98	N/A	18SEP2015
		3	8.01	N/A	18SEP2015
		1	N/A	96.4	09OCT2015
		2	N/A	91.1	09OCT2015
		3	N/A	92.7	09OCT2015
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	8.02	102.4	15AUG2014
		2	7.96	103.7	15AUG2014
		3	8.19	107.9	15AUG2014
	10AUG2015	1	9.51	N/A	18SEP2015
		2	7.47	N/A	18SEP2015
		3	7.45	N/A	18SEP2015
		1	N/A	98.0	09OCT2015
		2	N/A	97.5	09OCT2015
		3	N/A	97.0	09OCT2015
Kent Kings	01JUN2015	1	9.70	131.9	23DEC2015
		2	9.37	132.5	23DEC2015
		3	9.51	128.1	23DEC2015

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Kool Box	02JUL2014	1	10.07	125.0	15AUG2014
		2	9.39	127.2	15AUG2014
		3	10.30	122.4	15AUG2014
	15JUL2015	1	10.56	119.0	22DEC2015
		2	12.18	121.5	22DEC2015
		3	9.82	115.3	22DEC2015
L&M Blue Pack Box	06AUG2014	1	6.45	91.5	26AUG2014
		2	5.66	82.4	26AUG2014
		3	6.24	92.5	26AUG2014
L&M Box	06AUG2014	1	7.10	101.1	26AUG2014
		2	6.94	96.2	26AUG2014
		3	7.33	98.9	26AUG2014
	31AUG2015	1	6.45	78.2	22DEC2015
		2	6.34	74.6	22DEC2015
		3	6.65	72.8	22DEC2015
L&M Menthol 100's Box	06AUG2014	1	8.99	120.4	26AUG2014
		2	8.52	119.7	26AUG2014
		3	8.94	119.8	26AUG2014

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Marlboro 100's Box	31AUG2015	1	13.62	135.1	07OCT2015
		2	13.30	132.5	07OCT2015
		3	14.76	136.3	07OCT2015
Marlboro 72s Blue Pack Box	06AUG2014	1	8.18	106.8	21AUG2014
		2	8.29	109.0	21AUG2014
		3	8.42	109.7	21AUG2014
Marlboro 72s Box	06AUG2014	1	9.52	N/A	25AUG2014
		2	9.66	N/A	25AUG2014
		3	9.47	N/A	25AUG2014
		1	N/A	114.7	08SEP2014
		2	N/A	117.4	08SEP2014
		3	N/A	110.5	08SEP2014
Marlboro Blend No. 27 Box	06AUG2014	1	8.38	102.0	25AUG2014
		2	8.16	107.5	25AUG2014
		3	8.36	105.0	25AUG2014
Marlboro Box	06AUG2014	1	11.22	138.3	21AUG2014
		2	11.60	131.2	21AUG2014
		3	11.40	134.5	21AUG2014

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Marlboro Box	31AUG2015	1	12.27	126.0	07OCT2015
		2	11.16	119.2	07OCT2015
		3	12.25	116.5	07OCT2015
Marlboro Edge Box	31AUG2015	1	9.17	102.8	22DEC2015
		2	8.81	103.7	22DEC2015
		3	8.16	99.4	22DEC2015
Marlboro Eighty Threes Box	31AUG2015	1	12.71	129.8	22DEC2015
		2	10.80	118.4	22DEC2015
		3	13.38	139.7	22DEC2015
Marlboro Gold Pack 100's Box	31AUG2015	1	10.24	107.4	07OCT2015
		2	10.58	111.3	07OCT2015
		3	9.91	105.5	07OCT2015
Marlboro Gold Pack Box	06AUG2014	1	8.84	112.8	21AUG2014
		2	9.33	120.7	21AUG2014
		3	8.86	117.9	21AUG2014
	31AUG2015	1	8.87	97.3	07OCT2015
		2	8.74	99.6	07OCT2015
		3	8.86	100.3	07OCT2015

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Marlboro Menthol Box	06AUG2014	1	9.35	N/A	25AUG2014
		2	9.44	N/A	25AUG2014
		3	9.82	N/A	25AUG2014
		1	N/A	131.3	08SEP2014
		2	N/A	132.2	08SEP2014
		3	N/A	140.3	08SEP2014
	31AUG2015	1	9.90	116.1	07OCT2015
		2	9.74	114.2	07OCT2015
		3	10.35	118.2	07OCT2015
Marlboro Menthol Gold Pack Box	31AUG2015	1	7.70	86.1	22DEC2015
		2	7.65	91.6	22DEC2015
		3	6.14	75.0	22DEC2015
Marlboro Menthol Silver Pack Box	06AUG2014	1	6.40	88.0	25AUG2014
		2	6.95	86.1	25AUG2014
		3	6.40	87.2	25AUG2014
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	11.66	136.2	25AUG2014
		2	N/A	138.6	25AUG2014
		3	11.94	138.8	25AUG2014

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	4	11.92	N/A	08SEP2014
		5	11.78	N/A	08SEP2014
		6	11.84	N/A	08SEP2014
	31AUG2015	1	12.49	133.6	07OCT2015
		2	11.25	128.7	07OCT2015
		3	11.90	130.6	07OCT2015
Marlboro NXT Box (crushed)	31AUG2015	1	6.79	77.6	22DEC2015
		2	6.83	79.7	22DEC2015
		3	6.87	79.8	22DEC2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	6.81	87.7	22DEC2015
		2	6.62	86.7	22DEC2015
		3	6.60	86.5	22DEC2015
Marlboro Silver Pack 100's Box	06AUG2014	1	7.96	N/A	25AUG2014
		2	8.10	N/A	25AUG2014
		3	7.95	N/A	25AUG2014
		1	N/A	109.2	08SEP2014
		2	N/A	104.0	08SEP2014
		3	N/A	104.3	08SEP2014

N/A= not available



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Marlboro Silver Pack 100's Box	31AUG2015	1	7.19	90.6	07OCT2015
		2	7.66	88.9	07OCT2015
		3	7.56	91.2	07OCT2015
Marlboro Silver Pack Box	06AUG2014	1	6.50	85.1	21AUG2014
		2	6.46	83.6	21AUG2014
		3	6.22	85.5	21AUG2014
	31AUG2015	1	7.07	80.8	22DEC2015
		2	8.23	89.4	22DEC2015
		3	7.71	89.2	22DEC2015
Marlboro Special Blend (Black) Box	06AUG2014	1	10.05	124.2	25AUG2014
		2	9.58	122.2	25AUG2014
		3	10.44	124.2	25AUG2014
	31AUG2015	1	10.14	106.8	22DEC2015
		2	10.89	110.0	22DEC2015
		3	10.25	111.9	22DEC2015
Marlboro Special Blend (Gold) Box	06AUG2014	1	9.60	123.2	21AUG2014
		2	9.52	113.1	21AUG2014
		3	9.84	118.4	21AUG2014

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Marlboro Special Blend (Gold) Box	31AUG2015	1	8.10	93.4	07OCT2015
		2	7.85	94.0	07OCT2015
		3	8.65	104.1	07OCT2015
Marlboro Special Blend (Red) Box	31AUG2015	1	8.71	106.7	07OCT2015
		2	7.53	95.5	07OCT2015
		3	8.45	96.8	07OCT2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	10.76	N/A	25AUG2014
		2	11.36	N/A	25AUG2014
		3	11.68	N/A	25AUG2014
		1	N/A	143.0	08SEP2014
		2	N/A	157.4	08SEP2014
		3	N/A	150.1	08SEP2014
	31AUG2015	1	10.79	117.7	23DEC2015
		2	10.48	117.0	23DEC2015
		3	10.45	119.5	23DEC2015
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	9.94	112.9	07OCT2015
		2	9.66	110.2	07OCT2015
		3	9.32	107.0	07OCT2015

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Maverick 100s Box	31AUG2015	1	14.88	130.5	23DEC2015
		2	14.25	126.9	23DEC2015
		3	14.09	127.8	23DEC2015
Maverick Gold 100s Box	06AUG2014	1	9.16	95.9	25AUG2014
		2	10.09	102.6	25AUG2014
		3	10.72	96.3	25AUG2014
Maverick Menthol 100 Box	06AUG2014	1	12.15	140.5	05SEP2014
		2	12.07	144.4	05SEP2014
		3	12.52	139.8	05SEP2014
	31AUG2015	1	12.53	131.2	23DEC2015
		2	13.50	132.7	23DEC2015
		3	12.77	134.2	23DEC2015
Misty Blue 120's Box	24JUL2015	1	11.52	137.3	23SEP2015
		2	12.06	129.9	23SEP2015
		3	11.06	130.3	23SEP2015
Misty Menthol Green 120's Box	27JUN2014	1	12.10	121.6	13AUG2014
		2	11.44	116.2	13AUG2014
		3	11.61	116.2	13AUG2014

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
More 120's Soft Pack	05JUN2014	1	22.35	113.1	15AUG2014
		2	23.14	120.3	15AUG2014
		3	24.20	117.2	15AUG2014
	10JUL2015	1	13.62	115.1	23SEP2015
		2	12.04	107.9	23SEP2015
		3	12.07	109.3	23SEP2015
Natural American Spirit Full-Bodied Taste	27JUN2014	1	10.93	167.6	21AUG2014
		2	11.06	167.1	21AUG2014
		3	10.40	166.2	21AUG2014
	05MAY2015	1	9.76	163.6	17SEP2015
		2	9.54	167.2	17SEP2015
		3	9.74	158.2	17SEP2015
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	25JUN2014	1	6.00	N/A	25AUG2014
		2	5.59	N/A	25AUG2014
		3	5.96	N/A	25AUG2014
		1	N/A	150.6	08SEP2014
		2	N/A	152.8	08SEP2014
		3	N/A	155.6	08SEP2014

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	07AUG2015	1	4.39	135.6	17SEP2015
		2	4.77	134.6	17SEP2015
		3	4.92	137.8	17SEP2015
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	4.09	117.0	17SEP2015
		2	3.73	115.7	17SEP2015
		3	3.66	111.5	17SEP2015
Natural American Spirit Mellow Taste	06JUL2015	1	9.63	165.4	17SEP2015
		2	10.33	162.7	17SEP2015
		3	9.36	157.6	17SEP2015
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	6.13	127.7	17SEP2015
		2	6.39	129.0	17SEP2015
		3	6.99	126.7	17SEP2015
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	10.93	249.2	21AUG2014
		2	10.60	258.8	21AUG2014
		3	10.54	236.2	21AUG2014
	11AUG2015	1	11.64	266.4	18SEP2015
		2	12.38	265.7	18SEP2015
		3	11.76	251.7	18SEP2015

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Newport Box	06AUG2014	1	6.58	112.8	26AUG2014
		2	6.05	108.9	26AUG2014
		3	6.13	107.2	26AUG2014
	04AUG2015	1	8.96	120.5	23DEC2015
		2	7.77	95.7	23DEC2015
		3	9.16	115.3	23DEC2015
Newport Box 100s	06AUG2014	1	9.19	140.8	26AUG2014
		2	9.39	141.2	26AUG2014
		3	8.78	136.7	26AUG2014
	30JUL2015	1	12.27	139.0	23DEC2015
		2	11.10	125.8	23DEC2015
		3	13.49	147.9	23DEC2015
Newport Menthol Gold Box	25MAY2015	1	6.21	96.9	18SEP2015
		2	6.42	104.7	18SEP2015
		3	5.85	101.9	18SEP2015
Newport Non-Menthol Box	06AUG2014	1	6.34	108.2	05SEP2014
		2	6.74	116.8	05SEP2014
		3	6.59	109.6	05SEP2014

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Now Soft Pack	23APR2014	1	4.38	79.0	13AUG2014
		2	4.44	78.0	13AUG2014
		3	4.18	74.9	13AUG2014
	15MAY2015	1	3.83	N/A	18SEP2015
		2	3.42	N/A	18SEP2015
		3	3.39	N/A	18SEP2015
		1	N/A	65.1	09OCT2015
		2	N/A	67.1	09OCT2015
		3	N/A	73.4	09OCT2015
Pall Mall Blue 100's Box	19JUN2014	1	9.43	131.2	15AUG2014
		2	9.54	126.5	15AUG2014
		3	9.45	132.3	15AUG2014
	27JUL2015	1	9.85	N/A	18SEP2015
		2	9.43	N/A	18SEP2015
		3	9.94	N/A	18SEP2015
		1	N/A	129.2	09OCT2015
		2	N/A	127.3	09OCT2015
		3	N/A	130.5	09OCT2015

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Pall Mall Menthol 100's Box	07JUL2015	1	9.00	N/A	18SEP2015
		2	9.68	N/A	18SEP2015
		3	10.52	N/A	18SEP2015
		1	N/A	144.5	09OCT2015
		2	N/A	135.4	09OCT2015
		3	N/A	142.0	09OCT2015
Pall Mall Menthol White 100's Box	20JUN2014	1	8.18	102.4	15AUG2014
		2	8.27	113.7	15AUG2014
		3	8.34	103.8	15AUG2014
Pall Mall Orange Box	07JUL2014	1	5.95	91.9	15AUG2014
		2	6.30	99.6	15AUG2014
		3	6.11	97.3	15AUG2014
	15AUG2015	1	6.62	112.2	18SEP2015
		2	6.43	112.6	18SEP2015
		3	6.19	103.9	18SEP2015
Pall Mall Red 100's Box	01JUL2014	1	10.67	142.3	15AUG2014
		2	10.95	141.5	15AUG2014
		3	11.05	145.7	15AUG2014

N/A= not available



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Pall Mall Red 100's Box	05AUG2015	1	10.44	159.7	18SEP2015
		2	10.65	162.8	18SEP2015
		3	10.63	161.3	18SEP2015
Pall Mall Red Box	03AUG2015	1	9.29	141.8	18SEP2015
		2	9.52	138.1	18SEP2015
		3	8.93	138.6	18SEP2015
Parliament (White Pack) Box	06AUG2014	1	7.15	93.7	21AUG2014
		2	6.94	93.4	21AUG2014
		3	6.84	99.4	21AUG2014
Pyramid Blue 100s Box	31AUG2015	1	5.82	78.7	22DEC2015
		2	5.06	69.2	22DEC2015
		3	5.97	79.7	22DEC2015
Pyramid Menthol Silver 100s Box	06AUG2014	1	5.52	83.8	05SEP2014
		2	5.23	80.2	05SEP2014
		3	5.15	81.2	05SEP2014
	31AUG2015	1	6.69	79.1	22DEC2015
		2	6.88	84.2	22DEC2015
		3	6.82	80.8	22DEC2015

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Pyramid Orange 100s Box	06AUG2014	1	5.65	81.7	05SEP2014
		2	5.26	87.8	05SEP2014
		3	5.52	84.2	05SEP2014
Pyramid Red 100s Box	06AUG2014	1	5.79	92.1	21AUG2014
		2	6.29	92.9	21AUG2014
		3	6.18	86.9	21AUG2014
	31AUG2015	1	7.43	93.6	22DEC2015
		2	8.59	98.2	22DEC2015
		3	7.93	96.1	22DEC2015
Pyramid Red Box	06AUG2014	1	6.01	78.8	21AUG2014
		2	6.37	81.8	21AUG2014
		3	5.76	81.5	21AUG2014
Sonoma Red Box	06AUG2014	1	11.51	128.7	05SEP2014
		2	11.88	129.2	05SEP2014
		3	11.93	129.1	05SEP2014
	31AUG2015	1	10.74	130.2	22DEC2015
		2	11.01	129.6	22DEC2015
		3	10.08	123.8	22DEC2015

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Metals Analysis		
			Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
Tareyton Soft Pack	23APR2014	1	7.94	52.3	13AUG2014
		2	8.39	52.0	13AUG2014
		3	9.00	51.8	13AUG2014
True Kings	13MAY2015	1	10.93	119.5	23DEC2015
		2	10.56	118.3	23DEC2015
		3	10.96	120.3	23DEC2015
USA Gold Red Box	06AUG2014	1	12.13	133.1	05SEP2014
		2	12.38	124.4	05SEP2014
		3	11.61	126.7	05SEP2014
	31AUG2015	1	10.04	130.4	22DEC2015
		2	9.82	121.2	22DEC2015
		3	10.19	125.8	22DEC2015
Winston Red Box	12JUN2014	1	8.51	137.4	15AUG2014
		2	8.81	131.6	15AUG2014
		3	9.04	127.4	15AUG2014
	10JUL2015	1	9.69	133.6	22DEC2015
		2	9.44	124.7	22DEC2015
		3	9.16	120.7	22DEC2015

N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Camel Blue Hard Pack	25JUN2014	1	18.6	158.0	79.2	127.0	12AUG2014
		2	17.6	151.0	85.4	126.0	12AUG2014
		3	19.4	172.0	83.7	134.0	12AUG2014
	16JUL2015	1	14.8	179.0	85.5	136.0	02OCT2015
		2	14.6	190.0	86.5	130.0	02OCT2015
		3	16.1	186.0	93.1	132.0	02OCT2015
Camel Crush (crushed)	16JUN2014	1	24.5	202.0	103.0	151.0	13AUG2014
		2	22.2	190.0	99.0	140.0	13AUG2014
		3	20.8	186.0	99.4	141.0	13AUG2014
	17JUN2015	1	19.3	220.0	108.0	148.0	26SEP2015
		2	18.9	214.0	104.0	172.0	26SEP2015
		3	17.5	209.0	101.0	157.0	26SEP2015
Camel Crush (uncrushed)	16JUN2014	1	21.0	188.0	86.6	147.0	13AUG2014
		2	21.8	186.0	96.1	141.0	13AUG2014
		3	23.7	209.0	95.9	148.0	13AUG2014
	17JUN2015	1	16.9	191.0	106.0	144.0	21SEP2015
		2	15.0	181.0	94.4	130.0	21SEP2015
		3	16.8	194.0	103.0	150.0	21SEP2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Camel Filters Hard Pack	24JUN2014	1	25.7	226.0	117.0	158.0	18AUG2014
		2	24.1	211.0	132.0	140.0	18AUG2014
		3	26.6	237.0	135.0	158.0	18AUG2014
	15JUN2015	1	22.6	223.0	116.0	171.0	25SEP2015
		2	18.2	216.0	113.0	151.0	25SEP2015
		3	19.9	195.0	97.2	146.0	25SEP2015
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	22.3	214.0	110.0	134.0	18AUG2014
		2	22.9	210.0	96.6	138.0	18AUG2014
		3	22.7	189.0	101.0	127.0	18AUG2014
	10AUG2015	1	17.5	202.0	123.0	143.0	25SEP2015
		2	15.9	196.0	104.0	135.0	25SEP2015
		3	16.1	196.0	105.0	137.0	25SEP2015
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	23.2	217.0	97.8	150.0	18AUG2014
		2	21.7	206.0	113.0	153.0	18AUG2014
		3	22.9	201.0	165.0	134.0	18AUG2014
		1	24.7	235.0	103.0	149.0	04SEP2014
		2	25.7	238.0	97.0	151.0	04SEP2014
		3	22.7	226.0	92.7	133.0	04SEP2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
Camel Menthol Silver Hard Pack (uncrushed)	10AUG2015	1	14.8	189.0	86.6	133.0	02OCT2015
		2	13.5	174.0	76.7	124.0	02OCT2015
		3	15.4	190.0	79.8	144.0	02OCT2015
Kent Kings	01JUN2015	1	38.4	309.0	175.0	329.0	13OCT2015
		2	35.4	264.0	153.0	253.0	13OCT2015
		3	32.1	255.0	152.0	233.0	13OCT2015
Kool Box	02JUL2014	1	26.3	236.0	105.0	171.0	13AUG2014
		2	28.9	248.0	169.0	170.0	13AUG2014
		3	29.7	248.0	126.0	183.0	13AUG2014
	15JUL2015	1	18.9	227.0	97.7	152.0	09OCT2015
		2	17.4	215.0	102.0	168.0	09OCT2015
		3	20.3	216.0	101.0	165.0	09OCT2015
L&M Blue Pack Box	06AUG2014	1	26.3	261.0	152.0	210.0	26SEP2014
		2	26.5	259.0	156.0	218.0	26SEP2014
		1	27.8	239.0	172.0	215.0	08OCT2014
		2	29.3	257.0	200.0	221.0	08OCT2014
		3	31.8	268.0	243.0	243.0	08OCT2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
L&M Box	06AUG2014	1	26.9	252.0	203.0	207.0	05SEP2014
		2	28.7	250.0	188.0	209.0	05SEP2014
		3	28.6	257.0	223.0	217.0	05SEP2014
	31AUG2015	1	22.7	254.0	191.0	251.0	09OCT2015
		2	20.4	237.0	186.0	219.0	09OCT2015
		3	22.4	252.0	214.0	222.0	09OCT2015
L&M Menthol 100's Box	06AUG2014	1	27.4	257.0	194.0	214.0	26SEP2014
		2	29.3	271.0	194.0	222.0	26SEP2014
		3	28.7	267.0	214.0	257.0	26SEP2014
Marlboro 100's Box	31AUG2015	1	38.6	405.0	261.0	337.0	15OCT2015
		2	39.8	413.0	256.0	358.0	15OCT2015
		3	35.0	393.0	257.0	366.0	15OCT2015
Marlboro 72s Blue Pack Box	06AUG2014	1	31.2	317.0	210.0	268.0	05SEP2014
		2	29.9	302.0	201.0	247.0	05SEP2014
		3	30.2	334.0	212.0	251.0	05SEP2014
Marlboro 72s Box	06AUG2014	1	33.8	356.0	178.0	276.0	18AUG2014
		2	33.4	372.0	191.0	268.0	18AUG2014
		3	32.8	345.0	183.0	259.0	18AUG2014

NAB= N'-nitrosoanabasine NAT= N'-nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'-nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Marlboro Blend No. 27 Box	06AUG2014	1	23.6	237.0	184.0	189.0	04SEP2014
		2	23.8	236.0	197.0	191.0	04SEP2014
		3	24.9	250.0	169.0	181.0	04SEP2014
Marlboro Box	06AUG2014	1	33.5	315.0	188.0	244.0	20AUG2014
		2	34.2	337.0	198.0	266.0	20AUG2014
		3	36.0	326.0	192.0	294.0	20AUG2014
	31AUG2015	1	34.3	347.0	238.0	340.0	15OCT2015
		2	37.1	362.0	231.0	329.0	15OCT2015
		3	33.1	337.0	241.0	294.0	15OCT2015
Marlboro Edge Box	31AUG2015	1	21.8	356.0	219.0	285.0	09OCT2015
		2	22.3	392.0	234.0	304.0	09OCT2015
		3	20.6	376.0	236.0	279.0	09OCT2015
Marlboro Eighty Threes Box	31AUG2015	1	29.4	343.0	232.0	263.0	12OCT2015
		2	30.6	327.0	241.0	301.0	12OCT2015
		3	27.2	342.0	218.0	302.0	12OCT2015
Marlboro Gold Pack 100's Box	31AUG2015	1	36.0	351.0	224.0	321.0	13OCT2015
		2	35.0	339.0	218.0	302.0	13OCT2015
		3	32.1	348.0	203.0	401.0	13OCT2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Marlboro Gold Pack Box	06AUG2014	1	31.2	293.0	160.0	232.0	20AUG2014
		2	33.3	333.0	160.0	251.0	20AUG2014
		3	30.6	316.0	171.0	234.0	20AUG2014
	31AUG2015	1	25.0	266.0	169.0	224.0	15OCT2015
		2	25.6	262.0	153.0	205.0	15OCT2015
		3	26.5	270.0	168.0	241.0	15OCT2015
Marlboro Menthol Box	06AUG2014	1	34.6	355.0	227.0	259.0	18AUG2014
		2	32.4	355.0	236.0	272.0	18AUG2014
		3	33.9	325.0	235.0	261.0	18AUG2014
	31AUG2015	1	29.5	369.0	253.0	294.0	15OCT2015
		2	30.8	360.0	247.0	312.0	15OCT2015
		3	29.2	347.0	237.0	315.0	15OCT2015
Marlboro Menthol Gold Pack Box	31AUG2015	1	19.1	219.0	168.0	189.0	12OCT2015
		2	17.4	230.0	177.0	190.0	12OCT2015
		3	18.1	237.0	183.0	193.0	12OCT2015
Marlboro Menthol Silver Pack Box	06AUG2014	1	24.2	217.0	120.0	157.0	05SEP2014
		2	26.0	228.0	114.0	181.0	05SEP2014
		3	26.1	231.0	129.0	177.0	05SEP2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	45.6	451.0	236.0	308.0	04SEP2014
		2	41.8	422.0	237.0	288.0	04SEP2014
		3	40.1	412.0	230.0	301.0	04SEP2014
	31AUG2015	1	34.1	327.0	223.0	279.0	13OCT2015
		2	36.4	337.0	227.0	307.0	13OCT2015
		3	36.3	348.0	222.0	301.0	13OCT2015
Marlboro NXT Box (crushed)	31AUG2015	1	16.8	211.0	161.0	172.0	05OCT2015
		2	17.4	231.0	148.0	201.0	05OCT2015
		3	17.9	252.0	160.0	219.0	05OCT2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	18.8	258.0	158.0	202.0	05OCT2015
		2	18.1	247.0	164.0	197.0	05OCT2015
		3	19.8	225.0	168.0	182.0	05OCT2015
Marlboro Silver Pack 100's Box	06AUG2014	1	35.0	339.0	205.0	266.0	18AUG2014
		2	30.9	314.0	174.0	230.0	18AUG2014
		3	32.5	316.0	177.0	237.0	18AUG2014
	31AUG2015	1	25.3	302.0	168.0	217.0	12OCT2015
		2	25.5	314.0	177.0	240.0	12OCT2015
		3	23.9	273.0	174.0	229.0	12OCT2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Marlboro Silver Pack Box	06AUG2014	1	23.7	234.0	140.0	186.0	18AUG2014
		2	24.7	244.0	131.0	183.0	18AUG2014
		3	25.9	265.0	129.0	192.0	18AUG2014
	31AUG2015	1	22.1	260.0	133.0	192.0	12OCT2015
		2	16.0	205.0	112.0	161.0	12OCT2015
		3	19.5	200.0	123.0	164.0	12OCT2015
	06AUG2014	1	32.7	328.0	260.0	243.0	18AUG2014
		2	30.8	318.0	167.0	223.0	18AUG2014
		3	33.8	334.0	179.0	253.0	18AUG2014
Marlboro Special Blend (Black) Box	31AUG2015	1	25.2	300.0	190.0	246.0	12OCT2015
		2	24.1	291.0	187.0	261.0	12OCT2015
		3	24.4	312.0	175.0	254.0	12OCT2015
	06AUG2014	1	31.6	340.0	178.0	241.0	20AUG2014
		2	29.6	313.0	176.0	223.0	20AUG2014
		3	29.2	322.0	170.0	246.0	20AUG2014
	31AUG2015	1	25.3	259.0	166.0	212.0	13OCT2015
		2	24.3	240.0	177.0	212.0	13OCT2015
		3	24.7	248.0	149.0	206.0	13OCT2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
Marlboro Special Blend (Red) Box	31AUG2015	1	24.0	252.0	169.0	220.0	15OCT2015
		2	25.5	272.0	183.0	237.0	15OCT2015
		3	25.9	286.0	184.0	240.0	15OCT2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	40.4	412.0	220.0	300.0	18AUG2014
		2	39.4	401.0	210.0	286.0	18AUG2014
		3	39.4	417.0	311.0	306.0	18AUG2014
	31AUG2015	1	36.9	372.0	252.0	329.0	13OCT2015
		2	39.4	373.0	239.0	328.0	13OCT2015
		3	39.6	358.0	258.0	357.0	13OCT2015
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	28.5	320.0	201.0	281.0	15OCT2015
		2	26.0	285.0	204.0	236.0	15OCT2015
		3	30.3	313.0	207.0	266.0	15OCT2015
Maverick 100s Box	31AUG2015	1	31.9	253.0	174.0	241.0	15OCT2015
		2	29.6	238.0	160.0	227.0	15OCT2015
		3	31.6	254.0	155.0	241.0	15OCT2015
Maverick Gold 100s Box	06AUG2014	1	26.1	197.0	161.0	182.0	05SEP2014
		2	26.2	200.0	161.0	174.0	05SEP2014
		3	26.7	212.0	160.0	180.0	05SEP2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
Maverick Menthol 100 Box	06AUG2014	1	39.1	307.0	209.0	252.0	08SEP2014
		2	37.7	349.0	231.0	261.0	08SEP2014
		3	35.1	305.0	194.0	235.0	08SEP2014
	31AUG2015	1	32.0	282.0	171.0	250.0	15OCT2015
		2	33.6	286.0	174.0	271.0	15OCT2015
		3	33.3	281.0	182.0	286.0	15OCT2015
Misty Blue 120's Box	24JUL2015	1	25.2	289.0	202.0	238.0	25SEP2015
		2	25.5	292.0	205.0	236.0	25SEP2015
		3	24.3	287.0	211.0	232.0	25SEP2015
Misty Menthol Green 120's Box	27JUN2014	1	23.4	196.0	139.0	141.0	12AUG2014
		2	22.5	189.0	135.0	145.0	12AUG2014
		3	23.2	194.0	168.0	151.0	12AUG2014
More 120's Soft Pack	05JUN2014	1	25.8	241.0	162.0	177.0	13AUG2014
		2	25.9	223.0	154.0	181.0	13AUG2014
		3	26.2	234.0	143.0	177.0	13AUG2014
	10JUL2015	1	17.5	229.0	141.0	159.0	02OCT2015
		2	19.3	258.0	169.0	176.0	02OCT2015
		3	18.2	255.0	166.0	159.0	02OCT2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
Natural American Spirit Full-Bodied Taste	27JUN2014	1	6.1	45.6	35.9	35.5	20AUG2014
		2	5.7	40.8	38.4	34.7	20AUG2014
		3	7.7	48.4	37.2	35.8	20AUG2014
	05MAY2015	1	3.3	37.1	28.9	20.7	26SEP2015
		2	2.9	38.7	26.7	17.1	26SEP2015
		3	3.6	38.2	30.1	19.4	26SEP2015
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	25JUN2014	1	15.3	76.5	54.3	75.5	20AUG2014
		2	15.4	86.2	57.0	69.2	20AUG2014
		3	15.6	84.3	74.8	76.0	20AUG2014
	07AUG2015	1	10.9	70.9	54.5	62.7	24SEP2015
		2	11.2	78.2	76.3	58.8	24SEP2015
		3	8.3	67.8	53.6	47.6	24SEP2015
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	8.5	56.2	42.9	45.1	24SEP2015
		2	8.3	56.0	37.2	40.5	24SEP2015
		3	9.2	56.5	37.6	57.5	24SEP2015
Natural American Spirit Mellow Taste	06JUL2015	1	4.2	43.1	27.9	21.2	26SEP2015
		2	4.4	50.9	32.5	29.2	26SEP2015
		3	4.5	49.5	31.7	25.7	26SEP2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	7.1	53.6	49.5	38.2	26SEP2015
		2	7.9	53.3	45.0	35.4	26SEP2015
		3	8.7	67.3	44.4	46.5	26SEP2015
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	12.9	89.4	50.4	132.0	08OCT2014
		2	12.5	95.9	55.7	117.0	08OCT2014
		3	11.0	87.0	48.9	106.0	08OCT2014
	11AUG2015	1	10.7	112.0	50.6	99.6	24SEP2015
		2	12.5	110.0	42.6	92.3	24SEP2015
		3	10.5	108.0	46.1	100.0	24SEP2015
Newport Box	06AUG2014	1	27.6	224.0	111.0	165.0	26SEP2014
		2	27.5	239.0	146.0	171.0	26SEP2014
		3	27.9	233.0	114.0	182.0	26SEP2014
	04AUG2015	1	28.5	246.0	148.0	253.0	15OCT2015
		2	24.3	231.0	146.0	250.0	15OCT2015
		3	24.6	241.0	139.0	213.0	15OCT2015
Newport Box 100s	06AUG2014	1	37.1	304.0	187.0	211.0	26SEP2014
		2	37.0	305.0	158.0	216.0	26SEP2014
		3	35.8	333.0	175.0	227.0	26SEP2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Newport Box 100s	30JUL2015	1	37.2	326.0	197.0	321.0	15OCT2015
		2	37.8	318.0	189.0	285.0	15OCT2015
		3	36.0	302.0	195.0	282.0	15OCT2015
Newport Menthol Gold Box	25MAY2015	1	16.3	192.0	99.6	168.0	05OCT2015
		2	17.5	197.0	97.4	155.0	05OCT2015
		3	18.5	204.0	105.0	162.0	05OCT2015
Newport Non-Menthol Box	06AUG2014	1	26.5	227.0	119.0	162.0	26SEP2014
		2	27.8	243.0	137.0	170.0	26SEP2014
		3	25.0	219.0	127.0	158.0	26SEP2014
Now Soft Pack	23APR2014	1	18.5	154.0	70.6	113.0	12AUG2014
		2	22.2	179.0	73.7	126.0	12AUG2014
		3	19.7	167.0	90.1	132.0	12AUG2014
	15MAY2015	1	15.0	164.0	64.8	110.0	26SEP2015
		2	15.3	170.0	67.3	129.0	26SEP2015
		3	13.1	155.0	67.5	117.0	26SEP2015
Pall Mall Blue 100's Box	19JUN2014	1	23.4	203.0	132.0	152.0	18AUG2014
		2	26.6	248.0	139.0	171.0	18AUG2014
		3	24.7	223.0	125.0	154.0	18AUG2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Pall Mall Blue 100's Box	27JUL2015	1	16.2	195.0	126.0	163.0	25SEP2015
		2	16.4	199.0	130.0	160.0	25SEP2015
		3	16.8	198.0	130.0	146.0	25SEP2015
Pall Mall Menthol 100's Box	07JUL2015	1	17.0	203.0	140.0	164.0	26SEP2015
		2	16.7	207.0	127.0	168.0	26SEP2015
		3	16.8	214.0	145.0	167.0	26SEP2015
Pall Mall Menthol White 100's Box	20JUN2014	1	25.5	214.0	121.0	161.0	18AUG2014
		3	27.4	231.0	154.0	156.0	18AUG2014
		1	28.9	243.0	118.0	164.0	04SEP2014
		2	24.1	202.0	104.0	151.0	04SEP2014
		3	25.2	231.0	131.0	148.0	04SEP2014
Pall Mall Orange Box	07JUL2014	1	15.1	137.0	75.2	100.0	18AUG2014
		2	15.1	132.0	77.4	98.5	18AUG2014
		3	15.4	125.0	90.0	105.0	18AUG2014
	15AUG2015	1	10.3	128.0	76.0	90.8	02OCT2015
		2	10.8	144.0	81.6	92.3	02OCT2015
		3	9.7	144.0	86.5	96.6	02OCT2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Pall Mall Red 100's Box	01JUL2014	1	25.9	222.0	150.0	163.0	13AUG2014
		2	25.4	221.0	136.0	167.0	13AUG2014
		3	27.4	235.0	161.0	174.0	13AUG2014
	05AUG2015	1	16.3	223.0	126.0	159.0	02OCT2015
		2	17.2	225.0	136.0	190.0	02OCT2015
		3	15.3	219.0	130.0	163.0	02OCT2015
Pall Mall Red Box	03AUG2015	1	16.5	214.0	117.0	151.0	05OCT2015
		2	17.2	230.0	128.0	167.0	05OCT2015
		3	13.8	210.0	113.0	142.0	05OCT2015
Parliament (White Pack) Box	06AUG2014	1	30.9	291.0	133.0	206.0	09SEP2014
		2	28.6	275.0	136.0	196.0	26SEP2014
		3	29.6	296.0	152.0	227.0	26SEP2014
Pyramid Blue 100s Box	31AUG2015	1	22.9	200.0	113.0	130.0	09OCT2015
		2	22.8	213.0	121.0	141.0	09OCT2015
		3	20.9	192.0	107.0	132.0	09OCT2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Pyramid Menthol Silver 100s Box	06AUG2014	1	31.9	230.0	154.0	161.0	16SEP2014
		2	30.7	227.0	170.0	153.0	16SEP2014
		3	29.8	219.0	167.0	160.0	16SEP2014
	31AUG2015	1	21.5	218.0	111.0	135.0	09OCT2015
		2	22.0	201.0	101.0	137.0	09OCT2015
		3	23.4	235.0	99.9	159.0	09OCT2015
Pyramid Orange 100s Box	06AUG2014	1	24.8	200.0	153.0	137.0	08SEP2014
		2	24.2	208.0	153.0	157.0	08SEP2014
		3	23.4	198.0	148.0	137.0	08SEP2014
Pyramid Red 100s Box	06AUG2014	1	27.3	215.0	173.0	173.0	05SEP2014
		2	30.0	231.0	173.0	180.0	05SEP2014
		3	28.9	210.0	164.0	194.0	05SEP2014
	31AUG2015	1	29.9	271.0	154.0	190.0	12OCT2015
		2	23.4	245.0	120.0	173.0	12OCT2015
		3	28.2	274.0	131.0	186.0	12OCT2015
Pyramid Red Box	06AUG2014	1	24.5	182.0	153.0	141.0	05SEP2014
		2	24.4	175.0	148.0	120.0	05SEP2014
		3	23.8	182.0	168.0	136.0	05SEP2014

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	Completed Analysis Date
Sonoma Red Box	06AUG2014	1	40.6	378.0	328.0	367.0	08SEP2014
		2	40.8	375.0	274.0	281.0	08SEP2014
		3	43.5	401.0	268.0	284.0	08SEP2014
	31AUG2015	1	25.8	324.0	140.0	242.0	09OCT2015
		2	25.7	289.0	140.0	226.0	09OCT2015
		3	26.5	335.0	156.0	266.0	09OCT2015
Tareyton Soft Pack	23APR2014	1	14.1	117.0	92.8	98.5	12AUG2014
		2	17.1	144.0	142.0	103.0	12AUG2014
		3	15.6	131.0	104.0	99.7	12AUG2014
True Kings	13MAY2015	1	29.3	237.0	127.0	257.0	15OCT2015
		2	28.8	231.0	139.0	264.0	15OCT2015
		3	27.4	216.0	129.0	234.0	15OCT2015
USA Gold Red Box	06AUG2014	1	36.5	363.0	192.0	264.0	08SEP2014
		2	37.8	376.0	251.0	289.0	08SEP2014
		3	34.6	357.0	194.0	256.0	08SEP2014
	31AUG2015	1	23.7	328.0	130.0	219.0	05OCT2015
		2	20.7	284.0	130.0	210.0	05OCT2015
		3	21.4	304.0	142.0	204.0	05OCT2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
			NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
Winston Red Box	12JUN2014	1	36.5	246.0	158.0	229.0	12AUG2014
		2	36.5	274.0	174.0	217.0	12AUG2014
		3	35.5	250.0	176.0	219.0	12AUG2014
	10JUL2015	1	26.7	279.0	167.0	236.0	09OCT2015
		2	26.5	251.0	146.0	210.0	09OCT2015
		3	28.8	275.0	168.0	234.0	09OCT2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Camel Blue Hard Pack	25JUN2014	1	18.69	33.01	17.48	3.20*	4.80*	22AUG2014
		2	19.47	33.56	17.72	3.20*	4.80*	22AUG2014
		3	18.54	30.54	16.60	3.20*	4.80*	22AUG2014
	16JUL2015	1	15.86	30.77	16.80	3.46	4.80*	21DEC2015
		2	17.65	33.37	18.54	3.77	4.80*	21DEC2015
		3	16.23	30.88	17.62	3.47	4.80*	21DEC2015
Camel Crush (crushed)	16JUN2014	1	19.41	34.17	17.81	3.20*	4.80*	26AUG2014
		2	24.18	36.93	21.79	3.58	4.80*	26AUG2014
		3	25.72	42.06	23.59	4.14	4.80*	26AUG2014
	17JUN2015	1	17.72	32.09	27.34	4.23	4.80*	16DEC2015
		2	19.12	39.07	21.49	3.93	4.80*	16DEC2015
		3	23.33	44.32	22.24	4.35	4.80*	16DEC2015
Camel Crush (uncrushed)	16JUN2014	1	22.17	37.56	19.83	3.30	4.80*	26AUG2014
		2	22.35	39.09	20.42	3.49	4.80*	26AUG2014
		3	24.68	43.37	22.60	3.26	4.80*	26AUG2014

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Camel Crush (uncrushed)	17JUN2015	1	20.72	40.38	21.49	3.98	4.80*	16DEC2015
		2	22.83	37.90	21.75	3.98	4.80*	16DEC2015
		3	22.22	40.75	23.50	4.00	4.80*	16DEC2015
Camel Filters Hard Pack	24JUN2014	1	22.70	43.79	25.44	4.40	4.80*	26AUG2014
		2	26.58	48.41	28.79	5.49	4.80*	26AUG2014
		3	21.72	44.55	25.18	4.39	4.80*	26AUG2014
	15JUN2015	1	20.54	38.96	22.74	4.19	4.80*	21DEC2015
		2	21.91	42.87	24.09	4.04	4.80*	21DEC2015
		3	23.44	45.79	26.84	4.80	4.80*	21DEC2015
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	22.10	37.39	20.83	3.20*	4.80*	26AUG2014
		2	23.81	38.53	22.67	3.35	4.80*	26AUG2014
		3	27.92	45.76	26.42	4.09	4.80*	26AUG2014
	10AUG2015	1	20.97	37.05	22.88	4.11	4.80*	21DEC2015
		2	18.01	32.97	19.73	3.25	4.80*	21DEC2015
		3	16.59	30.75	18.61	3.20*	4.80*	21DEC2015

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	23.84	38.75	21.60	4.10	4.80*	26AUG2014
		2	22.55	38.65	21.90	3.20*	4.80*	26AUG2014
		3	20.72	37.44	19.35	3.20*	4.80*	26AUG2014
	10AUG2015	1	17.39	28.49	19.14	3.31	4.80*	16DEC2015
		2	16.60	29.23	17.58	3.20*	4.80*	16DEC2015
		3	17.37	30.36	17.90	3.20*	4.80*	16DEC2015
Kent Kings	01JUN2015	1	19.62	35.20	21.16	4.34	4.80*	12JAN2016
		2	18.91	33.76	20.31	4.30	4.80*	12JAN2016
		3	20.31	35.92	21.72	4.71	4.80*	12JAN2016
Kool Box	02JUL2014	1	21.80	39.10	23.99	4.21	4.80*	26AUG2014
		2	21.69	41.10	23.77	3.86	4.80*	26AUG2014
		3	21.56	39.95	22.59	3.96	4.80*	26AUG2014
	15JUL2015	1	24.18	43.94	27.95	5.73	4.80*	15DEC2015
		2	22.25	40.54	26.10	5.02	4.80*	15DEC2015
		3	23.86	38.53	24.49	5.09	4.80*	15DEC2015

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
L&M Blue Pack Box	06AUG2014	1	17.89	29.19	17.81	3.34	4.80*	02SEP2014
		2	19.44	30.32	20.41	3.20*	4.80*	02SEP2014
		3	18.90	31.03	19.03	3.20*	4.80*	02SEP2014
L&M Box	06AUG2014	1	17.99	34.37	20.94	3.43	4.80*	27AUG2014
		2	17.16	32.38	19.80	3.20*	4.80*	27AUG2014
		3	18.32	34.96	21.03	3.60	4.80*	27AUG2014
	31AUG2015	1	17.76	34.50	20.11	3.28	4.80*	15DEC2015
		2	16.94	36.34	19.19	4.10	4.80*	15DEC2015
		3	17.64	35.11	19.98	4.09	4.80*	15DEC2015
L&M Menthol 100's Box	06AUG2014	1	19.64	34.37	17.45	3.20*	4.80*	02SEP2014
		2	18.52	30.24	17.36	3.20*	4.80*	02SEP2014
		3	19.80	32.01	16.57	3.20*	4.80*	02SEP2014
Marlboro 100's Box	31AUG2015	1	21.04	34.00	20.30	3.22	4.80*	17DEC2015
		2	20.85	39.20	19.26	3.20*	4.80*	17DEC2015
		3	21.49	41.98	20.58	3.49	4.80*	17DEC2015

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro 72s Blue Pack Box	06AUG2014	1	15.43	27.85	14.27	3.20*	4.80*	02SEP2014
		2	16.08	27.38	14.33	3.20*	4.80*	02SEP2014
		3	15.33	25.00	13.55	3.20*	4.80*	02SEP2014
Marlboro 72s Box	06AUG2014	1	19.70	31.45	17.19	3.20*	4.80*	28AUG2014
		2	23.60	33.87	19.01	3.20*	4.80*	28AUG2014
		3	21.19	32.29	18.23	3.20*	4.80*	28AUG2014
Marlboro Blend No. 27 Box	06AUG2014	1	15.60	30.30	16.73	3.20*	4.80*	27AUG2014
		2	14.80	28.38	15.87	3.20*	4.80*	27AUG2014
		3	15.02	28.98	16.16	3.20*	4.80*	27AUG2014
Marlboro Box	06AUG2014	1	18.29	36.13	18.34	3.20*	4.80*	08SEP2014
		2	20.15	38.36	21.86	3.20*	4.80*	08SEP2014
		3	19.27	37.42	20.14	3.20*	4.80*	08SEP2014
	31AUG2015	1	19.13	37.63	14.87	3.20*	4.80*	17DEC2015
		2	19.24	35.99	15.43	3.20*	4.80*	17DEC2015
		3	17.30	35.15	16.25	3.20*	4.80*	17DEC2015

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro Edge Box	31AUG2015	1	16.37	34.50	17.63	3.43	4.80*	15DEC2015
		2	17.83	38.22	18.39	3.75	4.80*	15DEC2015
		3	16.78	36.45	18.15	3.21	4.80*	15DEC2015
Marlboro Eighty Threes Box	31AUG2015	1	18.33	42.73	21.01	4.18	4.80*	15DEC2015
		2	19.28	38.37	18.83	4.83	4.80*	15DEC2015
		3	17.37	39.16	18.96	3.95	4.80*	15DEC2015
Marlboro Gold Pack 100's Box	31AUG2015	1	18.47	34.88	17.75	4.03	4.80*	12JAN2016
		2	19.19	36.89	18.25	3.65	4.80*	12JAN2016
		3	19.15	37.47	18.23	3.84	4.80*	12JAN2016
Marlboro Gold Pack Box	06AUG2014	1	15.76	32.57	17.44	3.20*	4.80*	08SEP2014
		2	15.85	29.59	17.44	3.20*	4.80*	08SEP2014
		3	16.41	33.11	17.78	3.20*	4.80*	08SEP2014
	31AUG2015	1	16.31	29.77	13.75	3.20*	4.80*	17DEC2015
		2	15.08	29.63	12.68	3.20*	4.80*	17DEC2015
		3	17.33	31.74	15.71	3.20*	4.80*	17DEC2015

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro Menthol Box	06AUG2014	1	23.05	34.45	19.44	3.22	4.80*	28AUG2014
		2	25.70	38.97	21.41	3.82	4.80*	28AUG2014
		3	24.31	37.02	20.64	3.20*	4.80*	28AUG2014
	31AUG2015	1	18.12	32.81	15.87	3.20*	4.80*	22DEC2015
		2	17.81	32.40	15.85	3.20*	4.80*	22DEC2015
		3	19.02	37.01	16.80	3.28	4.80*	22DEC2015
Marlboro Menthol Gold Pack Box	31AUG2015	1	15.79	27.62	15.07	3.20*	4.80*	12JAN2016
		2	14.33	25.17	14.13	3.20*	4.80*	12JAN2016
		3	14.74	26.09	14.48	3.20*	4.80*	12JAN2016
Marlboro Menthol Silver Pack Box	06AUG2014	1	10.36	21.71	11.63	3.20*	4.80*	27AUG2014
		2	9.87	19.92	11.22	3.20*	4.80*	27AUG2014
		3	10.96	21.57	12.17	3.20*	4.80*	27AUG2014
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	18.45	36.19	19.69	3.20*	4.80*	27AUG2014
		2	19.28	37.58	20.63	3.20*	4.80*	27AUG2014
		3	19.51	38.85	21.05	3.20*	4.80*	27AUG2014

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro Menthol Special Blend 100's (Black) Box	31AUG2015	1	25.65	45.49	20.77	3.68	4.80*	17DEC2015
		2	20.06	40.38	18.02	3.35	4.80*	17DEC2015
		3	18.94	36.21	18.57	3.20*	4.80*	17DEC2015
Marlboro NXT Box (crushed)	31AUG2015	1	18.99	39.45	21.84	3.53	4.80*	15DEC2015
		2	18.06	39.02	19.89	3.62	4.80*	15DEC2015
		3	17.18	40.02	20.83	4.15	4.80*	15DEC2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	19.93	41.68	20.58	3.87	4.80*	15DEC2015
		2	17.67	39.41	18.62	4.06	4.80*	15DEC2015
		3	20.11	40.26	19.99	4.71	4.80*	15DEC2015
Marlboro Silver Pack 100's Box	06AUG2014	1	15.39	25.41	13.88	3.20*	4.80*	28AUG2014
		2	17.30	27.90	14.86	3.20*	4.80*	28AUG2014
		3	16.17	24.93	14.82	3.20*	4.80*	28AUG2014
	31AUG2015	1	14.58	31.34	15.12	3.43	4.80*	15DEC2015
		2	14.10	29.09	15.08	3.20*	4.80*	15DEC2015
		3	14.65	32.88	16.44	3.32	4.80*	15DEC2015

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro Silver Pack Box	06AUG2014	1	14.94	24.10	14.24	3.20*	4.80*	28AUG2014
		2	14.01	22.00	12.72	3.20*	4.80*	28AUG2014
		3	15.12	24.76	13.35	3.20*	4.80*	28AUG2014
	31AUG2015	1	12.65	25.63	12.75	3.20*	4.80*	15DEC2015
		2	11.08	23.46	11.13	3.20*	4.80*	15DEC2015
		3	11.34	26.26	12.93	3.20*	4.80*	15DEC2015
Marlboro Special Blend (Black) Box	06AUG2014	1	21.06	31.45	17.75	3.20*	4.80*	28AUG2014
		2	20.76	31.14	16.82	3.20*	4.80*	28AUG2014
		3	21.80	34.12	18.21	3.20*	4.80*	28AUG2014
	31AUG2015	1	18.88	35.90	18.68	3.86	4.80*	12JAN2016
		2	16.40	30.73	16.03	3.42	4.80*	12JAN2016
		3	16.89	31.37	16.14	3.32	4.80*	12JAN2016
Marlboro Special Blend (Gold) Box	06AUG2014	1	18.24	35.58	18.30	3.20*	4.80*	08SEP2014
		2	16.32	33.51	18.26	3.20*	4.80*	08SEP2014
		3	15.31	31.69	16.90	3.20*	4.80*	08SEP2014

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Marlboro Special Blend (Gold) Box	31AUG2015	1	16.48	31.13	15.74	3.31	4.80*	12JAN2016
		2	15.64	29.29	14.73	3.32	4.80*	12JAN2016
		3	17.09	31.65	15.86	3.51	4.80*	12JAN2016
Marlboro Special Blend (Red) Box	31AUG2015	1	16.79	33.09	15.04	3.20*	4.80*	22DEC2015
		2	14.75	29.25	13.54	3.20*	4.80*	22DEC2015
		3	16.36	31.83	14.55	3.20*	4.80*	22DEC2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	24.17	38.26	20.05	3.20*	4.80*	28AUG2014
		2	24.21	38.00	20.39	3.20*	4.80*	28AUG2014
		3	25.94	42.00	21.45	3.59	4.80*	28AUG2014
	31AUG2015	1	20.27	38.58	19.76	3.88	4.80*	12JAN2016
		2	21.50	40.53	20.44	4.37	4.80*	12JAN2016
		3	19.93	37.74	19.11	4.04	4.80*	12JAN2016
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	18.51	36.99	17.47	3.20*	4.80*	22DEC2015
		2	17.14	33.26	14.95	3.20*	4.80*	22DEC2015
		3	17.66	34.38	15.99	3.20*	4.80*	22DEC2015

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Maverick 100s Box	31AUG2015	1	22.01	40.01	23.28	4.27	4.80*	17DEC2015
		2	21.54	39.62	21.92	3.81	4.80*	17DEC2015
		3	23.93	44.52	25.27	5.02	4.80*	17DEC2015
Maverick Gold 100s Box	06AUG2014	1	16.77	30.84	19.22	3.20*	4.80*	27AUG2014
		2	16.84	33.72	19.33	3.20*	4.80*	27AUG2014
		3	16.01	30.75	18.57	3.20*	4.80*	27AUG2014
Maverick Menthol 100 Box	06AUG2014	1	20.93	42.21	25.05	3.20*	4.80*	28AUG2014
		2	20.80	42.59	23.74	4.03	4.80*	28AUG2014
		3	21.19	41.04	24.07	3.93	4.80*	28AUG2014
	31AUG2015	1	24.71	46.42	25.23	5.03	4.80*	22DEC2015
		2	24.77	44.93	25.85	4.30	4.80*	22DEC2015
		3	24.83	45.35	25.03	5.07	4.80*	22DEC2015
Misty Blue 120's Box	24JUL2015	1	27.45	51.58	31.54	6.09	4.80*	21DEC2015
		2	30.19	55.55	33.73	6.63	4.80*	21DEC2015
		3	28.80	52.04	32.53	6.30	4.80*	21DEC2015

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Misty Menthol Green 120's Box	27JUN2014	1	29.65	50.34	28.51	4.39	4.80*	22AUG2014
		2	28.87	48.81	28.86	5.47	4.80*	22AUG2014
		3	31.37	51.24	30.04	4.79	4.80*	22AUG2014
More 120's Soft Pack	05JUN2014	1	32.10	54.55	32.29	5.76	4.80*	26AUG2014
		2	30.19	49.89	29.08	4.56	4.80*	26AUG2014
		3	32.77	52.75	31.00	5.65	4.80*	26AUG2014
	10JUL2015	1	26.14	50.38	34.40	7.59	4.80*	17DEC2015
		2	24.53	47.73	31.14	6.71	4.80*	17DEC2015
		3	25.24	49.34	32.66	7.26	4.80*	17DEC2015
Natural American Spirit Full-Bodied Taste	27JUN2014	1	28.19	53.31	26.07	3.56	4.80*	08SEP2014
		2	30.34	55.02	28.06	4.44	4.80*	08SEP2014
		3	31.35	59.05	28.11	4.17	4.80*	08SEP2014
	05MAY2015	1	23.57	47.32	22.24	4.26	4.80*	21DEC2015
		2	23.40	48.28	23.02	3.90	4.80*	21DEC2015
		3	24.88	50.41	29.11	5.47	5.26	21DEC2015

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	25JUN2014	1	20.69	40.38	18.35	3.20*	4.80*	08SEP2014
		2	18.51	39.08	17.13	3.20*	4.80*	08SEP2014
		3	20.32	38.40	17.00	3.20*	4.80*	08SEP2014
	07AUG2015	1	18.77	36.36	19.12	3.57	4.80*	11JAN2016
		2	17.24	34.52	17.45	3.20*	4.80*	11JAN2016
		3	18.33	36.33	18.33	3.66	4.80*	11JAN2016
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	14.56	29.05	15.38	3.20*	4.80*	11JAN2016
		2	15.26	28.06	15.52	3.28	4.80*	11JAN2016
		3	15.54	31.44	16.11	3.30	4.80*	11JAN2016
Natural American Spirit Mellow Taste	06JUL2015	1	27.63	53.57	27.47	4.65	4.80*	17DEC2015
		2	26.24	51.64	26.80	4.81	4.80*	17DEC2015
		3	26.94	49.07	20.32	3.20*	4.80*	17DEC2015
		1	25.32	49.99	25.47	3.58	4.80*	23DEC2015
		2	29.22	56.05	28.74	4.16	4.80*	23DEC2015
		3	23.43	47.67	23.74	3.20*	4.80*	23DEC2015

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Natural American Spirit Mellow Taste	06JUL2015	1	24.44	47.05	26.34	5.14	4.80*	04MAR2016
		2	25.50	49.08	26.79	5.34	4.80*	04MAR2016
		3	26.70	52.26	28.08	6.59	4.80*	04MAR2016
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	22.58	47.16	24.84	5.46	4.80*	29SEP2015
		2	23.34	48.11	25.63	5.57	4.80*	29SEP2015
		3	24.67	50.71	28.29	6.37	4.80*	29SEP2015
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	26.65	48.25	23.64	3.25	4.80*	08SEP2014
		2	26.33	48.55	23.53	3.20*	4.80*	08SEP2014
		3	24.53	47.99	22.42	3.77	4.80*	08SEP2014
	11AUG2015	1	24.73	50.60	23.44	3.86	4.80*	16DEC2015
		2	24.97	56.55	23.61	3.23	4.80*	16DEC2015
		3	22.36	56.27	20.30	3.42	4.80*	16DEC2015
Newport Box	06AUG2014	1	16.93	31.95	21.78	3.20*	4.80*	28AUG2014
		2	17.43	32.90	21.02	3.73	4.80*	28AUG2014
		3	16.62	34.85	20.32	3.20*	4.80*	28AUG2014

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Newport Box	04AUG2015	1	18.17	33.66	22.77	3.53	4.80*	23DEC2015
		2	17.87	33.54	22.02	3.59	4.80*	23DEC2015
		3	18.94	34.98	22.87	3.59	4.80*	23DEC2015
Newport Box 100s	06AUG2014	1	27.23	44.73	28.17	5.68	4.80*	02SEP2014
		2	29.62	44.61	30.35	5.35	4.80*	02SEP2014
		3	30.48	45.60	31.48	5.05	4.80*	02SEP2014
	30JUL2015	1	24.27	45.40	29.89	5.18	4.80*	23DEC2015
		2	23.06	41.08	27.55	4.63	4.80*	23DEC2015
		3	22.54	43.09	27.64	4.72	4.80*	23DEC2015
Newport Menthol Gold Box	25MAY2015	1	14.65	26.41	19.55	3.95	4.80*	29SEP2015
		2	14.97	27.04	20.67	4.38	4.80*	29SEP2015
		3	13.44	24.69	18.24	3.90	4.80*	29SEP2015
Newport Non-Menthol Box	06AUG2014	1	15.98	30.84	19.47	3.20*	4.80*	28AUG2014
		2	17.36	31.90	20.55	3.63	4.80*	28AUG2014
		3	16.09	31.92	19.71	3.20*	4.80*	28AUG2014

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Now Soft Pack	23APR2014	1	10.38	20.26	10.95	3.20*	4.80*	22AUG2014
		2	13.21	22.95	13.49	3.20*	4.80*	22AUG2014
		3	13.27	22.34	12.67	3.20*	4.80*	22AUG2014
	15MAY2015	1	8.94	20.29	10.11	3.20*	4.80*	16DEC2015
		2	7.76	19.46	8.58	3.20*	4.80*	16DEC2015
		3	7.81	16.54	9.44	3.20*	4.80*	16DEC2015
		1	10.72	21.18	11.71	3.20*	4.80*	22DEC2015
		2	9.48	21.43	10.46	3.20*	4.80*	22DEC2015
		3	10.37	20.89	11.32	3.20*	4.80*	22DEC2015
Pall Mall Blue 100's Box	19JUN2014	1	26.70	48.27	30.90	5.76	4.80*	26AUG2014
		2	29.18	53.81	32.11	6.67	4.80*	26AUG2014
		3	27.91	49.96	29.94	6.37	4.80*	26AUG2014
	27JUL2015	1	25.44	48.27	27.84	5.05	4.80*	21DEC2015
		2	27.00	50.03	29.64	5.28	4.80*	21DEC2015
		3	25.38	48.37	27.43	4.82	4.80*	21DEC2015

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Pall Mall Menthol 100's Box	07JUL2015	1	24.50	43.97	28.33	4.33	4.80*	16DEC2015
		2	19.30	46.81	19.72	3.20*	4.80*	16DEC2015
		3	29.45	57.11	32.36	5.26	4.80*	16DEC2015
Pall Mall Menthol White 100's Box	20JUN2014	1	19.23	36.01	21.30	3.70	4.80*	26AUG2014
		2	16.16	32.33	18.72	3.20*	4.80*	26AUG2014
		3	18.54	34.73	20.22	3.40	4.80*	26AUG2014
Pall Mall Orange Box	07JUL2014	1	17.48	34.04	21.17	3.40	4.80*	26AUG2014
		2	15.74	30.63	19.37	3.50	4.80*	26AUG2014
		3	17.65	35.69	21.88	3.82	4.80*	26AUG2014
	15AUG2015	1	16.51	32.72	21.60	4.99	4.80*	11JAN2016
		2	17.80	33.67	23.05	5.61	4.80*	11JAN2016
		3	16.56	31.83	21.23	4.52	4.80*	11JAN2016
Pall Mall Red 100's Box	01JUL2014	1	33.67	59.22	34.83	5.52	4.80*	22AUG2014
		2	31.91	55.02	31.18	5.54	4.80*	22AUG2014
		3	33.46	54.99	30.67	5.56	4.80*	22AUG2014

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Pall Mall Red 100's Box	05AUG2015	1	26.13	49.26	32.41	8.03	4.80*	29SEP2015
		2	26.51	47.63	32.23	7.81	4.80*	29SEP2015
		3	26.17	51.60	32.25	7.65	4.80*	29SEP2015
Pall Mall Red Box	03AUG2015	1	24.95	48.86	31.15	7.20	4.80*	29SEP2015
		2	27.69	51.75	34.46	8.61	4.80*	29SEP2015
		3	25.13	47.23	32.08	7.78	4.80*	29SEP2015
Parliament (White Pack) Box	06AUG2014	1	18.31	32.67	19.05	3.20*	4.80*	02SEP2014
		2	16.44	30.06	17.48	3.20*	4.80*	02SEP2014
		3	16.70	30.34	16.95	3.20*	4.80*	02SEP2014
Pyramid Blue 100s Box	31AUG2015	1	16.74	37.66	20.46	3.89	4.80*	15DEC2015
		2	18.87	37.89	23.52	4.47	4.80*	15DEC2015
		3	18.86	39.73	23.69	4.63	4.80*	15DEC2015
Pyramid Menthol Silver 100s Box	06AUG2014	1	15.75	31.46	19.03	3.20*	4.80*	28AUG2014
		2	16.20	30.93	20.10	3.20*	4.80*	02SEP2014
		3	14.11	27.71	17.02	3.20*	4.80*	02SEP2014

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Pyramid Menthol Silver 100s Box	31AUG2015	1	16.08	33.08	19.32	4.38	4.80*	15DEC2015
		2	16.42	37.09	19.43	4.52	4.80*	15DEC2015
		3	16.87	36.51	21.06	3.60	4.80*	15DEC2015
Pyramid Orange 100s Box	06AUG2014	1	20.11	36.01	23.73	4.73	4.80*	02SEP2014
		2	18.13	34.18	21.70	3.85	4.80*	02SEP2014
		3	16.79	32.58	19.96	3.55	4.80*	02SEP2014
Pyramid Red 100s Box	06AUG2014	1	20.55	40.68	25.08	4.26	4.80*	27AUG2014
		2	20.28	41.41	24.22	4.30	4.80*	27AUG2014
		3	20.14	39.70	24.32	3.99	4.80*	27AUG2014
	31AUG2015	1	22.67	43.24	26.67	4.95	4.80*	15DEC2015
		2	20.03	42.14	24.64	4.47	4.80*	15DEC2015
		3	19.94	44.51	23.26	4.89	4.80*	15DEC2015
Pyramid Red Box	06AUG2014	1	21.70	36.70	23.02	4.01	4.80*	02SEP2014
		2	19.72	35.18	20.95	3.34	4.80*	02SEP2014
		3	20.96	37.39	21.89	3.36	4.80*	02SEP2014

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
 Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
Sonoma Red Box	06AUG2014	1	13.46	27.83	17.14	3.20*	4.80*	01OCT2014
		2	12.02	25.21	15.27	3.20*	4.80*	01OCT2014
		3	13.72	29.17	16.82	3.20*	4.80*	01OCT2014
	31AUG2015	1	14.53	29.56	19.47	4.13	4.80*	29SEP2015
		2	16.37	32.50	21.48	4.76	4.80*	29SEP2015
		3	16.33	33.15	21.78	4.31	4.80*	29SEP2015
Tareyton Soft Pack	23APR2014	1	24.68	41.99	25.07	4.19	4.80*	22AUG2014
		2	25.17	40.75	24.73	4.68	4.80*	22AUG2014
		3	25.84	42.35	26.64	4.39	4.80*	22AUG2014
True Kings	13MAY2015	1	16.10	31.08	16.25	3.20*	4.80*	22DEC2015
		2	14.10	27.75	14.74	3.20*	4.80*	22DEC2015
		3	14.49	28.42	14.82	3.20*	4.80*	22DEC2015
USA Gold Red Box	06AUG2014	1	17.37	33.41	21.13	3.91	4.80*	02SEP2014
		2	15.08	30.32	17.97	3.20*	4.80*	02SEP2014
		3	17.15	33.78	20.69	3.20	4.80*	02SEP2014

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbons Analysis					Completed Analysis Date
			B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	Dibenz(a,h)A (ng/cig)	
USA Gold Red Box	31AUG2015	1	14.81	28.84	19.93	3.96	4.80*	29SEP2015
		2	13.94	28.39	18.78	3.80	4.80*	29SEP2015
		3	16.06	32.50	21.12	4.14	4.80*	29SEP2015
Winston Red Box	12JUN2014	1	26.69	42.36	24.86	3.55	4.80*	22AUG2014
		2	25.12	43.01	24.89	4.46	4.80*	22AUG2014
		3	26.20	44.18	25.53	4.30	4.80*	22AUG2014
	10JUL2015	1	20.43	41.07	22.86	4.90	4.80*	15DEC2015
		2	18.68	41.67	23.53	4.56	4.80*	15DEC2015
		3	23.50	47.66	26.53	5.29	4.80*	15DEC2015

B(a)P=Benzo(a)pyrene B(a)A=Benz(a)anthracene B(b/j)FL=Benzo(b/j)fluoranthene B(k)FL=Benzo(k)fluoranthene  
Dibenz(a,h)A=Dibenzo(a,h)anthracene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Camel Blue Hard Pack	25JUN2014	1	8.98	1192.0	22AUG2014
		2	8.71	1206.0	22AUG2014
		3	7.96	1048.0	22AUG2014
	16JUL2015	1	7.96	977.5	21DEC2015
		2	8.81	1146.0	21DEC2015
		3	8.20	1030.0	21DEC2015
Camel Crush (crushed)	16JUN2014	1	8.71	347.9	26AUG2014
		2	9.79	487.6	26AUG2014
		3	10.31	450.5	26AUG2014
	17JUN2015	1	9.51	480.8	16DEC2015
		2	9.01	519.8	16DEC2015
		3	12.13	492.7	16DEC2015
Camel Crush (uncrushed)	16JUN2014	1	10.05	1149.0	26AUG2014
		2	10.40	1097.0	26AUG2014
		3	10.78	1320.0	26AUG2014
	17JUN2015	1	11.71	979.8	16DEC2015
		2	10.53	1005.0	16DEC2015
		3	10.50	981.7	16DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Camel Filters Hard Pack	24JUN2014	1	12.31	1986.0	26AUG2014
		2	12.78	2568.0	26AUG2014
		3	11.73	2184.0	26AUG2014
	15JUN2015	1	10.67	1681.0	21DEC2015
		2	11.20	1918.0	21DEC2015
		3	11.95	1923.0	21DEC2015
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	9.62	479.5	26AUG2014
		2	10.52	355.5	26AUG2014
		3	11.15	431.7	26AUG2014
	10AUG2015	1	10.81	438.7	21DEC2015
		2	9.54	461.8	21DEC2015
		3	8.52	506.6	21DEC2015
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	9.98	1158.0	26AUG2014
		2	9.68	1091.0	26AUG2014
		3	8.89	1064.0	26AUG2014
	10AUG2015	1	8.21	624.7	16DEC2015
		2	8.26	670.5	16DEC2015
		3	8.71	822.5	16DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Kent Kings	01JUN2015	1	10.18	1572.0	12JAN2016
		2	9.96	1546.0	12JAN2016
		3	10.57	1578.0	12JAN2016
Kool Box	02JUL2014	1	10.72	1952.0	26AUG2014
		2	11.24	2915.0	26AUG2014
		3	11.08	1892.0	26AUG2014
	15JUL2015	1	11.33	2020.0	15DEC2015
		2	9.99	1943.0	15DEC2015
		3	10.91	1850.0	15DEC2015
L&M Blue Pack Box	06AUG2014	1	8.30	1005.0	02SEP2014
		2	8.90	1226.0	02SEP2014
		3	8.24	1081.0	02SEP2014
L&M Box	06AUG2014	1	10.16	1632.0	27AUG2014
		2	9.21	1349.0	27AUG2014
		3	10.19	1494.0	27AUG2014
	31AUG2015	1	8.16	1563.0	15DEC2015
		2	8.39	1533.0	15DEC2015
		3	9.01	1510.0	15DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
L&M Menthol 100's Box	06AUG2014	1	8.63	1294.0	02SEP2014
		2	8.11	1320.0	02SEP2014
		3	8.72	1406.0	02SEP2014
Marlboro 100's Box	31AUG2015	1	11.18	1663.0	17DEC2015
		2	10.72	1406.0	17DEC2015
		3	10.43	1778.0	17DEC2015
Marlboro 72s Blue Pack Box	06AUG2014	1	6.98	1606.0	02SEP2014
		2	7.21	1576.0	02SEP2014
		3	6.26	1437.0	02SEP2014
Marlboro 72s Box	06AUG2014	1	8.49	1642.0	28AUG2014
		2	9.60	1974.0	28AUG2014
		3	8.68	1796.0	28AUG2014
Marlboro Blend No. 27 Box	06AUG2014	1	8.44	1369.0	27AUG2014
		2	7.74	1242.0	27AUG2014
		3	7.86	1237.0	27AUG2014
Marlboro Box	06AUG2014	1	9.79	1974.0	08SEP2014
		2	10.77	2349.0	08SEP2014
		3	10.37	2211.0	08SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Marlboro Box	31AUG2015	1	10.69	1627.0	17DEC2015
		2	8.72	1727.0	17DEC2015
		3	12.60	1655.0	17DEC2015
Marlboro Edge Box	31AUG2015	1	8.23	1528.0	15DEC2015
		2	8.50	1567.0	15DEC2015
		3	8.95	1558.0	15DEC2015
Marlboro Eighty Threes Box	31AUG2015	1	9.34	1730.0	15DEC2015
		2	8.84	1700.0	15DEC2015
		3	8.47	1675.0	15DEC2015
Marlboro Gold Pack 100's Box	31AUG2015	1	9.62	1201.0	12JAN2016
		2	9.61	1248.0	12JAN2016
		3	10.00	1225.0	12JAN2016
Marlboro Gold Pack Box	06AUG2014	1	8.95	1168.0	08SEP2014
		2	8.75	1102.0	08SEP2014
		3	8.76	1259.0	08SEP2014
	31AUG2015	1	8.35	1017.0	17DEC2015
		2	7.71	875.4	17DEC2015
		3	9.04	1071.0	17DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Marlboro Menthol Box	06AUG2014	1	9.95	2533.0	28AUG2014
		2	12.48	2221.0	28AUG2014
		3	10.04	2220.0	28AUG2014
	31AUG2015	1	8.45	1784.0	22DEC2015
		2	8.44	1786.0	22DEC2015
		3	8.72	1901.0	22DEC2015
Marlboro Menthol Gold Pack Box	31AUG2015	1	7.84	1134.0	12JAN2016
		2	7.49	934.6	12JAN2016
		3	7.44	1070.0	12JAN2016
Marlboro Menthol Silver Pack Box	06AUG2014	1	5.53	713.4	27AUG2014
		2	5.45	618.3	27AUG2014
		3	5.91	672.9	27AUG2014
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	9.30	1481.0	27AUG2014
		2	9.68	1537.0	27AUG2014
		3	10.04	1455.0	27AUG2014
	31AUG2015	1	12.01	1759.0	17DEC2015
		2	11.04	1384.0	17DEC2015
		3	9.93	1434.0	17DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Marlboro NXT Box (crushed)	31AUG2015	1	8.82	1658.0	15DEC2015
		2	9.05	1560.0	15DEC2015
		3	8.39	1485.0	15DEC2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	8.98	1768.0	15DEC2015
		2	8.73	1451.0	15DEC2015
		3	9.74	1346.0	15DEC2015
Marlboro Silver Pack 100's Box	06AUG2014	1	6.44	683.1	28AUG2014
		2	7.25	925.4	28AUG2014
		3	7.05	869.2	28AUG2014
	31AUG2015	1	7.00	922.6	15DEC2015
		2	7.26	871.8	15DEC2015
		3	7.99	1010.0	15DEC2015
Marlboro Silver Pack Box	06AUG2014	1	6.45	813.7	28AUG2014
		2	5.68	747.3	28AUG2014
		3	6.09	747.2	28AUG2014
	31AUG2015	1	5.73	994.7	15DEC2015
		2	6.61	729.3	15DEC2015
		3	6.03	951.1	15DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Marlboro Special Blend (Black) Box	06AUG2014	1	8.21	1398.0	28AUG2014
		2	7.74	1339.0	28AUG2014
		3	8.44	1337.0	28AUG2014
	31AUG2015	1	9.84	1356.0	12JAN2016
		2	8.51	1342.0	12JAN2016
		3	8.61	1194.0	12JAN2016
Marlboro Special Blend (Gold) Box	06AUG2014	1	9.31	1286.0	08SEP2014
		2	9.15	1214.0	08SEP2014
		3	8.45	1244.0	08SEP2014
	31AUG2015	1	8.72	1192.0	12JAN2016
		2	8.27	1147.0	12JAN2016
		3	8.63	1224.0	12JAN2016
Marlboro Special Blend (Red) Box	31AUG2015	1	7.74	1597.0	22DEC2015
		2	6.88	1416.0	22DEC2015
		3	7.87	1332.0	22DEC2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	9.15	1590.0	28AUG2014
		2	9.45	1549.0	28AUG2014
		3	10.04	1762.0	28AUG2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Marlboro Special Blend 100's (Red) Box	31AUG2015	1	9.90	1646.0	12JAN2016
		2	10.60	1561.0	12JAN2016
		3	9.89	1481.0	12JAN2016
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	9.13	1299.0	22DEC2015
		2	7.99	1248.0	22DEC2015
		3	8.21	1393.0	22DEC2015
Maverick 100s Box	31AUG2015	1	11.75	1620.0	17DEC2015
		2	11.31	1765.0	17DEC2015
		3	11.84	1701.0	17DEC2015
Maverick Gold 100s Box	06AUG2014	1	8.96	1195.0	27AUG2014
		2	9.04	1336.0	27AUG2014
		3	8.60	1220.0	27AUG2014
Maverick Menthol 100 Box	06AUG2014	1	10.95	902.2	28AUG2014
		2	10.88	1265.0	28AUG2014
		3	10.85	1018.0	28AUG2014
	31AUG2015	1	12.06	1785.0	22DEC2015
		2	11.89	1827.0	22DEC2015
		3	11.74	1823.0	22DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Misty Blue 120's Box	24JUL2015	1	14.66	1716.0	21DEC2015
		2	16.07	1841.0	21DEC2015
		3	15.65	1654.0	21DEC2015
Misty Menthol Green 120's Box	27JUN2014	1	14.21	2850.0	22AUG2014
		2	13.31	2464.0	22AUG2014
		3	14.57	2811.0	22AUG2014
More 120's Soft Pack	05JUN2014	1	14.15	2580.0	26AUG2014
		2	13.06	2091.0	26AUG2014
		3	13.65	2245.0	26AUG2014
	10JUL2015	1	12.39	1965.0	17DEC2015
		2	11.97	1729.0	17DEC2015
		3	11.74	1969.0	17DEC2015
Natural American Spirit Full-Bodied Taste	27JUN2014	1	13.21	3325.0	08SEP2014
		2	14.52	4131.0	08SEP2014
		3	15.24	3998.0	08SEP2014
	05MAY2015	1	11.41	1952.0	21DEC2015
		2	11.31	2072.0	21DEC2015
		3	11.28	2015.0	21DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	25JUN2014	1	9.89	3154.0	08SEP2014
		2	9.09	3300.0	08SEP2014
		3	9.53	2468.0	08SEP2014
	07AUG2015	1	7.33	2282.0	11JAN2016
		2	7.48	1628.0	11JAN2016
		3	7.51	2001.0	11JAN2016
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	6.46	1478.0	11JAN2016
		2	6.64	1662.0	11JAN2016
		3	6.79	1607.0	11JAN2016
Natural American Spirit Mellow Taste	06JUL2015	1	12.87	1728.0	17DEC2015
		2	12.49	1780.0	17DEC2015
		3	13.28	1967.0	17DEC2015
		1	12.47	1803.0	23DEC2015
		2	14.75	2009.0	23DEC2015
		3	12.26	1681.0	23DEC2015
		1	10.11	2226.0	04MAR2016
		2	10.67	N/A	04MAR2016
		3	10.92	2271.0	04MAR2016

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	11.89	2223.0	29SEP2015
		2	11.99	2345.0	29SEP2015
		3	12.52	2258.0	29SEP2015
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	11.75	3590.0	08SEP2014
		2	12.49	4354.0	08SEP2014
		3	12.00	3789.0	08SEP2014
	11AUG2015	1	10.58	1754.0	16DEC2015
		2	13.06	1927.0	16DEC2015
		3	11.19	1639.0	16DEC2015
Newport Box	06AUG2014	1	9.45	2508.0	28AUG2014
		2	9.64	2967.0	28AUG2014
		3	8.77	3055.0	28AUG2014
	04AUG2015	1	9.98	1265.0	23DEC2015
		2	9.90	1182.0	23DEC2015
		3	10.07	1265.0	23DEC2015
Newport Box 100s	06AUG2014	1	13.07	1798.0	02SEP2014
		2	13.18	1813.0	02SEP2014
		3	13.96	1850.0	02SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Newport Box 100s	30JUL2015	1	13.88	1552.0	23DEC2015
		2	12.64	1517.0	23DEC2015
		3	12.40	1550.0	23DEC2015
Newport Menthol Gold Box	25MAY2015	1	7.99	1074.0	29SEP2015
		2	8.21	1026.0	29SEP2015
		3	7.26	896.9	29SEP2015
Newport Non-Menthol Box	06AUG2014	1	8.86	2348.0	28AUG2014
		2	9.75	3000.0	28AUG2014
		3	8.90	2576.0	28AUG2014
Now Soft Pack	23APR2014	1	4.92	773.7	22AUG2014
		2	5.93	930.3	22AUG2014
		3	5.55	770.9	22AUG2014
	15MAY2015	1	4.99	513.6	16DEC2015
		2	4.61	486.8	16DEC2015
		3	4.29	411.8	16DEC2015
		1	5.51	805.3	22DEC2015
		2	4.88	757.0	22DEC2015
		3	5.58	799.3	22DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Pall Mall Blue 100's Box	19JUN2014	1	13.62	1833.0	26AUG2014
		2	14.77	1521.0	26AUG2014
		3	14.16	1279.0	26AUG2014
	27JUL2015	1	12.90	1757.0	21DEC2015
		2	13.66	1625.0	21DEC2015
		3	12.79	1627.0	21DEC2015
Pall Mall Menthol 100's Box	07JUL2015	1	11.37	1315.0	16DEC2015
		2	12.46	1400.0	16DEC2015
		3	14.88	1451.0	16DEC2015
Pall Mall Menthol White 100's Box	20JUN2014	1	9.51	819.7	26AUG2014
		2	8.56	684.7	26AUG2014
		3	9.59	619.7	26AUG2014
Pall Mall Orange Box	07JUL2014	1	8.85	1031.0	26AUG2014
		2	8.74	804.0	26AUG2014
		3	9.21	924.9	26AUG2014
	15AUG2015	1	8.11	1055.0	11JAN2016
		2	8.79	922.9	11JAN2016
		3	8.09	857.2	11JAN2016

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Pall Mall Red 100's Box	01JUL2014	1	15.76	2796.0	22AUG2014
		2	14.66	2918.0	22AUG2014
		3	15.61	2045.0	22AUG2014
	05AUG2015	1	14.28	1889.0	29SEP2015
		2	14.37	1846.0	29SEP2015
		3	14.01	1851.0	29SEP2015
Pall Mall Red Box	03AUG2015	1	13.34	2253.0	29SEP2015
		2	15.07	2346.0	29SEP2015
		3	13.46	2208.0	29SEP2015
Parliament (White Pack) Box	06AUG2014	1	7.69	1421.0	02SEP2014
		2	7.51	1356.0	02SEP2014
		3	7.38	1449.0	02SEP2014
Pyramid Blue 100s Box	31AUG2015	1	8.98	1314.0	15DEC2015
		2	8.73	1319.0	15DEC2015
		3	9.35	1160.0	15DEC2015
Pyramid Menthol Silver 100s Box	06AUG2014	1	8.56	2149.0	28AUG2014
		2	9.04	2068.0	02SEP2014
		3	7.75	1656.0	02SEP2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Pyramid Menthol Silver 100s Box	31AUG2015	1	7.43	1214.0	15DEC2015
		2	8.37	1170.0	15DEC2015
		3	9.31	1311.0	15DEC2015
Pyramid Orange 100s Box	06AUG2014	1	10.43	1834.0	02SEP2014
		2	10.03	1716.0	02SEP2014
		3	9.30	1718.0	02SEP2014
Pyramid Red 100s Box	06AUG2014	1	11.01	1913.0	27AUG2014
		2	11.03	1996.0	27AUG2014
		3	10.89	1799.0	27AUG2014
	31AUG2015	1	10.88	1482.0	15DEC2015
		2	9.69	1493.0	15DEC2015
		3	10.64	1689.0	15DEC2015
Pyramid Red Box	06AUG2014	1	9.43	1738.0	02SEP2014
		2	9.20	1771.0	02SEP2014
		3	9.08	1661.0	02SEP2014
Sonoma Red Box	06AUG2014	1	7.44	1960.0	01OCT2014
		2	6.92	2763.0	01OCT2014
		3	7.33	2202.0	01OCT2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Sonoma Red Box	31AUG2015	1	8.13	1609.0	29SEP2015
		2	8.93	1877.0	29SEP2015
		3	8.73	1951.0	29SEP2015
Tareyton Soft Pack	23APR2014	1	11.16	1456.0	22AUG2014
		2	11.90	1142.0	22AUG2014
		3	12.04	1157.0	22AUG2014
True Kings	13MAY2015	1	8.04	1775.0	22DEC2015
		2	7.31	1445.0	22DEC2015
		3	7.22	1479.0	22DEC2015
USA Gold Red Box	06AUG2014	1	9.30	2952.0	02SEP2014
		2	7.98	2833.0	02SEP2014
		3	9.01	2971.0	02SEP2014
	31AUG2015	1	8.13	1752.0	29SEP2015
		2	7.70	1558.0	29SEP2015
		3	8.87	1755.0	29SEP2015
Winston Red Box	12JUN2014	1	10.99	2691.0	22AUG2014
		2	11.04	3370.0	22AUG2014
		3	11.51	2603.0	22AUG2014

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis		
			Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
Winston Red Box	10JUL2015	1	10.26	1710.0	15DEC2015
		2	10.11	1581.0	15DEC2015
		3	11.19	1960.0	15DEC2015

Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene N/A= not available

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Camel Blue Hard Pack	25JUN2014	1	6.11	02SEP2014
		2	6.67	02SEP2014
		3	7.00	02SEP2014
	16JUL2015	1	5.20	21SEP2015
		2	6.36	21SEP2015
		3	4.92	21SEP2015
Camel Crush (crushed)	16JUN2014	1	7.22	05SEP2014
		2	7.96	05SEP2014
		3	8.95	05SEP2014
	17JUN2015	1	6.30	14SEP2015
		2	6.64	14SEP2015
		3	6.20	14SEP2015
Camel Crush (uncrushed)	16JUN2014	1	8.86	05SEP2014
		2	8.62	05SEP2014
		3	9.01	05SEP2014
	17JUN2015	1	6.57	14SEP2015
		2	5.56	14SEP2015
		3	5.82	14SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Camel Filters Hard Pack	24JUN2014	1	12.98	05SEP2014
		2	11.59	05SEP2014
		3	13.37	05SEP2014
	15JUN2015	1	8.86	16SEP2015
		2	9.95	16SEP2015
		3	9.68	16SEP2015
Camel Menthol Silver Hard Pack (crushed)	12JUL2014	1	8.38	05SEP2014
		2	8.38	05SEP2014
		3	8.52	05SEP2014
	10AUG2015	1	6.01	16SEP2015
		2	5.61	16SEP2015
		3	5.89	16SEP2015
Camel Menthol Silver Hard Pack (uncrushed)	12JUL2014	1	8.01	05SEP2014
		2	7.58	05SEP2014
		3	9.44	05SEP2014
	10AUG2015	1	6.10	16SEP2015
		2	6.23	16SEP2015
		3	6.42	16SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Kent Kings	01JUN2015	1	8.62	12OCT2015
		2	9.74	12OCT2015
		3	9.49	12OCT2015
Kool Box	02JUL2014	1	7.37	02SEP2014
		2	7.92	02SEP2014
		3	7.82	02SEP2014
	15JUL2015	1	2.89	28SEP2015
		2	2.32	28SEP2015
		3	2.32	28SEP2015
L&M Blue Pack Box	06AUG2014	1	4.28	06OCT2014
		2	4.69	06OCT2014
		3	5.44	06OCT2014
L&M Box	06AUG2014	1	8.13	12SEP2014
		2	8.34	12SEP2014
		3	7.57	12SEP2014
	31AUG2015	1	5.60	01OCT2015
		2	6.29	01OCT2015
		3	6.27	01OCT2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
L&M Menthol 100's Box	06AUG2014	1	7.78	06OCT2014
		2	7.66	06OCT2014
		3	7.52	06OCT2014
Marlboro 100's Box	31AUG2015	1	9.77	09OCT2015
		2	8.81	09OCT2015
		3	10.79	09OCT2015
Marlboro 72s Blue Pack Box	06AUG2014	1	9.80	12SEP2014
		2	8.70	12SEP2014
		3	8.47	12SEP2014
Marlboro 72s Box	06AUG2014	1	7.18	11SEP2014
		2	7.74	11SEP2014
		3	9.25	11SEP2014
Marlboro Blend No. 27 Box	06AUG2014	1	6.93	11SEP2014
		2	6.89	11SEP2014
		3	8.06	11SEP2014
Marlboro Box	06AUG2014	1	10.90	08SEP2014
		2	10.65	08SEP2014
		3	11.20	08SEP2014



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Marlboro Box	31AUG2015	1	9.46	12OCT2015
		2	9.16	12OCT2015
		3	9.06	12OCT2015
Marlboro Edge Box	31AUG2015	1	7.67	01OCT2015
		2	7.79	01OCT2015
		3	7.50	01OCT2015
Marlboro Eighty Threes Box	31AUG2015	1	7.95	01OCT2015
		2	7.99	01OCT2015
		3	7.34	01OCT2015
Marlboro Gold Pack 100's Box	31AUG2015	1	7.68	12OCT2015
		2	7.48	12OCT2015
		3	7.69	12OCT2015
Marlboro Gold Pack Box	06AUG2014	1	7.57	08SEP2014
		2	7.21	08SEP2014
		3	8.84	08SEP2014
	31AUG2015	1	7.14	12OCT2015
		2	6.49	12OCT2015
		3	7.17	12OCT2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Marlboro Menthol Box	06AUG2014	1	9.89	11SEP2014
		2	11.23	11SEP2014
		3	10.69	11SEP2014
	31AUG2015	1	9.14	13OCT2015
		2	11.11	13OCT2015
		3	9.42	13OCT2015
Marlboro Menthol Gold Pack Box	31AUG2015	1	5.47	02OCT2015
		2	5.50	02OCT2015
		3	5.26	02OCT2015
Marlboro Menthol Silver Pack Box	06AUG2014	1	4.77	12SEP2014
		2	5.63	12SEP2014
		3	5.23	12SEP2014
Marlboro Menthol Special Blend 100's (Black) Box	06AUG2014	1	10.75	11SEP2014
		2	10.94	11SEP2014
		3	10.45	11SEP2014
	31AUG2015	1	8.84	12OCT2015
		2	9.44	12OCT2015
		3	9.50	12OCT2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Marlboro NXT Box (crushed)	31AUG2015	1	6.85	23SEP2015
		2	7.06	23SEP2015
		3	6.04	23SEP2015
Marlboro NXT Box (uncrushed)	31AUG2015	1	6.70	23SEP2015
		2	6.71	23SEP2015
		3	6.92	23SEP2015
Marlboro Silver Pack 100's Box	06AUG2014	1	6.93	11SEP2014
		2	5.62	11SEP2014
		3	6.16	11SEP2014
	31AUG2015	1	5.62	02OCT2015
		2	4.80	02OCT2015
		3	4.44	02OCT2015
Marlboro Silver Pack Box	06AUG2014	1	6.17	08SEP2014
		2	6.92	08SEP2014
		3	6.61	08SEP2014
	31AUG2015	1	3.84	01OCT2015
		2	3.84	01OCT2015
		3	3.74	01OCT2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Marlboro Special Blend (Black) Box	06AUG2014	1	9.79	11SEP2014
		2	8.50	11SEP2014
		3	8.39	11SEP2014
	31AUG2015	1	6.10	02OCT2015
		2	5.96	02OCT2015
		3	6.38	02OCT2015
Marlboro Special Blend (Gold) Box	06AUG2014	1	8.85	08SEP2014
		2	8.91	08SEP2014
		3	8.37	08SEP2014
	31AUG2015	1	5.15	02OCT2015
		2	5.24	02OCT2015
		3	5.07	02OCT2015
Marlboro Special Blend (Red) Box	31AUG2015	1	7.21	09OCT2015
		2	6.99	09OCT2015
		3	7.29	09OCT2015
Marlboro Special Blend 100's (Red) Box	06AUG2014	1	11.53	08SEP2014
		2	9.80	08SEP2014
		3	11.38	08SEP2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Marlboro Special Blend 100's (Red) Box	31AUG2015	1	6.49	02OCT2015
		2	7.08	02OCT2015
		3	7.12	02OCT2015
Marlboro Special Blend 100's Box (Gold Pack)	31AUG2015	1	7.75	09OCT2015
		2	6.30	09OCT2015
		3	7.62	09OCT2015
Maverick 100s Box	31AUG2015	1	11.21	09OCT2015
		2	10.15	09OCT2015
		3	11.95	09OCT2015
Maverick Gold 100s Box	06AUG2014	1	8.48	12SEP2014
		2	9.50	12SEP2014
		3	9.29	12SEP2014
Maverick Menthol 100 Box	06AUG2014	1	12.23	20OCT2014
		2	12.18	20OCT2014
		3	12.93	20OCT2014
	31AUG2015	1	13.20	13OCT2015
		2	11.32	13OCT2015
		3	11.96	13OCT2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Misty Blue 120's Box	24JUL2015	1	13.46	16SEP2015
		2	13.15	16SEP2015
		3	13.55	16SEP2015
Misty Menthol Green 120's Box	27JUN2014	1	10.37	27OCT2014
		2	11.24	27OCT2014
		3	12.14	27OCT2014
More 120's Soft Pack	05JUN2014	1	13.14	05SEP2014
		2	15.02	05SEP2014
		3	13.62	05SEP2014
	10JUL2015	1	11.03	21SEP2015
		2	12.17	21SEP2015
		3	12.25	21SEP2015
Natural American Spirit Full-Bodied Taste	27JUN2014	1	13.56	05SEP2014
		2	14.16	05SEP2014
		3	13.77	05SEP2014
	05MAY2015	1	9.28	14SEP2015
		2	9.59	14SEP2015
		3	9.31	14SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Natural American Spirit Made With Organic Tobacco Full-Bodied Taste	25JUN2014	1	11.80	05SEP2014
		2	12.01	05SEP2014
		3	12.25	05SEP2014
	07AUG2015	1	12.48	14SEP2015
		2	12.04	14SEP2015
		3	14.20	14SEP2015
Natural American Spirit Made With Organic Tobacco Mellow Taste	26JUN2015	1	8.95	14SEP2015
		2	10.19	14SEP2015
		3	8.78	14SEP2015
Natural American Spirit Mellow Taste	06JUL2015	1	9.18	14SEP2015
		2	9.77	14SEP2015
		3	8.81	14SEP2015
Natural American Spirit Menthol Mellow Taste	04AUG2015	1	11.29	14SEP2015
		2	11.66	14SEP2015
		3	11.99	14SEP2015
Natural American Spirit Perique Blend Rich Robust Taste	07JUL2014	1	9.86	08SEP2014
		2	7.92	08SEP2014
		3	9.30	08SEP2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Natural American Spirit Perique Blend Rich Robust Taste	11AUG2015	1	11.20	14SEP2015
		2	10.17	14SEP2015
		3	11.20	14SEP2015
Newport Box	06AUG2014	1	6.78	06OCT2014
		2	6.73	06OCT2014
		3	6.44	06OCT2014
	04AUG2015	1	9.10	13OCT2015
		2	8.84	13OCT2015
		3	7.30	13OCT2015
Newport Box 100s	06AUG2014	1	9.89	06OCT2014
		2	9.96	06OCT2014
		3	9.48	06OCT2014
	30JUL2015	1	10.99	13OCT2015
		2	11.41	13OCT2015
		3	11.61	13OCT2015
Newport Menthol Gold Box	25MAY2015	1	4.75	23SEP2015
		2	4.49	23SEP2015
		3	4.82	23SEP2015



Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Newport Non-Menthol Box	06AUG2014	1	6.96	20OCT2014
		2	6.79	20OCT2014
		3	7.00	20OCT2014
Now Soft Pack	23APR2014	1	5.72	02SEP2014
		2	4.31	02SEP2014
		3	3.52	02SEP2014
	15MAY2015	1	3.87	14SEP2015
		2	4.94	14SEP2015
		3	3.82	14SEP2015
Pall Mall Blue 100's Box	19JUN2014	1	9.02	05SEP2014
		2	11.80	05SEP2014
		3	10.54	05SEP2014
	27JUL2015	1	9.10	16SEP2015
		2	9.12	16SEP2015
		3	8.30	16SEP2015
Pall Mall Menthol 100's Box	07JUL2015	1	8.43	14SEP2015
		2	8.01	14SEP2015
		3	8.56	14SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Pall Mall Menthol White 100's Box	20JUN2014	1	9.68	05SEP2014
		2	8.66	05SEP2014
		3	9.99	05SEP2014
Pall Mall Orange Box	07JUL2014	1	8.67	05SEP2014
		2	9.65	05SEP2014
		3	8.37	05SEP2014
	15AUG2015	1	4.88	21SEP2015
		2	4.32	21SEP2015
		3	4.99	21SEP2015
Pall Mall Red 100's Box	01JUL2014	1	7.86	02SEP2014
		2	9.87	02SEP2014
		3	9.98	02SEP2014
	05AUG2015	1	7.52	21SEP2015
		2	8.07	21SEP2015
		3	7.95	21SEP2015
Pall Mall Red Box	03AUG2015	1	7.90	23SEP2015
		2	9.76	23SEP2015
		3	8.83	23SEP2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Parliament (White Pack) Box	06AUG2014	1	5.75	06OCT2014
		2	5.79	06OCT2014
		3	6.90	06OCT2014
Pyramid Blue 100s Box	31AUG2015	1	4.77	01OCT2015
		2	5.54	01OCT2015
		3	5.20	01OCT2015
Pyramid Menthol Silver 100s Box	06AUG2014	1	7.33	20OCT2014
		2	5.72	20OCT2014
		3	7.59	20OCT2014
	31AUG2015	1	2.89	28SEP2015
		2	2.49	28SEP2015
		3	2.45	28SEP2015
Pyramid Orange 100s Box	06AUG2014	1	5.58	20OCT2014
		2	6.91	20OCT2014
		3	6.82	20OCT2014
Pyramid Red 100s Box	06AUG2014	1	8.83	12SEP2014
		2	8.04	12SEP2014
		3	9.29	12SEP2014

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
Pyramid Red 100s Box	31AUG2015	1	6.71	01OCT2015
		2	7.18	01OCT2015
		3	7.05	01OCT2015
Pyramid Red Box	06AUG2014	1	7.84	12SEP2014
		2	8.17	12SEP2014
		3	7.56	12SEP2014
Sonoma Red Box	06AUG2014	1	10.43	20OCT2014
		2	10.41	20OCT2014
		3	10.58	20OCT2014
	31AUG2015	1	3.54	28SEP2015
		2	3.61	28SEP2015
		3	3.85	28SEP2015
Tareyton Soft Pack	23APR2014	1	7.18	02SEP2014
		2	9.66	02SEP2014
		3	9.72	02SEP2014
True Kings	13MAY2015	1	9.98	09OCT2015
		2	9.77	09OCT2015
		3	9.38	09OCT2015

Table 4. Cigarette Data Listing (Canadian Intense Smoking) (cont'd)

Cigarette Name	Manufacture/ purchase Date	Replicate (n)	Acrylamide Analysis	
			Acrylamide (ug/cig)	Completed Analysis Date
USA Gold Red Box	06AUG2014	1	10.75	20OCT2014
		2	10.19	20OCT2014
		3	12.52	20OCT2014
	31AUG2015	1	4.69	28SEP2015
		2	4.21	28SEP2015
		3	4.01	28SEP2015
Winston Red Box	12JUN2014	1	7.25	02SEP2014
		2	7.98	02SEP2014
		3	6.84	02SEP2014
	10JUL2015	1	3.13	28SEP2015
		2	4.26	28SEP2015
		3	4.65	28SEP2015

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Camel Blue Hard Pack (2014)				Camel Blue Hard Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.0	1.8	2.2	8	2.0	2.0	2.1	8
Acetaldehyde (ug/cig)	1448	1386	1498	3	1780	1713	1822	3
Crotonaldehyde (ug/cig)	39	37	40	3	52	50	54	3
Formaldehyde (ug/cig)	72	63	84	3	73	64	85	3
Arsenic (ng/cig)	8.4	8.1	8.8	3	7.2	7.1	7.4	3
Cadmium (ng/cig)	110	104	115	3	107	106	109	3
NNN (ng/cig)	129	126	134	3	133	130	136	3
NNK (ng/cig)	83	79	85	3	88	86	93	3
NAT (ng/cig)	160	151	172	3	185	179	190	3
NAB (ng/cig)	19	18	19	3	15	15	16	3
B(a)P (ng/cig)	18.9	18.5	19.5	3	16.6	15.9	17.7	3
B(a)A (ng/cig)	32.4	30.5	33.6	3	31.7	30.8	33.4	3
B(b/j)FL (ng/cig)	17.3	16.6	17.7	3	17.7	16.8	18.5	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	3.6	3.5	3.8	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	8.6	8.0	9.0	3	8.3	8.0	8.8	3
Acrylamide (ug/cig)	6.6	6.1	7.0	3	5.5	4.9	6.4	3
Naphthalene (ng/cig)	1149	1048	1206	3	1051	978	1146	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Camel Crush (crushed) (2014)				Camel Crush (crushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.1	1.9	2.2	8	2.1	2.0	2.3	8
Acetaldehyde (ug/cig)	1531	1517	1554	3	1713	1657	1763	3
Crotonaldehyde (ug/cig)	40	39	40	3	49	46	51	3
Formaldehyde (ug/cig)	90	82	94	3	86	80	90	3
Arsenic (ng/cig)	8.1	8.0	8.2	3	7.1	6.9	7.1	3
Cadmium (ng/cig)	106	102	108	3	101	99	103	3
NNN (ng/cig)	144	140	151	3	159	148	172	3
NNK (ng/cig)	100	99	103	3	104	101	108	3
NAT (ng/cig)	193	186	202	3	214	209	220	3
NAB (ng/cig)	23	21	25	3	19	18	19	3
B(a)P (ng/cig)	23.1	19.4	25.7	3	20.1	17.7	23.3	3
B(a)A (ng/cig)	37.7	34.2	42.1	3	38.5	32.1	44.3	3
B(b/j)FL (ng/cig)	21.1	17.8	23.6	3	23.7	21.5	27.3	3
B(k)FL (ng/cig)	3.6 <sup>†</sup>	3.2 <sup>*</sup>	4.1	3	4.2	3.9	4.4	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	9.6	8.7	10.3	3	10.2	9.0	12.1	3
Acrylamide (ug/cig)	8.0	7.2	9.0	3	6.4	6.2	6.6	3
Naphthalene (ng/cig)	429	348	488	3	498	481	520	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Camel Crush (uncrushed) (2014)				Camel Crush (uncrushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.1	1.9	2.3	8	2.1	2.0	2.2	8
Acetaldehyde (ug/cig)	1461	1392	1574	3	1709	1651	1742	3
Crotonaldehyde (ug/cig)	38	34	42	3	51	49	52	3
Formaldehyde (ug/cig)	80	64	90	3	78	73	81	3
Arsenic (ng/cig)	7.9	7.8	8.0	3	6.9	6.8	7.1	3
Cadmium (ng/cig)	105	102	109	3	105	105	106	3
NNN (ng/cig)	145	141	148	3	141	130	150	3
NNK (ng/cig)	93	87	96	3	101	94	106	3
NAT (ng/cig)	194	186	209	3	189	181	194	3
NAB (ng/cig)	22	21	24	3	16	15	17	3
B(a)P (ng/cig)	23.1	22.2	24.7	3	21.9	20.7	22.8	3
B(a)A (ng/cig)	40.0	37.6	43.4	3	39.7	37.9	40.8	3
B(b/j)FL (ng/cig)	21.0	19.8	22.6	3	22.2	21.5	23.5	3
B(k)FL (ng/cig)	3.4	3.3	3.5	3	4.0	4.0	4.0	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	10.4	10.1	10.8	3	10.9	10.5	11.7	3
Acrylamide (ug/cig)	8.8	8.6	9.0	3	6.0	5.6	6.6	3
Naphthalene (ng/cig)	1189	1097	1320	3	989	980	1005	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Camel Filters Hard Pack (2014)				Camel Filters Hard Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.0	1.8	2.2	8	2.4	2.3	2.7	8
Acetaldehyde (ug/cig)	1779	1685	1910	3	1910	1900	1915	3
Crotonaldehyde (ug/cig)	53	50	56	3	60	59	61	3
Formaldehyde (ug/cig)	109	105	114	3	127	121	130	3
Arsenic (ng/cig)	10.8	10.3	11.4	3	9.8	8.8	10.4	3
Cadmium (ng/cig)	133	132	134	3	125	120	129	3
NNN (ng/cig)	152	140	158	3	156	146	171	3
NNK (ng/cig)	128	117	135	3	109	97	116	3
NAT (ng/cig)	225	211	237	3	211	195	223	3
NAB (ng/cig)	25	24	27	3	20	18	23	3
B(a)P (ng/cig)	23.7	21.7	26.6	3	22.0	20.5	23.4	3
B(a)A (ng/cig)	45.6	43.8	48.4	3	42.5	39.0	45.8	3
B(b/j)FL (ng/cig)	26.5	25.2	28.8	3	24.6	22.7	26.8	3
B(k)FL (ng/cig)	4.8	4.4	5.5	3	4.3	4.0	4.8	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	12.3	11.7	12.8	3	11.3	10.7	12.0	3
Acrylamide (ug/cig)	12.6	11.6	13.4	3	9.5	8.9	10.0	3
Naphthalene (ng/cig)	2246	1986	2568	3	1841	1681	1923	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Camel Menthol Silver Hard Pack (crushed) (2014)				Camel Menthol Silver Hard Pack (crushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.8	1.7	2.1	8	1.9	1.8	2.0	8
Acetaldehyde (ug/cig)	1569	1435	1681	3	1791	1743	1864	3
Crotonaldehyde (ug/cig)	41	36	45	3	51	49	54	3
Formaldehyde (ug/cig)	91	81	100	3	109	100	119	3
Arsenic (ng/cig)	8.6	8.5	8.9	3	8.6	8.0	9.0	3
Cadmium (ng/cig)	96	94	97	3	93	91	96	3
NNN (ng/cig)	133	127	138	3	138	135	143	3
NNK (ng/cig)	103	97	110	3	111	104	123	3
NAT (ng/cig)	204	189	214	3	198	196	202	3
NAB (ng/cig)	23	22	23	3	17	16	18	3
B(a)P (ng/cig)	24.6	22.1	27.9	3	18.5	16.6	21.0	3
B(a)A (ng/cig)	40.6	37.4	45.8	3	33.6	30.8	37.1	3
B(b/j)FL (ng/cig)	23.3	20.8	26.4	3	20.4	18.6	22.9	3
B(k)FL (ng/cig)	3.5 <sup>†</sup>	3.2 <sup>*</sup>	4.1	3	3.5 <sup>†</sup>	3.2 <sup>*</sup>	4.1	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	10.4	9.6	11.2	3	9.6	8.5	10.8	3
Acrylamide (ug/cig)	8.4	8.4	8.5	3	5.8	5.6	6.0	3
Naphthalene (ng/cig)	422	356	480	3	469	439	507	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Camel Menthol Silver Hard Pack (uncrushed) (2014)				Camel Menthol Silver Hard Pack (uncrushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.9	1.5	2.1	8	1.9	1.8	2.1	7
Acetaldehyde (ug/cig)	1557	1534	1579	3	1672	1628	1717	3
Crotonaldehyde (ug/cig)	41	40	42	3	50	49	51	3
Formaldehyde (ug/cig)	98	91	103	3	103	92	114	3
Arsenic (ng/cig)	8.1	8.0	8.2	3	8.1	7.5	9.5	3
Cadmium (ng/cig)	105	102	108	3	97	97	98	3
NNN (ng/cig)	146	134	153	3	134	124	144	3
	144	133	151	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	125	98	165	3	81	77	87	3
	98	93	103	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	208	201	217	3	184	174	190	3
	233	226	238	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	23	22	23	3	15	14	15	3
	24	23	26	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	22.4	20.7	23.8	3	17.1	16.6	17.4	3
B(a)A (ng/cig)	38.3	37.4	38.8	3	29.4	28.5	30.4	3
B(b/j)FL (ng/cig)	21.0	19.4	21.9	3	18.2	17.6	19.1	3
B(k)FL (ng/cig)	3.5 <sup>†</sup>	3.2 <sup>*</sup>	4.1	3	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.3	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Camel Menthol Silver Hard Pack (uncrushed) (2014)				Camel Menthol Silver Hard Pack (uncrushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8*	4.8*	3	4.8 <sup>†</sup>	4.8*	4.8*	3
Indeno(c,d)P (ng/cig)	9.5	8.9	10.0	3	8.4	8.2	8.7	3
Acrylamide (ug/cig)	8.3	7.6	9.4	3	6.3	6.1	6.4	3
Naphthalene (ng/cig)	1104	1064	1158	3	706	625	823	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Kent Kings (2014)				Kent Kings (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	2.3	2.1	2.5	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1899	1867	1959	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	55	55	56	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	79	75	84	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	9.5	9.4	9.7	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	131	128	133	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	272	233	329	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	160	152	175	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	276	255	309	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	35	32	38	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	19.6	18.9	20.3	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	35.0	33.8	35.9	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	21.1	20.3	21.7	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	4.5	4.3	4.7	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	10.2	10.0	10.6	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	9.3	8.6	9.7	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1565	1546	1578	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Kool Box (2014)				Kool Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.1	1.3	2.6	8	2.3	2.0	2.4	8
Acetaldehyde (ug/cig)	1649	1602	1693	3	1896	1859	1915	3
Crotonaldehyde (ug/cig)	47	45	48	3	61	60	62	3
Formaldehyde (ug/cig)	97	83	108	3	105	98	120	3
Arsenic (ng/cig)	9.9	9.4	10.3	3	10.9	9.8	12.2	3
Cadmium (ng/cig)	125	122	127	3	119	115	122	3
NNN (ng/cig)	175	170	183	3	162	152	168	3
NNK (ng/cig)	133	105	169	3	100	98	102	3
NAT (ng/cig)	244	236	248	3	219	215	227	3
NAB (ng/cig)	28	26	30	3	19	17	20	3
B(a)P (ng/cig)	21.7	21.6	21.8	3	23.4	22.3	24.2	3
B(a)A (ng/cig)	40.1	39.1	41.1	3	41.0	38.5	43.9	3
B(b/j)FL (ng/cig)	23.5	22.6	24.0	3	26.2	24.5	28.0	3
B(k)FL (ng/cig)	4.0	3.9	4.2	3	5.3	5.0	5.7	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	11.0	10.7	11.2	3	10.7	10.0	11.3	3
Acrylamide (ug/cig)	7.7	7.4	7.9	3	2.5	2.3	2.9	3
Naphthalene (ng/cig)	2253	1892	2915	3	1938	1850	2020	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	L&M Blue Pack Box (2014)				L&M Blue Pack Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.4	1.4	1.5	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1487	1443	1546	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	41	40	43	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	72	67	76	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	6.1	5.7	6.5	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	89	82	92	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	214	210	218	2	N/A	N/A	N/A	N/A
	226	215	243	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	154	152	156	2	N/A	N/A	N/A	N/A
	205	172	243	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	260	259	261	2	N/A	N/A	N/A	N/A
	255	239	268	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	26	26	27	2	N/A	N/A	N/A	N/A
	30	28	32	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	18.7	17.9	19.4	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	30.2	29.2	31.0	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	19.1	17.8	20.4	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.3	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	L&M Blue Pack Box (2014)				L&M Blue Pack Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8*	4.8*	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	8.5	8.2	8.9	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	4.8	4.3	5.4	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	1104	1005	1226	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	L&M Box (2014)				L&M Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.7	1.6	1.9	8	1.8	1.7	1.9	8
Acetaldehyde (ug/cig)	1509	1465	1564	3	1811	1740	1869	3
Crotonaldehyde (ug/cig)	45	43	47	3	55	53	56	3
Formaldehyde (ug/cig)	96	92	100	3	95	90	99	3
Arsenic (ng/cig)	7.1	6.9	7.3	3	6.5	6.3	6.7	3
Cadmium (ng/cig)	99	96	101	3	75	73	78	3
NNN (ng/cig)	211	207	217	3	231	219	251	3
NNK (ng/cig)	205	188	223	3	197	186	214	3
NAT (ng/cig)	253	250	257	3	248	237	254	3
NAB (ng/cig)	28	27	29	3	22	20	23	3
B(a)P (ng/cig)	17.8	17.2	18.3	3	17.4	16.9	17.8	3
B(a)A (ng/cig)	33.9	32.4	35.0	3	35.3	34.5	36.3	3
B(b/j)FL (ng/cig)	20.6	19.8	21.0	3	19.8	19.2	20.1	3
B(k)FL (ng/cig)	3.4 <sup>†</sup>	3.2 <sup>*</sup>	3.6	3	3.8	3.3	4.1	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	9.9	9.2	10.2	3	8.5	8.2	9.0	3
Acrylamide (ug/cig)	8.0	7.6	8.3	3	6.1	5.6	6.3	3
Naphthalene (ng/cig)	1492	1349	1632	3	1535	1510	1563	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	L&M Menthol 100's Box (2014)				L&M Menthol 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.2	2.0	2.4	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1661	1601	1760	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	44	42	48	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	95	87	100	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	8.8	8.5	9.0	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	120	120	120	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	231	214	257	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	201	194	214	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	265	257	271	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	28	27	29	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	19.3	18.5	19.8	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	32.2	30.2	34.4	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	17.1	16.6	17.5	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	8.5	8.1	8.7	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	7.7	7.5	7.8	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	1340	1294	1406	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro 100's Box (2014)				Marlboro 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	2.4	2.3	2.5	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1806	1785	1826	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	55	54	56	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	86	82	89	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	13.9	13.3	14.8	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	135	133	136	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	354	337	366	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	258	256	261	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	404	393	413	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	38	35	40	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	21.1	20.9	21.5	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	38.4	34.0	42.0	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	20.0	19.3	20.6	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	3.3 <sup>†</sup>	3.2 <sup>*</sup>	3.5	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	10.8	10.4	11.2	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	9.8	8.8	10.8	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1616	1406	1778	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro 72s Blue Pack Box (2014)				Marlboro 72s Blue Pack Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.9	1.8	2.0	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1358	1280	1400	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	39	37	41	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	118	111	122	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	8.3	8.2	8.4	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	109	107	110	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	255	247	268	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	208	201	212	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	318	302	334	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	30	30	31	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	15.6	15.3	16.1	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	26.7	25.0	27.9	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	14.1	13.6	14.3	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	6.8	6.3	7.2	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	9.0	8.5	9.8	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	1540	1437	1606	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro 72s Box (2014)				Marlboro 72s Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.9	1.8	1.9	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1384	1334	1461	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	39	37	42	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	79	77	82	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	9.6	9.5	9.7	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	114	111	117	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	268	259	276	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	184	178	191	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	358	345	372	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	33	33	34	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	21.5	19.7	23.6	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	32.5	31.5	33.9	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	18.1	17.2	19.0	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	8.9	8.5	9.6	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	8.1	7.2	9.3	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	1804	1642	1974	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Blend No. 27 Box (2014)				Marlboro Blend No. 27 Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.8	1.7	2.0	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1513	1509	1518	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	43	42	43	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	126	120	132	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	8.3	8.2	8.4	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	105	102	108	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	187	181	191	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	183	169	197	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	241	236	250	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	24	24	25	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	15.1	14.8	15.6	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	29.2	28.4	30.3	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	16.3	15.9	16.7	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	8.0	7.7	8.4	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	7.3	6.9	8.1	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	1283	1237	1369	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Box (2014)				Marlboro Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.1	2.0	2.2	8	2.2	2.1	2.3	8
Acetaldehyde (ug/cig)	1490	1399	1580	3	1643	1605	1671	3
Crotonaldehyde (ug/cig)	43	40	46	3	52	51	53	3
Formaldehyde (ug/cig)	83	77	90	3	93	83	105	3
Arsenic (ng/cig)	11.4	11.2	11.6	3	11.9	11.2	12.3	3
Cadmium (ng/cig)	135	131	138	3	121	117	126	3
NNN (ng/cig)	268	244	294	3	321	294	340	3
NNK (ng/cig)	193	188	198	3	237	231	241	3
NAT (ng/cig)	326	315	337	3	349	337	362	3
NAB (ng/cig)	35	34	36	3	35	33	37	3
B(a)P (ng/cig)	19.2	18.3	20.2	3	18.6	17.3	19.2	3
B(a)A (ng/cig)	37.3	36.1	38.4	3	36.3	35.2	37.6	3
B(b/j)FL (ng/cig)	20.1	18.3	21.9	3	15.5	14.9	16.3	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	10.3	9.8	10.8	3	10.7	8.7	12.6	3
Acrylamide (ug/cig)	10.9	10.7	11.2	3	9.2	9.1	9.5	3
Naphthalene (ng/cig)	2178	1974	2349	3	1670	1627	1727	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Edge Box (2014)				Marlboro Edge Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	2.0	1.7	2.3	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1834	1819	1857	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	60	59	60	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	144	137	154	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	8.7	8.2	9.2	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	102	99	104	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	289	279	304	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	230	219	236	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	375	356	392	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	22	21	22	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	17.0	16.4	17.8	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	36.4	34.5	38.2	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	18.1	17.6	18.4	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	3.5	3.2	3.8	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	8.6	8.2	9.0	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	7.7	7.5	7.8	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1551	1528	1567	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Eighty Threes Box (2014)				Marlboro Eighty Threes Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	2.2	2.1	2.4	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1716	1680	1746	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	54	53	56	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	88	81	94	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	12.3	10.8	13.4	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	129	118	140	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	289	263	302	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	230	218	241	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	337	327	343	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	29	27	31	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	18.3	17.4	19.3	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	40.1	38.4	42.7	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	19.6	18.8	21.0	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	4.3	4.0	4.8	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	8.9	8.5	9.3	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	7.8	7.3	8.0	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1702	1675	1730	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Gold Pack 100's Box (2014)				Marlboro Gold Pack 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	2.0	1.8	2.1	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1781	1733	1831	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	52	50	54	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	65	61	68	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	10.2	9.9	10.6	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	108	106	111	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	341	302	401	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	215	203	224	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	346	339	351	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	34	32	36	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	18.9	18.5	19.2	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	36.4	34.9	37.5	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	18.1	17.8	18.3	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	3.8	3.7	4.0	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	9.7	9.6	10.0	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	7.6	7.5	7.7	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1225	1201	1248	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Gold Pack Box (2014)				Marlboro Gold Pack Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.7	1.6	1.8	8	1.8	1.7	1.9	8
Acetaldehyde (ug/cig)	1437	1366	1523	3	1613	1526	1672	3
Crotonaldehyde (ug/cig)	41	38	44	3	49	46	51	3
Formaldehyde (ug/cig)	73	67	77	3	82	79	86	3
Arsenic (ng/cig)	9.0	8.8	9.3	3	8.8	8.7	8.9	3
Cadmium (ng/cig)	117	113	121	3	99	97	100	3
NNN (ng/cig)	239	232	251	3	223	205	241	3
NNK (ng/cig)	164	160	171	3	163	153	169	3
NAT (ng/cig)	314	293	333	3	266	262	270	3
NAB (ng/cig)	32	31	33	3	26	25	27	3
B(a)P (ng/cig)	16.0	15.8	16.4	3	16.2	15.1	17.3	3
B(a)A (ng/cig)	31.8	29.6	33.1	3	30.4	29.6	31.7	3
B(b/j)FL (ng/cig)	17.6	17.4	17.8	3	14.0	12.7	15.7	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	8.8	8.8	9.0	3	8.4	7.7	9.0	3
Acrylamide (ug/cig)	7.9	7.2	8.8	3	6.9	6.5	7.2	3
Naphthalene (ng/cig)	1176	1102	1259	3	988	875	1071	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Menthol Box (2014)				Marlboro Menthol Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.3	2.1	2.4	8	2.3	2.1	2.4	7
Acetaldehyde (ug/cig)	1667	1647	1703	3	1730	1714	1746	3
Crotonaldehyde (ug/cig)	51	49	53	3	48	48	48	3
Formaldehyde (ug/cig)	128	123	132	3	133	132	134	3
Arsenic (ng/cig)	9.5	9.4	9.8	3	10.0	9.7	10.4	3
Cadmium (ng/cig)	135	131	140	3	116	114	118	3
NNN (ng/cig)	264	259	272	3	307	294	315	3
NNK (ng/cig)	233	227	236	3	246	237	253	3
NAT (ng/cig)	345	325	355	3	359	347	369	3
NAB (ng/cig)	34	32	35	3	30	29	31	3
B(a)P (ng/cig)	24.4	23.1	25.7	3	18.3	17.8	19.0	3
B(a)A (ng/cig)	36.8	34.5	39.0	3	34.1	32.4	37.0	3
B(b/j)FL (ng/cig)	20.5	19.4	21.4	3	16.2	15.9	16.8	3
B(k)FL (ng/cig)	3.4 <sup>†</sup>	3.2 <sup>*</sup>	3.8	3	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.3	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	10.8	10.0	12.5	3	8.5	8.4	8.7	3
Acrylamide (ug/cig)	10.6	9.9	11.2	3	9.9	9.1	11.1	3
Naphthalene (ng/cig)	2325	2220	2533	3	1824	1784	1901	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Menthol Gold Pack Box (2014)				Marlboro Menthol Gold Pack Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.8	1.8	1.9	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1569	1510	1631	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	47	46	49	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	130	122	139	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	7.2	6.1	7.7	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	84	75	92	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	191	189	193	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	176	168	183	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	229	219	237	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	18	17	19	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	15.0	14.3	15.8	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	26.3	25.2	27.6	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	14.6	14.1	15.1	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	7.6	7.4	7.8	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	5.4	5.3	5.5	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1046	935	1134	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Menthol Silver Pack Box (2014)				Marlboro Menthol Silver Pack Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.5	1.4	1.5	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1309	1286	1345	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	35	34	35	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	51	48	53	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	6.6	6.4	7.0	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	87	86	88	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	172	157	181	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	121	114	129	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	225	217	231	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	25	24	26	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	10.4	9.9	11.0	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	21.1	19.9	21.7	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	11.7	11.2	12.2	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	5.6	5.5	5.9	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	5.2	4.8	5.6	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	668	618	713	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Menthol Special Blend 100's (Black) Box (2014)				Marlboro Menthol Special Blend 100's (Black) Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.3	2.2	2.4	8	2.4	2.2	2.6	8
Acetaldehyde (ug/cig)	1647	1589	1761	3	1805	1719	1849	3
Crotonaldehyde (ug/cig)	46	45	49	3	56	53	57	3
Formaldehyde (ug/cig)	68	63	76	3	85	81	92	3
Arsenic (ng/cig)	11.8	11.7	11.9	5	11.9	11.3	12.5	3
Cadmium (ng/cig)	138	136	139	3	131	129	134	3
NNN (ng/cig)	299	288	308	3	296	279	307	3
NNK (ng/cig)	234	230	237	3	224	222	227	3
NAT (ng/cig)	428	412	451	3	337	327	348	3
NAB (ng/cig)	43	40	46	3	36	34	36	3
B(a)P (ng/cig)	19.1	18.5	19.5	3	21.6	18.9	25.7	3
B(a)A (ng/cig)	37.5	36.2	38.9	3	40.7	36.2	45.5	3
B(b/j)FL (ng/cig)	20.5	19.7	21.1	3	19.1	18.0	20.8	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	3.4 <sup>†</sup>	3.2 <sup>*</sup>	3.7	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	9.7	9.3	10.0	3	11.0	9.9	12.0	3
Acrylamide (ug/cig)	10.7	10.5	10.9	3	9.3	8.8	9.5	3
Naphthalene (ng/cig)	1491	1455	1537	3	1526	1384	1759	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro NXT Box (crushed) (2014)				Marlboro NXT Box (crushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.9	1.7	2.0	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1533	1476	1583	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	45	43	47	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	125	122	129	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	6.8	6.8	6.9	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	79	78	80	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	197	172	219	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	156	148	161	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	231	211	252	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	17	17	18	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	18.1	17.2	19.0	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	39.5	39.0	40.0	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	20.9	19.9	21.8	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	3.8	3.5	4.2	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	8.8	8.4	9.1	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	6.7	6.0	7.1	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1568	1485	1658	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro NXT Box (uncrushed) (2014)				Marlboro NXT Box (uncrushed) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.9	1.7	2.0	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1528	1411	1606	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	46	43	50	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	111	92	126	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	6.7	6.6	6.8	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	87	86	88	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	194	182	202	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	163	158	168	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	243	225	258	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	19	18	20	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	19.2	17.7	20.1	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	40.5	39.4	41.7	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	19.7	18.6	20.6	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	4.2	3.9	4.7	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	9.2	8.7	9.7	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	6.8	6.7	6.9	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1522	1346	1768	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Silver Pack 100's Box (2014)				Marlboro Silver Pack 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.7	1.6	1.8	8	1.7	1.5	1.9	8
Acetaldehyde (ug/cig)	1602	1567	1664	3	1676	1611	1762	3
Crotonaldehyde (ug/cig)	43	41	44	3	49	47	52	3
Formaldehyde (ug/cig)	46	44	48	3	58	55	60	3
Arsenic (ng/cig)	8.0	8.0	8.1	3	7.5	7.2	7.7	3
Cadmium (ng/cig)	106	104	109	3	90	89	91	3
NNN (ng/cig)	244	230	266	3	229	217	240	3
NNK (ng/cig)	185	174	205	3	173	168	177	3
NAT (ng/cig)	323	314	339	3	296	273	314	3
NAB (ng/cig)	33	31	35	3	25	24	26	3
B(a)P (ng/cig)	16.3	15.4	17.3	3	14.4	14.1	14.7	3
B(a)A (ng/cig)	26.1	24.9	27.9	3	31.1	29.1	32.9	3
B(b/j)FL (ng/cig)	14.5	13.9	14.9	3	15.5	15.1	16.4	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	3.3 <sup>†</sup>	3.2 <sup>*</sup>	3.4	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	6.9	6.4	7.3	3	7.4	7.0	8.0	3
Acrylamide (ug/cig)	6.2	5.6	6.9	3	5.0	4.4	5.6	3
Naphthalene (ng/cig)	826	683	925	3	935	872	1010	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Silver Pack Box (2014)				Marlboro Silver Pack Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.4	1.4	1.5	8	1.5	1.4	1.7	8
Acetaldehyde (ug/cig)	1401	1331	1453	3	1530	1492	1551	3
Crotonaldehyde (ug/cig)	38	36	40	3	46	45	47	3
Formaldehyde (ug/cig)	51	49	53	3	68	60	80	3
Arsenic (ng/cig)	6.4	6.2	6.5	3	7.7	7.1	8.2	3
Cadmium (ng/cig)	85	84	85	3	86	81	89	3
NNN (ng/cig)	187	183	192	3	172	161	192	3
NNK (ng/cig)	133	129	140	3	123	112	133	3
NAT (ng/cig)	248	234	265	3	222	200	260	3
NAB (ng/cig)	25	24	26	3	19	16	22	3
B(a)P (ng/cig)	14.7	14.0	15.1	3	11.7	11.1	12.7	3
B(a)A (ng/cig)	23.6	22.0	24.8	3	25.1	23.5	26.3	3
B(b/j)FL (ng/cig)	13.4	12.7	14.2	3	12.3	11.1	12.9	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	6.1	5.7	6.5	3	6.1	5.7	6.6	3
Acrylamide (ug/cig)	6.6	6.2	6.9	3	3.8	3.7	3.8	3
Naphthalene (ng/cig)	769	747	814	3	892	729	995	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Special Blend (Black) Box (2014)				Marlboro Special Blend (Black) Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.0	1.9	2.2	8	2.1	1.8	2.3	8
Acetaldehyde (ug/cig)	1387	1331	1434	3	1606	1549	1713	3
Crotonaldehyde (ug/cig)	40	37	42	3	51	49	54	3
Formaldehyde (ug/cig)	76	74	80	3	88	82	92	3
Arsenic (ng/cig)	10.0	9.6	10.4	3	10.4	10.1	10.9	3
Cadmium (ng/cig)	124	122	124	3	110	107	112	3
NNN (ng/cig)	240	223	253	3	254	246	261	3
NNK (ng/cig)	202	167	260	3	184	175	190	3
NAT (ng/cig)	327	318	334	3	301	291	312	3
NAB (ng/cig)	32	31	34	3	25	24	25	3
B(a)P (ng/cig)	21.2	20.8	21.8	3	17.4	16.4	18.9	3
B(a)A (ng/cig)	32.2	31.1	34.1	3	32.7	30.7	35.9	3
B(b/j)FL (ng/cig)	17.6	16.8	18.2	3	17.0	16.0	18.7	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	3.5	3.3	3.9	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	8.1	7.7	8.4	3	9.0	8.5	9.8	3
Acrylamide (ug/cig)	8.9	8.4	9.8	3	6.1	6.0	6.4	3
Naphthalene (ng/cig)	1358	1337	1398	3	1297	1194	1356	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Special Blend (Gold) Box (2014)				Marlboro Special Blend (Gold) Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.7	1.6	1.8	8	1.8	1.7	1.9	8
Acetaldehyde (ug/cig)	1430	1396	1457	3	1501	1442	1555	3
Crotonaldehyde (ug/cig)	40	39	41	3	44	43	45	3
Formaldehyde (ug/cig)	66	62	73	3	71	63	76	3
Arsenic (ng/cig)	9.7	9.5	9.8	3	8.2	7.9	8.7	3
Cadmium (ng/cig)	118	113	123	3	97	93	104	3
NNN (ng/cig)	237	223	246	3	210	206	212	3
NNK (ng/cig)	175	170	178	3	164	149	177	3
NAT (ng/cig)	325	313	340	3	249	240	259	3
NAB (ng/cig)	30	29	32	3	25	24	25	3
B(a)P (ng/cig)	16.6	15.3	18.2	3	16.4	15.6	17.1	3
B(a)A (ng/cig)	33.6	31.7	35.6	3	30.7	29.3	31.7	3
B(b/j)FL (ng/cig)	17.8	16.9	18.3	3	15.4	14.7	15.9	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	3.4	3.3	3.5	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	9.0	8.5	9.3	3	8.5	8.3	8.7	3
Acrylamide (ug/cig)	8.7	8.4	8.9	3	5.2	5.1	5.2	3
Naphthalene (ng/cig)	1248	1214	1286	3	1188	1147	1224	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Special Blend (Red) Box (2014)				Marlboro Special Blend (Red) Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.9	1.7	2.0	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1613	1575	1663	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	51	49	54	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	84	76	91	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	8.2	7.5	8.7	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	100	96	107	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	232	220	240	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	179	169	184	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	270	252	286	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	25	24	26	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	16.0	14.8	16.8	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	31.4	29.3	33.1	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	14.4	13.5	15.0	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	7.5	6.9	7.9	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	7.2	7.0	7.3	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1448	1332	1597	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

	Marlboro Special Blend 100's (Red) Box (2014)				Marlboro Special Blend 100's (Red) Box (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.2	1.9	2.4	8	2.3	2.2	2.4	8
Acetaldehyde (ug/cig)	1618	1592	1638	3	1762	1722	1819	3
Crotonaldehyde (ug/cig)	46	46	47	3	50	49	53	3
Formaldehyde (ug/cig)	71	68	75	3	73	71	78	3
Arsenic (ng/cig)	11.3	10.8	11.7	3	10.6	10.5	10.8	3
Cadmium (ng/cig)	150	143	157	3	118	117	120	3
NNN (ng/cig)	297	286	306	3	338	328	357	3
NNK (ng/cig)	247	210	311	3	250	239	258	3
NAT (ng/cig)	410	401	417	3	368	358	373	3
NAB (ng/cig)	40	39	40	3	39	37	40	3
B(a)P (ng/cig)	24.8	24.2	25.9	3	20.6	19.9	21.5	3
B(a)A (ng/cig)	39.4	38.0	42.0	3	39.0	37.7	40.5	3
B(b/j)FL (ng/cig)	20.6	20.1	21.5	3	19.8	19.1	20.4	3
B(k)FL (ng/cig)	3.3 <sup>†</sup>	3.2 <sup>*</sup>	3.6	3	4.1	3.9	4.4	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	9.5	9.2	10.0	3	10.1	9.9	10.6	3
Acrylamide (ug/cig)	10.9	9.8	11.5	3	6.9	6.5	7.1	3
Naphthalene (ng/cig)	1634	1549	1762	3	1563	1481	1646	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Marlboro Special Blend 100's Box (Gold Pack) (2014)				Marlboro Special Blend 100's Box (Gold Pack) (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	2.0	1.9	2.1	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1738	1668	1851	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	52	50	56	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	66	61	73	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	9.6	9.3	9.9	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	110	107	113	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	261	236	281	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	204	201	207	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	306	285	320	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	28	26	30	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	17.8	17.1	18.5	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	34.9	33.3	37.0	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	16.1	15.0	17.5	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	8.4	8.0	9.1	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	7.2	6.3	7.7	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1313	1248	1393	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Maverick 100s Box (2014)				Maverick 100s Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	2.4	2.2	2.5	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	2137	2075	2203	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	60	58	62	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	81	80	82	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	14.4	14.1	14.9	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	128	127	131	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	236	227	241	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	163	155	174	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	248	238	254	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	31	30	32	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	22.5	21.5	23.9	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	41.4	39.6	44.5	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	23.5	21.9	25.3	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	4.4	3.8	5.0	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	11.6	11.3	11.8	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	11.1	10.2	12.0	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1695	1620	1765	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Maverick Gold 100s Box (2014)				Maverick Gold 100s Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.8	1.8	1.9	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1766	1726	1832	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	45	44	48	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	67	64	73	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	10.0	9.2	10.7	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	98	96	103	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	179	174	182	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	161	160	161	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	203	197	212	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	26	26	27	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	16.5	16.0	16.8	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	31.8	30.8	33.7	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	19.0	18.6	19.3	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	8.9	8.6	9.0	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	9.1	8.5	9.5	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	1250	1195	1336	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Maverick Menthol 100 Box (2014)				Maverick Menthol 100 Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.3	2.2	2.5	8	2.6	2.4	2.7	8
Acetaldehyde (ug/cig)	1971	1948	2010	3	2060	2033	2096	3
Crotonaldehyde (ug/cig)	53	51	55	3	53	52	53	3
Formaldehyde (ug/cig)	94	93	96	3	90	73	103	3
Arsenic (ng/cig)	12.2	12.1	12.5	3	12.9	12.5	13.5	3
Cadmium (ng/cig)	142	140	144	3	133	131	134	3
NNN (ng/cig)	249	235	261	3	269	250	286	3
NNK (ng/cig)	211	194	231	3	176	171	182	3
NAT (ng/cig)	320	305	349	3	283	281	286	3
NAB (ng/cig)	37	35	39	3	33	32	34	3
B(a)P (ng/cig)	21.0	20.8	21.2	3	24.8	24.7	24.8	3
B(a)A (ng/cig)	41.9	41.0	42.6	3	45.6	44.9	46.4	3
B(b/j)FL (ng/cig)	24.3	23.7	25.1	3	25.4	25.0	25.9	3
B(k)FL (ng/cig)	3.7 <sup>†</sup>	3.2 <sup>*</sup>	4.0	3	4.8	4.3	5.1	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	10.9	10.9	11.0	3	11.9	11.7	12.1	3
Acrylamide (ug/cig)	12.4	12.2	12.9	3	12.2	11.3	13.2	3
Naphthalene (ng/cig)	1062	902	1265	3	1812	1785	1827	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Misty Blue 120's Box (2014)				Misty Blue 120's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	2.9	2.4	3.1	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	2167	2032	2301	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	66	63	70	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	94	87	104	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	11.5	11.1	12.1	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	132	130	137	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	235	232	238	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	206	202	211	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	289	287	292	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	25	24	26	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	28.8	27.5	30.2	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	53.1	51.6	55.6	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	32.6	31.5	33.7	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	6.3	6.1	6.6	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	15.5	14.7	16.1	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	13.4	13.2	13.6	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1737	1654	1841	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Misty Menthol Green 120's Box (2014)				Misty Menthol Green 120's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.2	1.9	2.4	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1928	1852	2009	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	55	54	56	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	101	88	110	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	11.7	11.4	12.1	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	118	116	122	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	146	141	151	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	147	135	168	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	193	189	196	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	23	23	23	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	30.0	28.9	31.4	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	50.1	48.8	51.2	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	29.1	28.5	30.0	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	4.9	4.4	5.5	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	14.0	13.3	14.6	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	11.3	10.4	12.1	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	2708	2464	2850	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	More 120's Soft Pack (2014)				More 120's Soft Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.6	2.4	2.8	8	2.3	2.0	2.4	8
Acetaldehyde (ug/cig)	2052	1967	2097	3	2381	2323	2436	3
Crotonaldehyde (ug/cig)	56	53	58	3	73	70	75	3
Formaldehyde (ug/cig)	81	75	92	3	95	86	110	3
Arsenic (ng/cig)	23.2	22.4	24.2	3	12.6	12.0	13.6	3
Cadmium (ng/cig)	117	113	120	3	111	108	115	3
NNN (ng/cig)	178	177	181	3	165	159	176	3
NNK (ng/cig)	153	143	162	3	159	141	169	3
NAT (ng/cig)	233	223	241	3	247	229	258	3
NAB (ng/cig)	26	26	26	3	18	18	19	3
B(a)P (ng/cig)	31.7	30.2	32.8	3	25.3	24.5	26.1	3
B(a)A (ng/cig)	52.4	49.9	54.6	3	49.2	47.7	50.4	3
B(b/j)FL (ng/cig)	30.8	29.1	32.3	3	32.7	31.1	34.4	3
B(k)FL (ng/cig)	5.3	4.6	5.8	3	7.2	6.7	7.6	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	13.6	13.1	14.2	3	12.0	11.7	12.4	3
Acrylamide (ug/cig)	13.9	13.1	15.0	3	11.8	11.0	12.3	3
Naphthalene (ng/cig)	2305	2091	2580	3	1888	1729	1969	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Natural American Spirit Full-Bodied Taste (2014)				Natural American Spirit Full-Bodied Taste (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	3.8	3.4	4.3	8	3.6	3.4	3.8	8
Acetaldehyde (ug/cig)	1541	1501	1567	3	1529	1495	1572	3
Crotonaldehyde (ug/cig)	49	48	50	3	52	51	54	3
Formaldehyde (ug/cig)	123	114	128	3	158	143	167	3
Arsenic (ng/cig)	10.8	10.4	11.1	3	9.7	9.5	9.8	3
Cadmium (ng/cig)	167	166	168	3	163	158	167	3
NNN (ng/cig)	35	35	36	3	19	17	21	3
NNK (ng/cig)	37	36	38	3	29	27	30	3
NAT (ng/cig)	45	41	48	3	38	37	39	3
NAB (ng/cig)	7	6	8	3	3	3	4	3
B(a)P (ng/cig)	30.0	28.2	31.4	3	24.0	23.4	24.9	3
B(a)A (ng/cig)	55.8	53.3	59.1	3	48.7	47.3	50.4	3
B(b/j)FL (ng/cig)	27.4	26.1	28.1	3	24.8	22.2	29.1	3
B(k)FL (ng/cig)	4.1	3.6	4.4	3	4.5	3.9	5.5	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	5.0 <sup>†</sup>	4.8 <sup>*</sup>	5.3	3
Indeno(c,d)P (ng/cig)	14.3	13.2	15.2	3	11.3	11.3	11.4	3
Acrylamide (ug/cig)	13.8	13.6	14.2	3	9.4	9.3	9.6	3
Naphthalene (ng/cig)	3818	3325	4131	3	2013	1952	2072	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

	Natural American Spirit Made With Organic Tobacco Full-Bodied Taste (2014)				Natural American Spirit Made With Organic Tobacco Full-Bodied Taste (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	4.0	3.6	4.4	8	4.2	3.9	4.4	8
Acetaldehyde (ug/cig)	1581	1526	1683	3	1495	1398	1645	3
Crotonaldehyde (ug/cig)	50	48	53	3	48	46	54	3
Formaldehyde (ug/cig)	86	84	88	3	88	78	102	3
Arsenic (ng/cig)	5.9	5.6	6.0	3	4.7	4.4	4.9	3
Cadmium (ng/cig)	153	151	156	3	136	135	138	3
NNN (ng/cig)	74	69	76	3	56	48	63	3
NNK (ng/cig)	62	54	75	3	61	54	76	3
NAT (ng/cig)	82	77	86	3	72	68	78	3
NAB (ng/cig)	15	15	16	3	10	8	11	3
B(a)P (ng/cig)	19.8	18.5	20.7	3	18.1	17.2	18.8	3
B(a)A (ng/cig)	39.3	38.4	40.4	3	35.7	34.5	36.4	3
B(b/j)FL (ng/cig)	17.5	17.0	18.4	3	18.3	17.5	19.1	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	3.5 <sup>†</sup>	3.2 <sup>*</sup>	3.7	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	9.5	9.1	9.9	3	7.4	7.3	7.5	3
Acrylamide (ug/cig)	12.0	11.8	12.3	3	12.9	12.0	14.2	3
Naphthalene (ng/cig)	2974	2468	3300	3	1970	1628	2282	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Natural American Spirit Made With Organic Tobacco Mellow Taste (2014)				Natural American Spirit Made With Organic Tobacco Mellow Taste (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	3.5	3.3	3.8	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1604	1532	1747	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	54	49	64	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	82	74	95	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	3.8	3.7	4.1	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	115	112	117	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	48	41	58	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	39	37	43	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	56	56	57	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	9	8	9	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	15.1	14.6	15.5	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	29.5	28.1	31.4	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	15.7	15.4	16.1	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	3.3 <sup>†</sup>	3.2 <sup>*</sup>	3.3	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	6.6	6.5	6.8	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	9.3	8.8	10.2	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1582	1478	1662	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

	Natural American Spirit Mellow Taste (2014)				Natural American Spirit Mellow Taste (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	3.4	3.3	3.5	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1551	1495	1615	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	53	50	55	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	130	123	139	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	9.8	9.4	10.3	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	162	158	165	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	25	21	29	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	31	28	33	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	48	43	51	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	4	4	5	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	25.5	24.4	26.7	3
	N/A	N/A	N/A	N/A	26.9	26.2	27.6	3
	N/A	N/A	N/A	N/A	26.0	23.4	29.2	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	49.5	47.1	52.3	3
	N/A	N/A	N/A	N/A	51.4	49.1	53.6	3
	N/A	N/A	N/A	N/A	51.2	47.7	56.1	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	27.1	26.3	28.1	3
	N/A	N/A	N/A	N/A	24.9	20.3	27.5	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Natural American Spirit Mellow Taste (2014)				Natural American Spirit Mellow Taste (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	26.0	23.7	28.7	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	5.7	5.1	6.6	3
	N/A	N/A	N/A	N/A	4.2 <sup>†</sup>	3.2 <sup>*</sup>	4.8	3
	N/A	N/A	N/A	N/A	3.6 <sup>†</sup>	3.2 <sup>*</sup>	4.2	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	10.6	10.1	10.9	3
	N/A	N/A	N/A	N/A	12.9	12.5	13.3	3
	N/A	N/A	N/A	N/A	13.2	12.3	14.8	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	9.3	8.8	9.8	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	2249	2226	2271	2
	N/A	N/A	N/A	N/A	1825	1728	1967	3
	N/A	N/A	N/A	N/A	1831	1681	2009	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

	Natural American Spirit Menthol Mellow Taste (2014)				Natural American Spirit Menthol Mellow Taste (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	4.1	3.7	4.5	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1605	1563	1662	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	52	50	53	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	107	101	117	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	6.5	6.1	7.0	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	128	127	129	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	40	35	47	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	46	44	50	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	58	53	67	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	8	7	9	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	23.5	22.6	24.7	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	48.7	47.2	50.7	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	26.3	24.8	28.3	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	5.8	5.5	6.4	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	12.1	11.9	12.5	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	11.6	11.3	12.0	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	2275	2223	2345	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Natural American Spirit Perique Blend Rich Robust Taste (2014)				Natural American Spirit Perique Blend Rich Robust Taste (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	3.3	2.7	3.8	8	4.2	4.0	4.6	8
Acetaldehyde (ug/cig)	1613	1567	1664	3	1509	1486	1533	3
Crotonaldehyde (ug/cig)	51	50	52	3	51	50	52	3
Formaldehyde (ug/cig)	113	105	124	3	119	105	135	3
Arsenic (ng/cig)	10.7	10.5	10.9	3	11.9	11.6	12.4	3
Cadmium (ng/cig)	248	236	259	3	261	252	266	3
NNN (ng/cig)	118	106	132	3	97	92	100	3
NNK (ng/cig)	52	49	56	3	46	43	51	3
NAT (ng/cig)	91	87	96	3	110	108	112	3
NAB (ng/cig)	12	11	13	3	11	11	13	3
B(a)P (ng/cig)	25.8	24.5	26.7	3	24.0	22.4	25.0	3
B(a)A (ng/cig)	48.3	48.0	48.6	3	54.5	50.6	56.6	3
B(b/j)FL (ng/cig)	23.2	22.4	23.6	3	22.5	20.3	23.6	3
B(k)FL (ng/cig)	3.4 <sup>†</sup>	3.2 <sup>*</sup>	3.8	3	3.5	3.2	3.9	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	12.1	11.8	12.5	3	11.6	10.6	13.1	3
Acrylamide (ug/cig)	9.0	7.9	9.9	3	10.9	10.2	11.2	3
Naphthalene (ng/cig)	3911	3590	4354	3	1773	1639	1927	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Newport Box (2014)				Newport Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.0	1.9	2.2	8	2.1	1.9	2.3	8
Acetaldehyde (ug/cig)	1664	1587	1711	3	1768	1740	1815	3
Crotonaldehyde (ug/cig)	46	45	48	3	46	45	47	3
Formaldehyde (ug/cig)	99	96	104	3	86	74	93	3
Arsenic (ng/cig)	6.3	6.1	6.6	3	8.6	7.8	9.2	3
Cadmium (ng/cig)	110	107	113	3	111	96	121	3
NNN (ng/cig)	173	165	182	3	239	213	253	3
NNK (ng/cig)	124	111	146	3	144	139	148	3
NAT (ng/cig)	232	224	239	3	239	231	246	3
NAB (ng/cig)	28	28	28	3	26	24	29	3
B(a)P (ng/cig)	17.0	16.6	17.4	3	18.3	17.9	18.9	3
B(a)A (ng/cig)	33.2	32.0	34.9	3	34.1	33.5	35.0	3
B(b/j)FL (ng/cig)	21.0	20.3	21.8	3	22.6	22.0	22.9	3
B(k)FL (ng/cig)	3.4 <sup>†</sup>	3.2 <sup>*</sup>	3.7	3	3.6	3.5	3.6	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	9.3	8.8	9.6	3	10.0	9.9	10.1	3
Acrylamide (ug/cig)	6.7	6.4	6.8	3	8.4	7.3	9.1	3
Naphthalene (ng/cig)	2843	2508	3055	3	1237	1182	1265	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Newport Box 100s (2014)				Newport Box 100s (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.7	2.5	2.8	8	2.8	2.7	2.9	8
Acetaldehyde (ug/cig)	1722	1642	1789	3	1956	1945	1969	3
Crotonaldehyde (ug/cig)	46	42	48	3	50	50	51	3
Formaldehyde (ug/cig)	100	89	106	3	93	93	94	3
Arsenic (ng/cig)	9.1	8.8	9.4	3	12.3	11.1	13.5	3
Cadmium (ng/cig)	140	137	141	3	138	126	148	3
NNN (ng/cig)	218	211	227	3	296	282	321	3
NNK (ng/cig)	173	158	187	3	194	189	197	3
NAT (ng/cig)	314	304	333	3	315	302	326	3
NAB (ng/cig)	37	36	37	3	37	36	38	3
B(a)P (ng/cig)	29.1	27.2	30.5	3	23.3	22.5	24.3	3
B(a)A (ng/cig)	45.0	44.6	45.6	3	43.2	41.1	45.4	3
B(b/j)FL (ng/cig)	30.0	28.2	31.5	3	28.4	27.6	29.9	3
B(k)FL (ng/cig)	5.4	5.1	5.7	3	4.8	4.6	5.2	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	13.4	13.1	14.0	3	13.0	12.4	13.9	3
Acrylamide (ug/cig)	9.8	9.5	10.0	3	11.3	11.0	11.6	3
Naphthalene (ng/cig)	1820	1798	1850	3	1540	1517	1552	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Newport Menthol Gold Box (2014)				Newport Menthol Gold Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.6	1.5	1.8	7
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1630	1583	1667	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	47	45	48	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	66	59	70	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	6.2	5.9	6.4	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	101	97	105	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	162	155	168	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	101	97	105	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	198	192	204	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	17	16	19	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	14.4	13.4	15.0	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	26.0	24.7	27.0	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	19.5	18.2	20.7	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	4.1	3.9	4.4	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	7.8	7.3	8.2	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	4.7	4.5	4.8	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	999	897	1074	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Newport Non-Menthol Box (2014)				Newport Non-Menthol Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.0	1.7	2.1	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1579	1562	1606	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	44	43	45	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	99	93	103	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	6.6	6.3	6.7	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	112	108	117	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	163	158	170	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	128	119	137	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	230	219	243	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	26	25	28	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	16.5	16.0	17.4	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	31.6	30.8	31.9	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	19.9	19.5	20.6	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	3.3 <sup>†</sup>	3.2 <sup>*</sup>	3.6	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	9.2	8.9	9.8	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	6.9	6.8	7.0	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	2641	2348	3000	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Now Soft Pack (2014)				Now Soft Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.5	1.4	1.6	8	1.4	1.3	1.5	8
Acetaldehyde (ug/cig)	1267	1232	1298	3	1405	1339	1441	3
Crotonaldehyde (ug/cig)	33	32	35	3	41	38	42	3
Formaldehyde (ug/cig)	49	48	51	3	55	48	61	3
Arsenic (ng/cig)	4.3	4.2	4.4	3	3.5	3.4	3.8	3
Cadmium (ng/cig)	77	75	79	3	69	65	73	3
NNN (ng/cig)	124	113	132	3	119	110	129	3
NNK (ng/cig)	78	71	90	3	67	65	68	3
NAT (ng/cig)	167	154	179	3	163	155	170	3
NAB (ng/cig)	20	19	22	3	14	13	15	3
B(a)P (ng/cig)	12.3	10.4	13.3	3	8.2	7.8	8.9	3
	N/A	N/A	N/A	N/A	10.2	9.5	10.7	3
B(a)A (ng/cig)	21.9	20.3	23.0	3	18.8	16.5	20.3	3
	N/A	N/A	N/A	N/A	21.2	20.9	21.4	3
B(b/j)FL (ng/cig)	12.4	11.0	13.5	3	9.4	8.6	10.1	3
	N/A	N/A	N/A	N/A	11.2	10.5	11.7	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3
	N/A	N/A	N/A	N/A	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Now Soft Pack (2014)				Now Soft Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	5.5	4.9	5.9	3	4.6	4.3	5.0	3
	N/A	N/A	N/A	N/A	5.3	4.9	5.6	3
Acrylamide (ug/cig)	4.5	3.5	5.7	3	4.2	3.8	4.9	3
Naphthalene (ng/cig)	825	771	930	3	471	412	514	3
	N/A	N/A	N/A	N/A	787	757	805	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Pall Mall Blue 100's Box (2014)				Pall Mall Blue 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.4	2.2	2.5	8	2.3	2.2	2.5	8
Acetaldehyde (ug/cig)	1800	1749	1894	3	2148	2008	2267	3
Crotonaldehyde (ug/cig)	49	48	52	3	63	59	68	3
Formaldehyde (ug/cig)	104	101	108	3	105	93	124	3
Arsenic (ng/cig)	9.5	9.4	9.5	3	9.7	9.4	9.9	3
Cadmium (ng/cig)	130	127	132	3	129	127	131	3
NNN (ng/cig)	159	152	171	3	156	146	163	3
NNK (ng/cig)	132	125	139	3	129	126	130	3
NAT (ng/cig)	225	203	248	3	197	195	199	3
NAB (ng/cig)	25	23	27	3	16	16	17	3
B(a)P (ng/cig)	27.9	26.7	29.2	3	25.9	25.4	27.0	3
B(a)A (ng/cig)	50.7	48.3	53.8	3	48.9	48.3	50.0	3
B(b/j)FL (ng/cig)	31.0	29.9	32.1	3	28.3	27.4	29.6	3
B(k)FL (ng/cig)	6.3	5.8	6.7	3	5.1	4.8	5.3	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	14.2	13.6	14.8	3	13.1	12.8	13.7	3
Acrylamide (ug/cig)	10.5	9.0	11.8	3	8.8	8.3	9.1	3
Naphthalene (ng/cig)	1544	1279	1833	3	1670	1625	1757	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Pall Mall Menthol 100's Box (2014)				Pall Mall Menthol 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	2.5	2.3	2.7	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	2094	2029	2207	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	61	58	64	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	116	109	129	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	9.7	9.0	10.5	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	141	135	145	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	166	164	168	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	137	127	145	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	208	203	214	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	17	17	17	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	24.4	19.3	29.5	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	49.3	44.0	57.1	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	26.8	19.7	32.4	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	4.3 <sup>†</sup>	3.2 <sup>*</sup>	5.3	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	12.9	11.4	14.9	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	8.3	8.0	8.6	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1389	1315	1451	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Pall Mall Menthol White 100's Box (2014)				Pall Mall Menthol White 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.0	1.7	2.2	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1747	1700	1801	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	48	47	51	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	77	72	81	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	8.3	8.2	8.3	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	107	102	114	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	159	156	161	2	N/A	N/A	N/A	N/A
	154	148	164	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	138	121	154	2	N/A	N/A	N/A	N/A
	118	104	131	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	223	214	231	2	N/A	N/A	N/A	N/A
	225	202	243	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	26	26	27	2	N/A	N/A	N/A	N/A
	26	24	29	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	18.0	16.2	19.2	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	34.4	32.3	36.0	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	20.1	18.7	21.3	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	3.4 <sup>†</sup>	3.2 <sup>*</sup>	3.7	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

	Pall Mall Menthol White 100's Box (2014)				Pall Mall Menthol White 100's Box (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8*	4.8*	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	9.2	8.6	9.6	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	9.4	8.7	10.0	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	708	620	820	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Pall Mall Orange Box (2014)				Pall Mall Orange Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.6	1.4	1.7	8	1.6	1.6	1.7	8
Acetaldehyde (ug/cig)	1554	1443	1656	3	1620	1574	1650	3
Crotonaldehyde (ug/cig)	41	38	43	3	43	42	43	3
Formaldehyde (ug/cig)	73	72	74	3	73	70	78	3
Arsenic (ng/cig)	6.1	6.0	6.3	3	6.4	6.2	6.6	3
Cadmium (ng/cig)	96	92	100	3	110	104	113	3
NNN (ng/cig)	101	99	105	3	93	91	97	3
NNK (ng/cig)	81	75	90	3	81	76	87	3
NAT (ng/cig)	131	125	137	3	139	128	144	3
NAB (ng/cig)	15	15	15	3	10	10	11	3
B(a)P (ng/cig)	17.0	15.7	17.7	3	17.0	16.5	17.8	3
B(a)A (ng/cig)	33.5	30.6	35.7	3	32.7	31.8	33.7	3
B(b/j)FL (ng/cig)	20.8	19.4	21.9	3	22.0	21.2	23.1	3
B(k)FL (ng/cig)	3.6	3.4	3.8	3	5.0	4.5	5.6	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	8.9	8.7	9.2	3	8.3	8.1	8.8	3
Acrylamide (ug/cig)	8.9	8.4	9.6	3	4.7	4.3	5.0	3
Naphthalene (ng/cig)	920	804	1031	3	945	857	1055	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Pall Mall Red 100's Box (2014)				Pall Mall Red 100's Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.4	1.9	2.5	8	2.6	2.3	2.8	8
Acetaldehyde (ug/cig)	1802	1779	1822	3	2109	2044	2149	3
Crotonaldehyde (ug/cig)	49	48	50	3	63	61	65	3
Formaldehyde (ug/cig)	100	92	109	3	118	108	127	3
Arsenic (ng/cig)	10.9	10.7	11.1	3	10.6	10.4	10.7	3
Cadmium (ng/cig)	143	142	146	3	161	160	163	3
NNN (ng/cig)	168	163	174	3	171	159	190	3
NNK (ng/cig)	149	136	161	3	131	126	136	3
NAT (ng/cig)	226	221	235	3	222	219	225	3
NAB (ng/cig)	26	25	27	3	16	15	17	3
B(a)P (ng/cig)	33.0	31.9	33.7	3	26.3	26.1	26.5	3
B(a)A (ng/cig)	56.4	55.0	59.2	3	49.5	47.6	51.6	3
B(b/j)FL (ng/cig)	32.2	30.7	34.8	3	32.3	32.2	32.4	3
B(k)FL (ng/cig)	5.5	5.5	5.6	3	7.8	7.7	8.0	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	15.3	14.7	15.8	3	14.2	14.0	14.4	3
Acrylamide (ug/cig)	9.2	7.9	10.0	3	7.8	7.5	8.1	3
Naphthalene (ng/cig)	2586	2045	2918	3	1862	1846	1889	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Pall Mall Red Box (2014)				Pall Mall Red Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	2.5	2.4	2.5	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1873	1778	1955	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	59	57	61	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	120	114	125	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	9.2	8.9	9.5	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	140	138	142	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	153	142	167	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	119	113	128	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	218	210	230	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	16	14	17	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	25.9	25.0	27.7	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	49.3	47.2	51.8	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	32.6	31.2	34.5	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	7.9	7.2	8.6	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	14.0	13.3	15.1	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	8.8	7.9	9.8	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	2269	2208	2346	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Parliament (White Pack) Box (2014)				Parliament (White Pack) Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.7	1.5	1.9	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1429	1404	1442	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	41	40	42	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	64	59	69	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	7.0	6.8	7.2	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	96	93	99	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	210	196	227	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	140	133	152	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	287	275	296	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	30	29	31	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	17.2	16.4	18.3	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	31.0	30.1	32.7	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	17.8	17.0	19.1	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	7.5	7.4	7.7	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	6.1	5.8	6.9	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	1409	1356	1449	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Pyramid Blue 100s Box (2014)				Pyramid Blue 100s Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.8	1.6	1.9	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1761	1707	1809	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	53	51	54	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	77	75	80	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	5.6	5.1	6.0	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	76	69	80	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	134	130	141	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	114	107	121	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	202	192	213	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	22	21	23	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	18.2	16.7	18.9	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	38.4	37.7	39.7	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	22.6	20.5	23.7	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	4.3	3.9	4.6	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	9.0	8.7	9.4	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	5.2	4.8	5.5	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1264	1160	1319	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

	Pyramid Menthol Silver 100s Box (2014)				Pyramid Menthol Silver 100s Box (2015)			
Analyte	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.7	1.5	1.7	8	1.8	1.6	1.9	8
Acetaldehyde (ug/cig)	1770	1715	1849	3	1823	1759	1881	3
Crotonaldehyde (ug/cig)	46	45	47	3	54	53	55	3
Formaldehyde (ug/cig)	85	79	92	3	87	85	91	3
Arsenic (ng/cig)	5.3	5.2	5.5	3	6.8	6.7	6.9	3
Cadmium (ng/cig)	82	80	84	3	81	79	84	3
NNN (ng/cig)	158	153	161	3	144	135	159	3
NNK (ng/cig)	164	154	170	3	104	100	111	3
NAT (ng/cig)	225	219	230	3	218	201	235	3
NAB (ng/cig)	31	30	32	3	22	22	23	3
B(a)P (ng/cig)	15.4	14.1	16.2	3	16.5	16.1	16.9	3
B(a)A (ng/cig)	30.0	27.7	31.5	3	35.6	33.1	37.1	3
B(b/j)FL (ng/cig)	18.7	17.0	20.1	3	19.9	19.3	21.1	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	4.2	3.6	4.5	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	8.5	7.8	9.0	3	8.4	7.4	9.3	3
Acrylamide (ug/cig)	6.9	5.7	7.6	3	2.6	2.4	2.9	3
Naphthalene (ng/cig)	1958	1656	2149	3	1232	1170	1311	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Pyramid Orange 100s Box (2014)				Pyramid Orange 100s Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.6	1.5	1.7	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1759	1686	1874	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	48	46	52	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	92	87	95	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	5.5	5.3	5.7	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	85	82	88	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	144	137	157	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	151	148	153	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	202	198	208	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	24	23	25	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	18.3	16.8	20.1	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	34.3	32.6	36.0	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	21.8	20.0	23.7	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	4.0	3.6	4.7	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	9.9	9.3	10.4	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	6.4	5.6	6.9	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	1756	1716	1834	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Pyramid Red 100s Box (2014)				Pyramid Red 100s Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.9	1.8	2.1	8	2.1	1.8	2.3	8
Acetaldehyde (ug/cig)	1815	1723	1915	3	1678	1661	1687	3
Crotonaldehyde (ug/cig)	50	47	53	3	45	44	46	3
Formaldehyde (ug/cig)	101	93	105	3	114	112	115	3
Arsenic (ng/cig)	6.1	5.8	6.3	3	8.0	7.4	8.6	3
Cadmium (ng/cig)	91	87	93	3	96	94	98	3
NNN (ng/cig)	182	173	194	3	183	173	190	3
NNK (ng/cig)	170	164	173	3	135	120	154	3
NAT (ng/cig)	219	210	231	3	263	245	274	3
NAB (ng/cig)	29	27	30	3	27	23	30	3
B(a)P (ng/cig)	20.3	20.1	20.6	3	20.9	19.9	22.7	3
B(a)A (ng/cig)	40.6	39.7	41.4	3	43.3	42.1	44.5	3
B(b/j)FL (ng/cig)	24.5	24.2	25.1	3	24.9	23.3	26.7	3
B(k)FL (ng/cig)	4.2	4.0	4.3	3	4.8	4.5	5.0	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	11.0	10.9	11.0	3	10.4	9.7	10.9	3
Acrylamide (ug/cig)	8.7	8.0	9.3	3	7.0	6.7	7.2	3
Naphthalene (ng/cig)	1903	1799	1996	3	1555	1482	1689	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Pyramid Red Box (2014)				Pyramid Red Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.7	1.5	1.8	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1564	1439	1675	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	44	40	47	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	113	108	123	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	6.0	5.8	6.4	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	81	79	82	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	132	120	141	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	156	148	168	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	180	175	182	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	24	24	25	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	20.8	19.7	21.7	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	36.4	35.2	37.4	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	22.0	21.0	23.0	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	3.6	3.3	4.0	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	9.2	9.1	9.4	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	7.9	7.6	8.2	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	1723	1661	1771	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.



Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Sonoma Red Box (2014)				Sonoma Red Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.8	1.7	1.9	8	2.0	1.9	2.2	8
Acetaldehyde (ug/cig)	1544	1485	1632	3	1625	1552	1663	3
Crotonaldehyde (ug/cig)	44	42	47	3	50	47	52	3
Formaldehyde (ug/cig)	115	109	123	3	114	104	121	3
Arsenic (ng/cig)	11.8	11.5	11.9	3	10.6	10.1	11.0	3
Cadmium (ng/cig)	129	129	129	3	128	124	130	3
NNN (ng/cig)	311	281	367	3	245	226	266	3
NNK (ng/cig)	290	268	328	3	145	140	156	3
NAT (ng/cig)	385	375	401	3	316	289	335	3
NAB (ng/cig)	42	41	44	3	26	26	27	3
B(a)P (ng/cig)	13.1	12.0	13.7	3	15.7	14.5	16.4	3
B(a)A (ng/cig)	27.4	25.2	29.2	3	31.7	29.6	33.2	3
B(b/j)FL (ng/cig)	16.4	15.3	17.1	3	20.9	19.5	21.8	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	4.4	4.1	4.8	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	7.2	6.9	7.4	3	8.6	8.1	8.9	3
Acrylamide (ug/cig)	10.5	10.4	10.6	3	3.7	3.5	3.9	3
Naphthalene (ng/cig)	2308	1960	2763	3	1812	1609	1951	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Tareyton Soft Pack (2014)				Tareyton Soft Pack (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.8	1.7	1.9	8	N/A	N/A	N/A	N/A
Acetaldehyde (ug/cig)	1473	1395	1523	3	N/A	N/A	N/A	N/A
Crotonaldehyde (ug/cig)	34	33	37	3	N/A	N/A	N/A	N/A
Formaldehyde (ug/cig)	129	118	142	3	N/A	N/A	N/A	N/A
Arsenic (ng/cig)	8.4	7.9	9.0	3	N/A	N/A	N/A	N/A
Cadmium (ng/cig)	52	52	52	3	N/A	N/A	N/A	N/A
NNN (ng/cig)	100	99	103	3	N/A	N/A	N/A	N/A
NNK (ng/cig)	113	93	142	3	N/A	N/A	N/A	N/A
NAT (ng/cig)	131	117	144	3	N/A	N/A	N/A	N/A
NAB (ng/cig)	16	14	17	3	N/A	N/A	N/A	N/A
B(a)P (ng/cig)	25.2	24.7	25.8	3	N/A	N/A	N/A	N/A
B(a)A (ng/cig)	41.7	40.8	42.4	3	N/A	N/A	N/A	N/A
B(b/j)FL (ng/cig)	25.5	24.7	26.6	3	N/A	N/A	N/A	N/A
B(k)FL (ng/cig)	4.4	4.2	4.7	3	N/A	N/A	N/A	N/A
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	N/A	N/A	N/A	N/A
Indeno(c,d)P (ng/cig)	11.7	11.2	12.0	3	N/A	N/A	N/A	N/A
Acrylamide (ug/cig)	8.9	7.2	9.7	3	N/A	N/A	N/A	N/A
Naphthalene (ng/cig)	1252	1142	1456	3	N/A	N/A	N/A	N/A

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	True Kings (2014)				True Kings (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	N/A	N/A	N/A	N/A	1.9	1.8	2.0	8
Acetaldehyde (ug/cig)	N/A	N/A	N/A	N/A	1725	1696	1781	3
Crotonaldehyde (ug/cig)	N/A	N/A	N/A	N/A	51	49	52	3
Formaldehyde (ug/cig)	N/A	N/A	N/A	N/A	64	63	65	3
Arsenic (ng/cig)	N/A	N/A	N/A	N/A	10.8	10.6	11.0	3
Cadmium (ng/cig)	N/A	N/A	N/A	N/A	119	118	120	3
NNN (ng/cig)	N/A	N/A	N/A	N/A	252	234	264	3
NNK (ng/cig)	N/A	N/A	N/A	N/A	132	127	139	3
NAT (ng/cig)	N/A	N/A	N/A	N/A	228	216	237	3
NAB (ng/cig)	N/A	N/A	N/A	N/A	29	27	29	3
B(a)P (ng/cig)	N/A	N/A	N/A	N/A	14.9	14.1	16.1	3
B(a)A (ng/cig)	N/A	N/A	N/A	N/A	29.1	27.8	31.1	3
B(b/j)FL (ng/cig)	N/A	N/A	N/A	N/A	15.3	14.7	16.3	3
B(k)FL (ng/cig)	N/A	N/A	N/A	N/A	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	N/A	N/A	N/A	N/A	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	N/A	N/A	N/A	N/A	7.5	7.2	8.0	3
Acrylamide (ug/cig)	N/A	N/A	N/A	N/A	9.7	9.4	10.0	3
Naphthalene (ng/cig)	N/A	N/A	N/A	N/A	1566	1445	1775	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	USA Gold Red Box (2014)				USA Gold Red Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.8	1.7	2.0	8	2.0	1.9	2.3	8
Acetaldehyde (ug/cig)	1551	1509	1585	3	1575	1463	1739	3
Crotonaldehyde (ug/cig)	44	43	46	3	48	45	53	3
Formaldehyde (ug/cig)	118	110	123	3	117	100	128	3
Arsenic (ng/cig)	12.0	11.6	12.4	3	10.0	9.8	10.2	3
Cadmium (ng/cig)	128	124	133	3	126	121	130	3
NNN (ng/cig)	270	256	289	3	211	204	219	3
NNK (ng/cig)	212	192	251	3	134	130	142	3
NAT (ng/cig)	365	357	376	3	305	284	328	3
NAB (ng/cig)	36	35	38	3	22	21	24	3
B(a)P (ng/cig)	16.5	15.1	17.4	3	14.9	13.9	16.1	3
B(a)A (ng/cig)	32.5	30.3	33.8	3	29.9	28.4	32.5	3
B(b/j)FL (ng/cig)	19.9	18.0	21.1	3	19.9	18.8	21.1	3
B(k)FL (ng/cig)	3.4 <sup>†</sup>	3.2 <sup>*</sup>	3.9	3	4.0	3.8	4.1	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	8.8	8.0	9.3	3	8.2	7.7	8.9	3
Acrylamide (ug/cig)	11.2	10.2	12.5	3	4.3	4.0	4.7	3
Naphthalene (ng/cig)	2919	2833	2971	3	1688	1558	1755	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 5. Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	Winston Red Box (2014)				Winston Red Box (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	2.3	2.1	2.5	8	2.1	2.0	2.2	8
Acetaldehyde (ug/cig)	1638	1576	1683	3	1847	1570	1973	6
Crotonaldehyde (ug/cig)	50	48	52	3	58	45	63	6
Formaldehyde (ug/cig)	93	89	100	3	95	59	111	6
Arsenic (ng/cig)	8.8	8.5	9.0	3	9.4	9.2	9.7	3
Cadmium (ng/cig)	132	127	137	3	126	121	134	3
NNN (ng/cig)	222	217	229	3	227	210	236	3
NNK (ng/cig)	169	158	176	3	160	146	168	3
NAT (ng/cig)	257	246	274	3	268	251	279	3
NAB (ng/cig)	36	36	37	3	27	27	29	3
B(a)P (ng/cig)	26.0	25.1	26.7	3	20.9	18.7	23.5	3
B(a)A (ng/cig)	43.2	42.4	44.2	3	43.5	41.1	47.7	3
B(b/j)FL (ng/cig)	25.1	24.9	25.5	3	24.3	22.9	26.5	3
B(k)FL (ng/cig)	4.1	3.6	4.5	3	4.9	4.6	5.3	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	11.2	11.0	11.5	3	10.5	10.1	11.2	3
Acrylamide (ug/cig)	7.4	6.8	8.0	3	4.0	3.1	4.7	3
Naphthalene (ng/cig)	2888	2603	3370	3	1750	1581	1960	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 N/A= not available

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 6. Range of Product Means Observed for the 2014-2015 Cigarette Market Survey Dataset (Canadian Intense Smoking Regimen)

Analyte	Minimum	Maximum
Acetaldehyde (ug/cig)	1267	2381
Acrylamide (ug/cig)	2.5	13.9
Arsenic (ng/cig)	3.5	23.2
B(a)A (ng/cig)	18.8	56.4
B(a)P (ng/cig)	8.2	33.0
B(b/j)FL (ng/cig)	9.4	32.7
B(k)FL (ng/cig)	3.2 <sup>†</sup>	7.9
Cadmium (ng/cig)	52	261
Crotonaldehyde (ug/cig)	33	73
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	5.0 <sup>†</sup>
Formaldehyde (ug/cig)	46	158
Indeno (c,d)P (ng/cig)	4.6	15.5
NAB (ng/cig)	3	43
Naphthalene (ng/cig)	422	3911
NAT (ng/cig)	38	428
Nicotine (mg/cig)	1.4	4.2
NNK (ng/cig)	29	290
NNN (ng/cig)	19	354

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
<sup>†</sup>Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean and the corresponding minimum and maximum values.

Table 7. Reference Cigarette (3R4F) Data Listing (ISO Smoking Regimen)

Survey Year	Replicate (n)	Nicotine Analysis		Acrylamide Analysis	
		Nicotine (mg/cig)	Completed Analysis Date	Acrylamide (ug/cig)	Completed Analysis Date
2014	1	0.69	11AUG2014	1.61	03SEP2014
	2	0.64	11AUG2014	1.82	03SEP2014
	3	0.69	11AUG2014	1.89	03SEP2014
	5	0.68	11AUG2014	N/A	N/A
	6	0.64	11AUG2014	N/A	N/A
	7	0.68	11AUG2014	N/A	N/A
	8	0.72	11AUG2014	N/A	N/A
	4	0.70	12AUG2014	N/A	N/A
2015	1	0.68	09SEP2015	1.23	17SEP2015
	2	0.64	09SEP2015	1.33	17SEP2015
	3	0.76	09SEP2015	1.21	17SEP2015
	5	0.69	09SEP2015	N/A	N/A
	6	0.70	09SEP2015	N/A	N/A
	7	0.68	10SEP2015	N/A	N/A
	8	0.71	10SEP2015	N/A	N/A

N/A= not available

Table 7. Reference Cigarette (3R4F) Data Listing (ISO Smoking Regimen) (cont'd)

Survey Year	Replicate (n)	Carbonyl Analysis			Completed Analysis Date
		Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	
2014	1	560.9	10.5	19.2	14AUG2014
	2	580.8	11.3	21.0	14AUG2014
	3	539.8	8.9	18.6	14AUG2014
2015	1	483.3	9.1	11.4	10SEP2015
	2	631.0	13.0	18.3	10SEP2015
	3	610.2	12.5	16.6	10SEP2015



Table 7. Reference Cigarette (3R4F) Data Listing (ISO Smoking Regimen) (cont'd)

Survey Year	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
		NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
2014	1	12.2	103.0	101.0	104.0	13AUG2014
	2	12.3	99.6	92.4	107.0	13AUG2014
	3	13.1	106.0	96.6	112.0	13AUG2014
2015	1	11.0	116.0	102.0	110.0	30SEP2015
	2	11.0	119.0	84.6	105.0	30SEP2015
	3	12.6	119.0	91.8	119.0	30SEP2015

NAB= N'nitrosoanabasine NAT= N'nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN = N'nitrosonornicotine

Table 7. Reference Cigarette (3R4F) Data Listing (ISO Smoking Regimen) (cont'd)

Survey Year	Replicate (n)	Metals Analysis		
		Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
2014	1	2.75	37.7	16AUG2014
	2	2.79	36.9	16AUG2014
	3	2.88	36.9	16AUG2014
2015	1	2.34	34.5	23SEP2015
	2	2.40	33.4	23SEP2015
	3	2.36	32.4	23SEP2015

Table 7. Reference Cigarette (3R4F) Data Listing (ISO Smoking Regimen) (cont'd)

Survey Year	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis				Completed Analysis Date
		B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	
2014	1	8.21	14.72	7.34	1.92*	04SEP2014
	2	8.53	12.88	7.49	1.92*	04SEP2014
	3	7.88	12.38	7.18	1.92*	04SEP2014
2015	1	6.18	13.29	5.69	1.92*	17DEC2015
	2	6.40	13.42	6.29	1.92*	17DEC2015
	3	5.88	13.24	5.86	1.92*	17DEC2015

B(a)A= Benz(a)anthracene B(a)P= Benzo(a)pyrene B(b/j)FL= Benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 7. Reference Cigarette (3R4F) Data Listing (ISO Smoking Regimen) (cont'd)

Survey Year	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis			
		Dibenz(a,h)A (ng/cig)	Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
2014	1	2.88*	3.57	245.0	04SEP2014
	2	2.88*	3.62	258.4	04SEP2014
	3	2.88*	3.29	239.0	04SEP2014
2015	1	2.88*	2.76	214.9	17DEC2015
	2	2.88*	2.94	211.4	17DEC2015
	3	2.88*	2.84	217.8	17DEC2015

Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 8. Reference Cigarette Descriptive Data (ISO Smoking Regimen)

Analyte	3R4F (2014)				3R4F (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	0.7	0.6	0.7	8	0.7	0.6	0.8	7
Acetaldehyde (ug/cig)	561	540	581	3	575	483	631	3
Crotonaldehyde (ug/cig)	10	9	11	3	12	9	13	3
Formaldehyde (ug/cig)	20	19	21	3	15	11	18	3
Arsenic (ng/cig)	2.8	2.8	2.9	3	2.4	2.3	2.4	3
Cadmium (ng/cig)	37	37	38	3	33	32	35	3
NNN (ng/cig)	108	104	112	3	111	105	119	3
NNK (ng/cig)	97	92	101	3	93	85	102	3
NAT (ng/cig)	103	100	106	3	118	116	119	3
NAB (ng/cig)	13	12	13	3	12	11	13	3
B(a)P (ng/cig)	8.2	7.9	8.5	3	6.2	5.9	6.4	3
B(a)A (ng/cig)	13.3	12.4	14.7	3	13.3	13.2	13.4	3
B(b/j)FL (ng/cig)	7.3	7.2	7.5	3	5.9	5.7	6.3	3
B(k)FL (ng/cig)	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3	1.9 <sup>†</sup>	1.9 <sup>*</sup>	1.9 <sup>*</sup>	3
Dibenz(a,h)A (ng/cig)	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3	2.9 <sup>†</sup>	2.9 <sup>*</sup>	2.9 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	3.5	3.3	3.6	3	2.8	2.8	2.9	3
Acrylamide (ug/cig)	1.8	1.6	1.9	3	1.3	1.2	1.3	3
Naphthalene (ng/cig)	247	239	258	3	215	211	218	3

NNN = N'-nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'-nitrosoanatabine  
 NAB= N' nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenz(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 \*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

Table 9. Reference Cigarette (3R4F) Data Listing (Canadian Intense Smoking Regimen)

Survey Year	Replicate (n)	Nicotine Analysis		Acrylamide Analysis	
		Nicotine (mg/cig)	Completed Analysis Date	Acrylamide (ug/cig)	Completed Analysis Date
2014	1	1.92	06AUG2014	7.09	05SEP2014
	2	1.81	06AUG2014	6.37	05SEP2014
	3	1.67	07AUG2014	7.08	05SEP2014
	4	1.66	07AUG2014	N/A	N/A
	5	1.88	08AUG2014	N/A	N/A
	6	1.85	08AUG2014	N/A	N/A
	7	1.88	08AUG2014	N/A	N/A
	8	1.95	08AUG2014	N/A	N/A
2015	3	1.96	09SEP2015	5.16	21SEP2015
	4	1.99	09SEP2015	N/A	N/A
	5	1.95	09SEP2015	N/A	N/A
	6	1.85	09SEP2015	N/A	N/A
	7	1.98	09SEP2015	N/A	N/A
	8	1.97	09SEP2015	N/A	N/A
	1	1.73	10SEP2015	4.71	21SEP2015
	2	1.76	10SEP2015	4.93	21SEP2015

N/A= not available

Table 9. Reference Cigarette (3R4F) Data Listing (Canadian Intense Smoking Regimen) (cont'd)

		Carbonyl Analysis			
Survey Year	Replicate (n)	Acetaldehyde (ug/cig)	Crotonaldehyde (ug/cig)	Formaldehyde (ug/cig)	Completed Analysis Date
2014	1	1630.5	44.6	78.2	15AUG2014
	2	1446.6	36.9	62.2	15AUG2014
	3	1555.5	41.4	75.9	15AUG2014
2015	1	1789.6	52.5	76.7	19SEP2015
	2	1726.7	48.5	66.3	19SEP2015
	3	1764.8	51.7	77.3	19SEP2015

Table 9. Reference Cigarette (3R4F) Data Listing (Canadian Intense Smoking Regimen) (cont'd)

Survey Year	Replicate (n)	Tobacco Specific Nitrosamine Analysis				Completed Analysis Date
		NAB (ng/cig)	NAT (ng/cig)	NNK (ng/cig)	NNN (ng/cig)	
2014	1	25.3	238.0	222.0	253.0	13AUG2014
	2	28.3	271.0	238.0	284.0	13AUG2014
	3	26.9	263.0	236.0	263.0	13AUG2014
2015	1	25.1	287.0	230.0	271.0	02OCT2015
	2	26.3	280.0	232.0	282.0	02OCT2015
	3	23.0	295.0	241.0	264.0	02OCT2015

NAB= N' nitrosoanabasine NAT= N' nitrosoanatabine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NNN  
= N' nitrosonornicotine



Table 9. Reference Cigarette (3R4F) Data Listing (Canadian Intense Smoking Regimen) (cont'd)

Survey Year	Replicate (n)	Metals Analysis		
		Arsenic (ng/cig)	Cadmium (ng/cig)	Completed Analysis Date
2014	1	10.31	140.8	15AUG2014
	2	9.87	129.0	15AUG2014
	3	9.86	127.9	15AUG2014
2015	1	8.18	N/A	18SEP2015
	2	8.44	138.5	18SEP2015
	3	8.42	139.8	18SEP2015
	1	N/A	136.6	11JAN2016

N/A= not available

Table 9. Reference Cigarette (3R4F) Data Listing (ISO Smoking Regimen) (cont'd)

Survey Year	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis				Completed Analysis Date
		B(a)P (ng/cig)	B(a)A (ng/cig)	B(b/j)FL (ng/cig)	B(k)FL (ng/cig)	
2014	1	8.21	14.72	7.34	1.92*	04SEP2014
	2	8.53	12.88	7.49	1.92*	04SEP2014
	3	7.88	12.38	7.18	1.92*	04SEP2014
2015	1	6.18	13.29	5.69	1.92*	17DEC2015
	2	6.40	13.42	6.29	1.92*	17DEC2015
	3	5.88	13.24	5.86	1.92*	17DEC2015

B(a)A= Benz(a)anthracene B(a)P= Benzo(a)pyrene B(b/j)FL= Benzo(b/j)fluoranthene B(k)FL= Benzo(k)fluoranthene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 9. Reference Cigarette (3R4F) Data Listing (Canadian Intense Smoking Regimen) (cont'd)

Survey Year	Replicate (n)	Polycyclic Aromatic Hydrocarbon Analysis			
		Dibenz(a,h)A (ng/cig)	Indeno(c,d)P (ng/cig)	Naphthalene (ng/cig)	Completed Analysis Date
2014	1	4.80*	7.93	1053.0	26AUG2014
	2	4.80*	8.12	1114.0	26AUG2014
	3	4.80*	8.46	1127.0	26AUG2014
2015	1	4.80*	7.69	1172.0	11JAN2016
	2	4.80*	7.01	1081.0	11JAN2016
	3	4.80*	6.57	1037.0	11JAN2016

Dibenz(a,h)A= Dibenzo(a, h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene

\*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

Table 10. Reference Cigarette Descriptive Data (Canadian Intense Smoking Regimen)

Analyte	3R4F (2014)				3R4F (2015)			
	Mean	Minimum	Maximum	Replicate (n)	Mean	Minimum	Maximum	Replicate (n)
Nicotine (mg/cig)	1.8	1.7	2.0	8	1.9	1.7	2.0	8
Acetaldehyde (ug/cig)	1544	1447	1631	3	1760	1727	1790	3
Crotonaldehyde (ug/cig)	41	37	45	3	51	49	53	3
Formaldehyde (ug/cig)	72	62	78	3	73	66	77	3
Arsenic (ng/cig)	10.0	9.9	10.3	3	8.3	8.2	8.4	3
Cadmium (ng/cig)	133	128	141	3	138	137	140	3
NNN (ng/cig)	267	253	284	3	272	264	282	3
NNK (ng/cig)	232	222	238	3	234	230	241	3
NAT (ng/cig)	257	238	271	3	287	280	295	3
NAB (ng/cig)	27	25	28	3	25	23	26	3
B(a)P (ng/cig)	20.6	19.6	21.7	3	15.1	14.1	15.9	3
B(a)A (ng/cig)	34.1	32.0	35.4	3	32.0	31.0	32.9	2
B(b/j)FL (ng/cig)	17.4	16.9	18.4	3	18.1	17.0	19.3	3
B(k)FL (ng/cig)	3.2 <sup>†</sup>	3.2 <sup>*</sup>	3.2 <sup>*</sup>	3	3.4 <sup>†</sup>	3.2 <sup>*</sup>	3.7	3
Dibenz(a,h)A (ng/cig)	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3	4.8 <sup>†</sup>	4.8 <sup>*</sup>	4.8 <sup>*</sup>	3
Indeno(c,d)P (ng/cig)	8.2	7.9	8.5	3	7.1	6.6	7.7	3
Acrylamide (ug/cig)	6.8	6.4	7.1	3	4.9	4.7	5.2	3
Naphthalene (ng/cig)	1098	1053	1127	3	1097	1037	1172	3

NNN = N'nitrosonornicotine NNK=4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone NAT= N'nitrosoanatabine  
 NAB= N'nitrosoanabasine B(a)P= Benzo(a)pyrene B(a)A= Benz(a)anthracene B(b/j)FL= Benzo(b/j)fluoranthene  
 B(k)FL= Benzo(k)fluoranthene Dibenz(a,h)A= Dibenzo(a,h)anthracene Indeno(c,d)P= Indeno(1,2,3-c,d)pyrene  
 \*indicates value below Limit of Quantification (LOQ). LOQ was used as value in these tables.

†Indicates that at least one replicate value was below the Limit of Quantification (LOQ). For values below the LOQ, the LOQ was used to calculate the mean.

## Appendix B Analytical Methods

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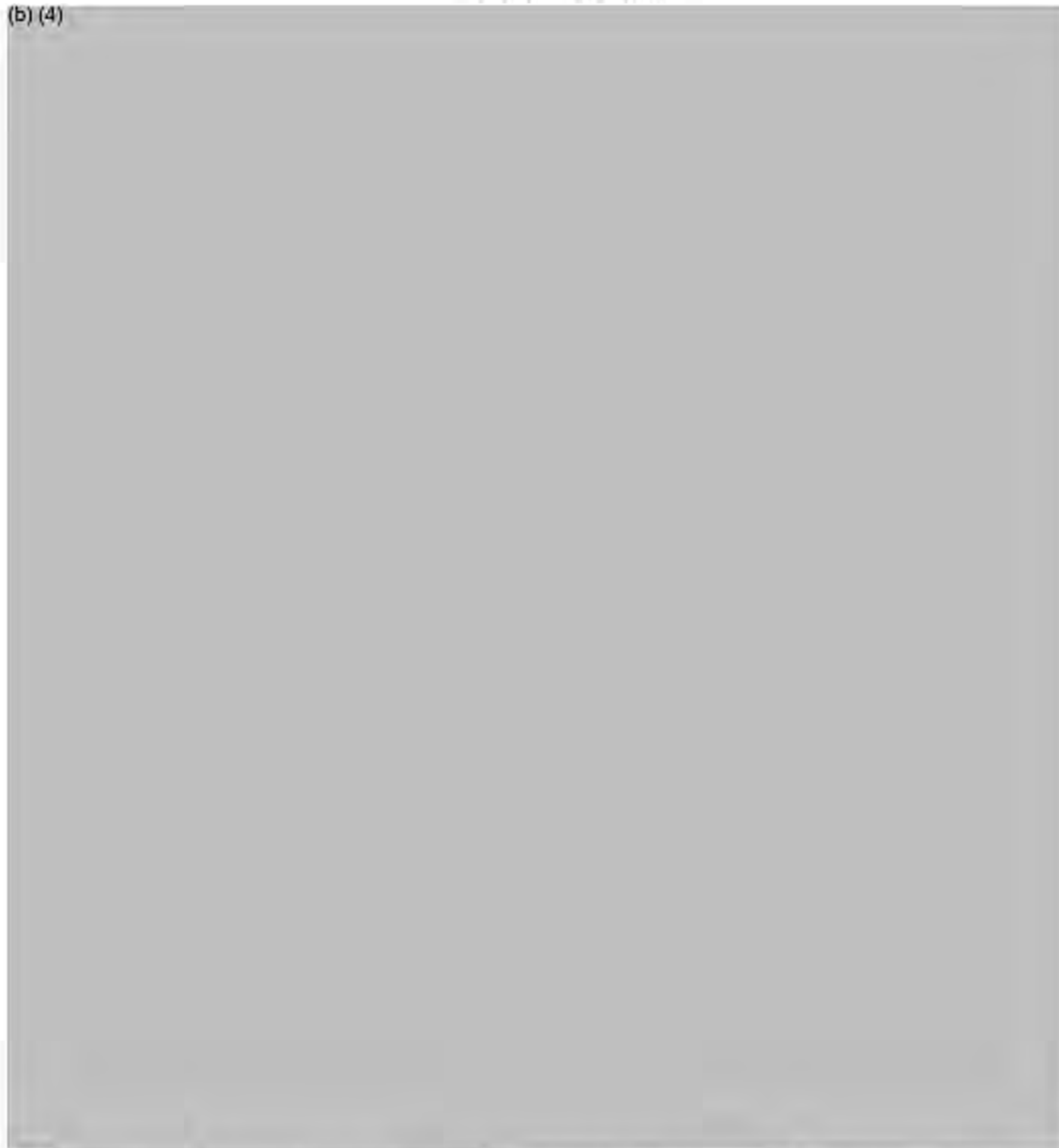
1. Gas Chromatographic Determination of Nicotine and Water in Smoke Rev 18
2. Gas Chromatographic Determination of Nicotine and Water in Smoke Rev 19
3. Gas Chromatographic Determination of Nicotine and Water in Smoke Rev 20
4. Determination of Selected Carbonyl Compounds in Mainstream Smoke and Aerosol Rev 20
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**Level 3 Document**

**Gas Chromatographic Determination of Nicotine and Water in Smoke**

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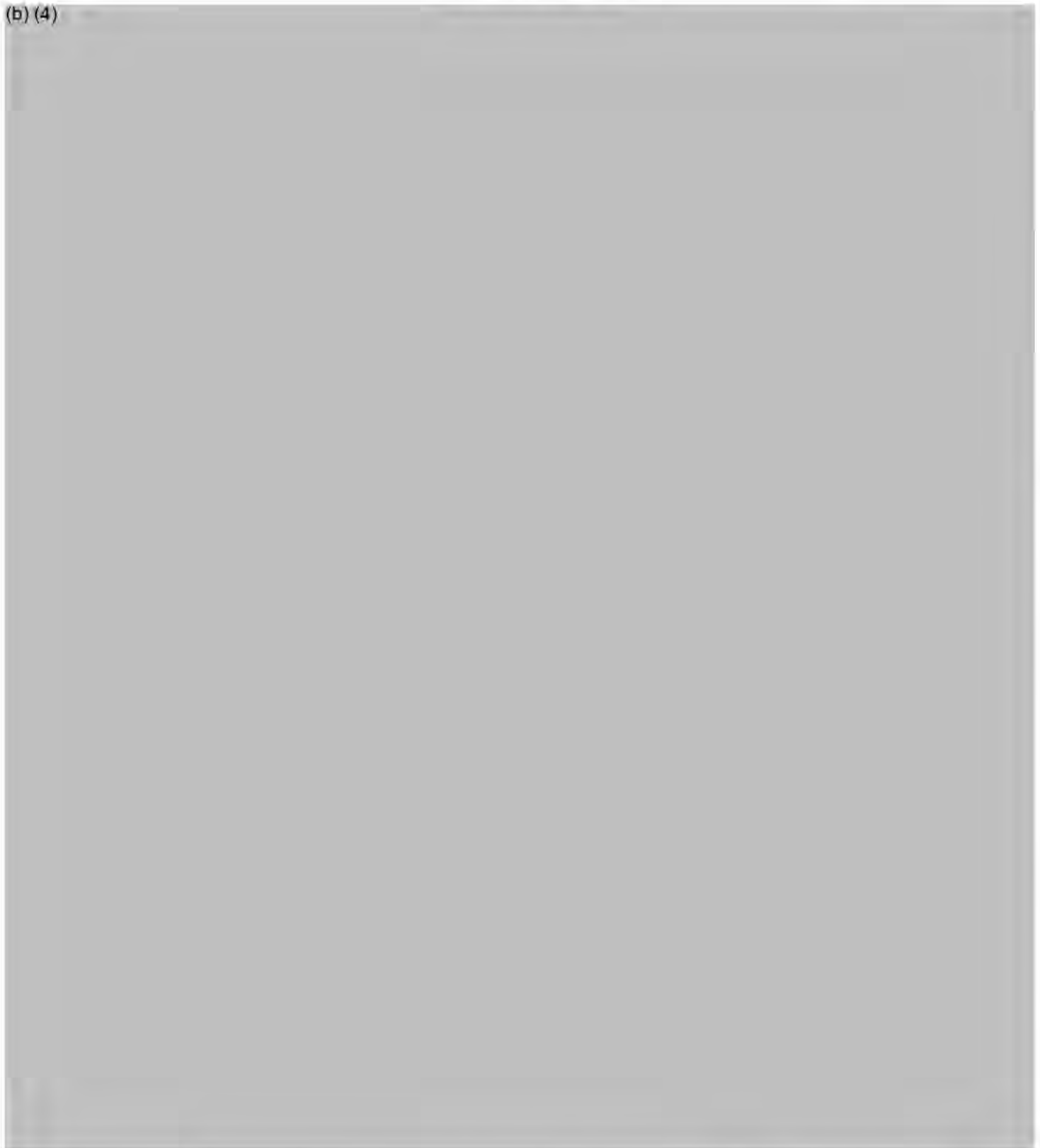
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Approvals:

Prepared by: Kathy P. Putnam Date: 5/2/2014  
Author

Approved by: David D. Mickey Date: 5-2-2014  
Management - LLI

Approved by: Mark R. Baker Date: 05/02/14  
Quality Assurance - LLI

Approved by: Jannell M. Rave Date: 05/02/2014  
Analytical Support Management - RJRT

Approved by: Lisa Winkler Date: 05/02/14  
Quality Assurance - LLI Document Control

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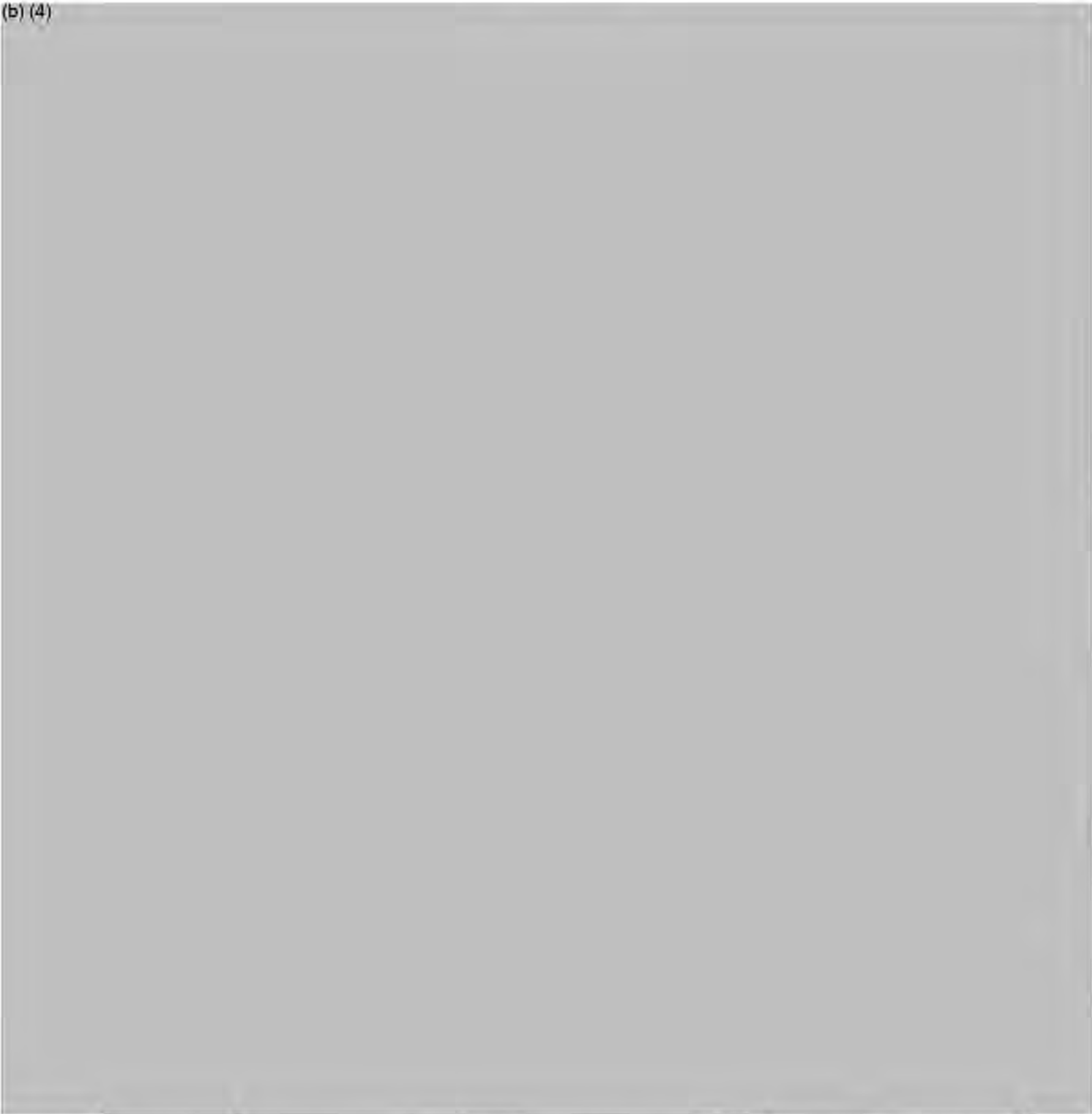
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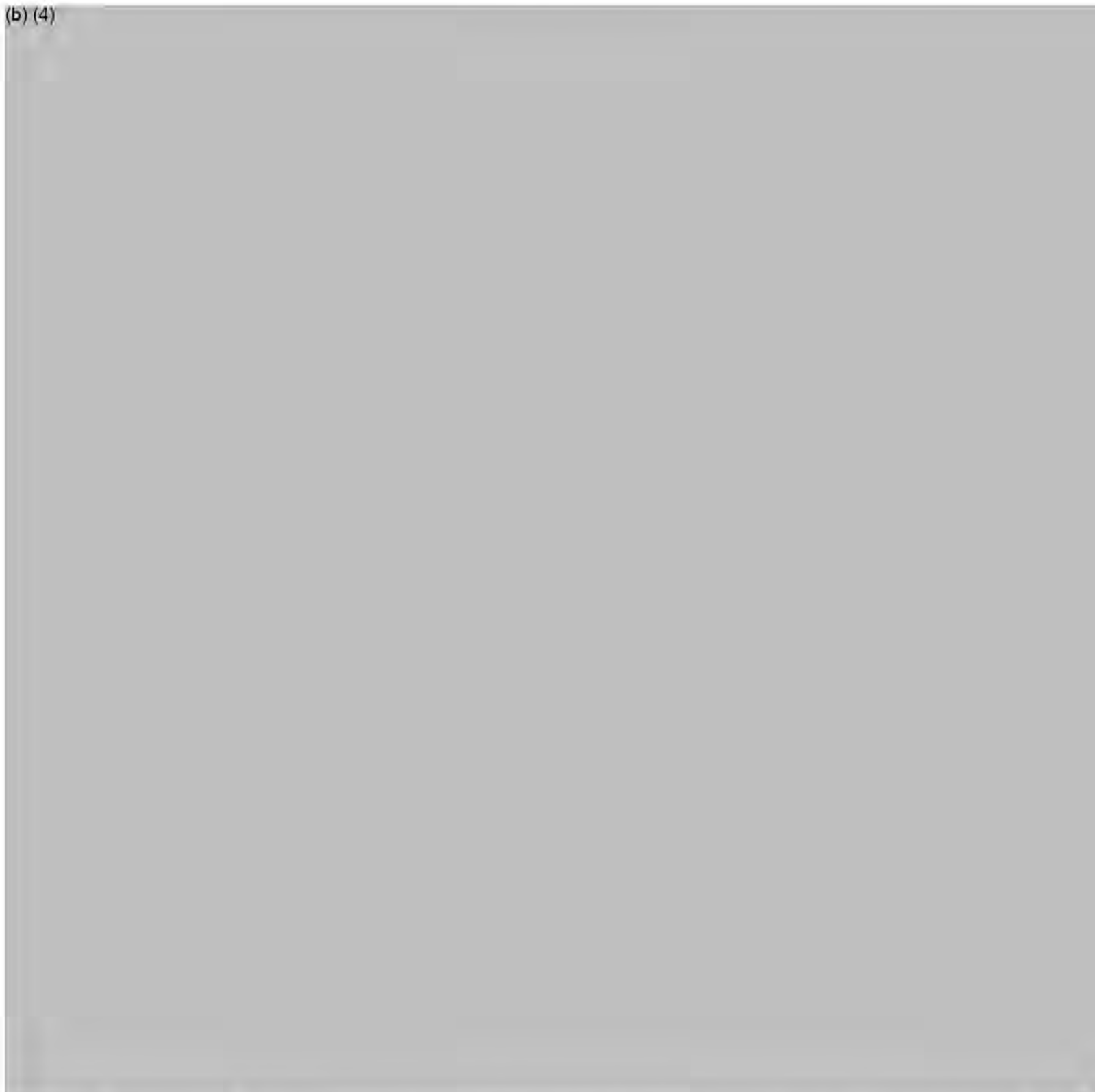
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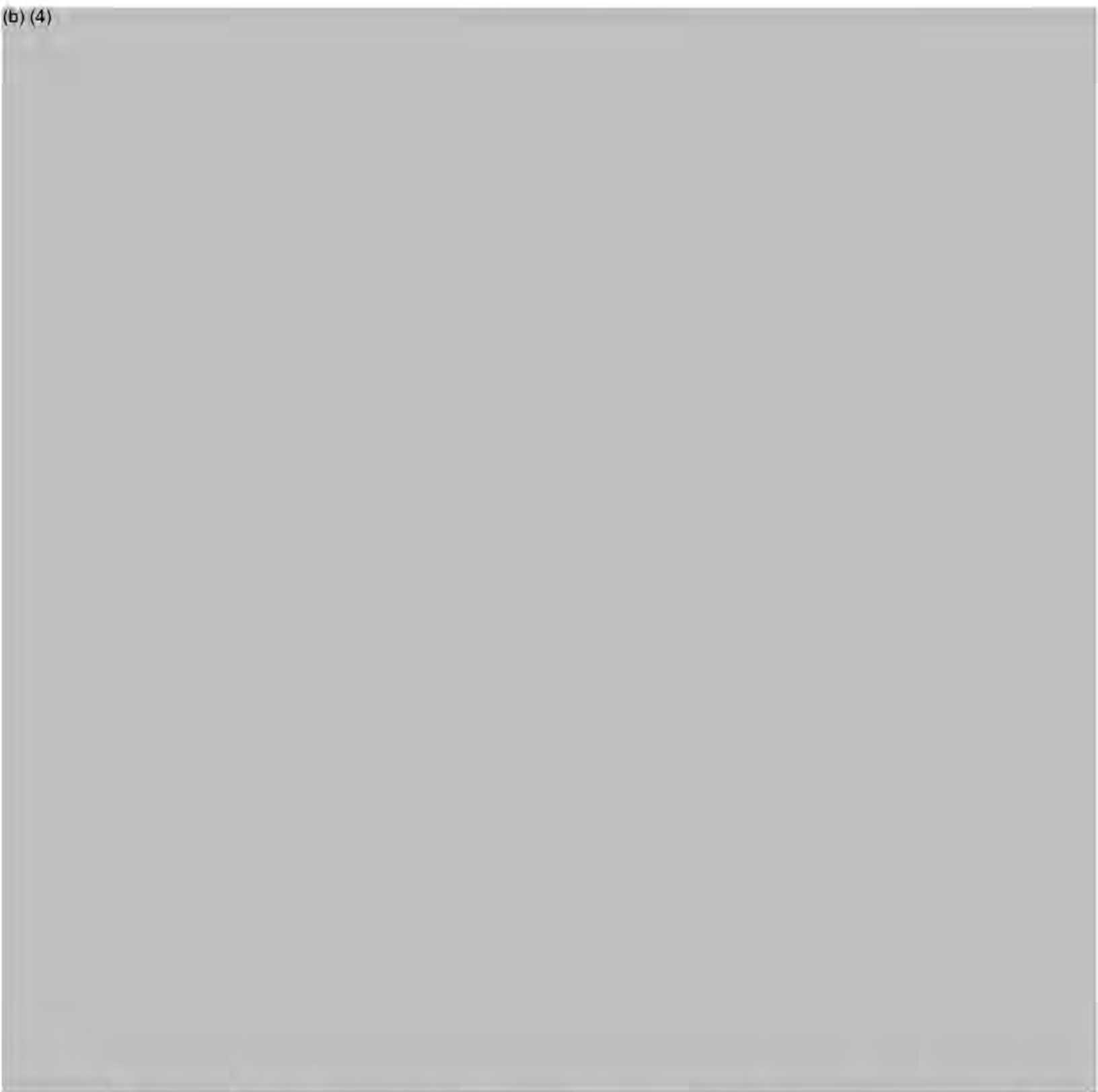


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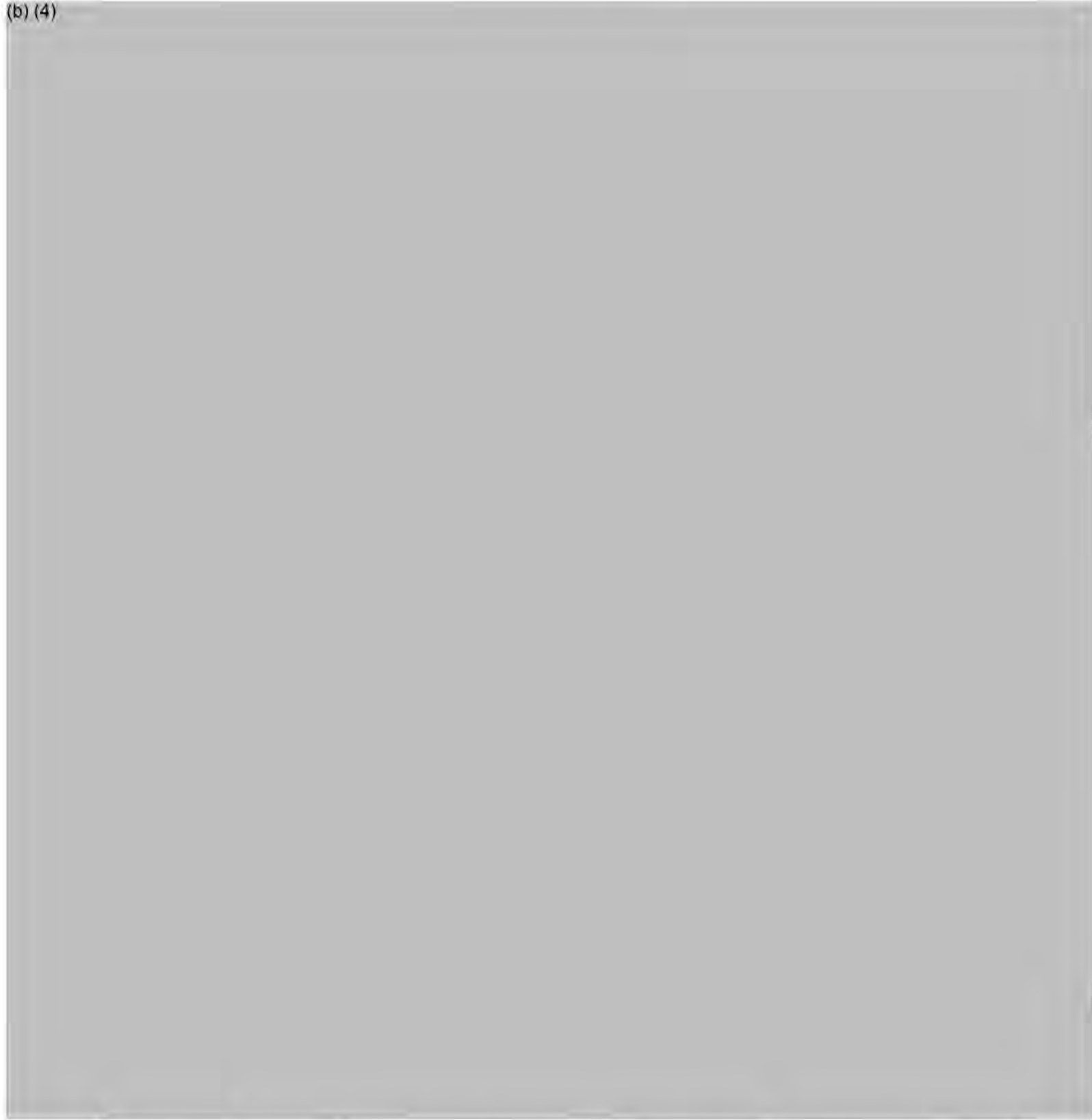
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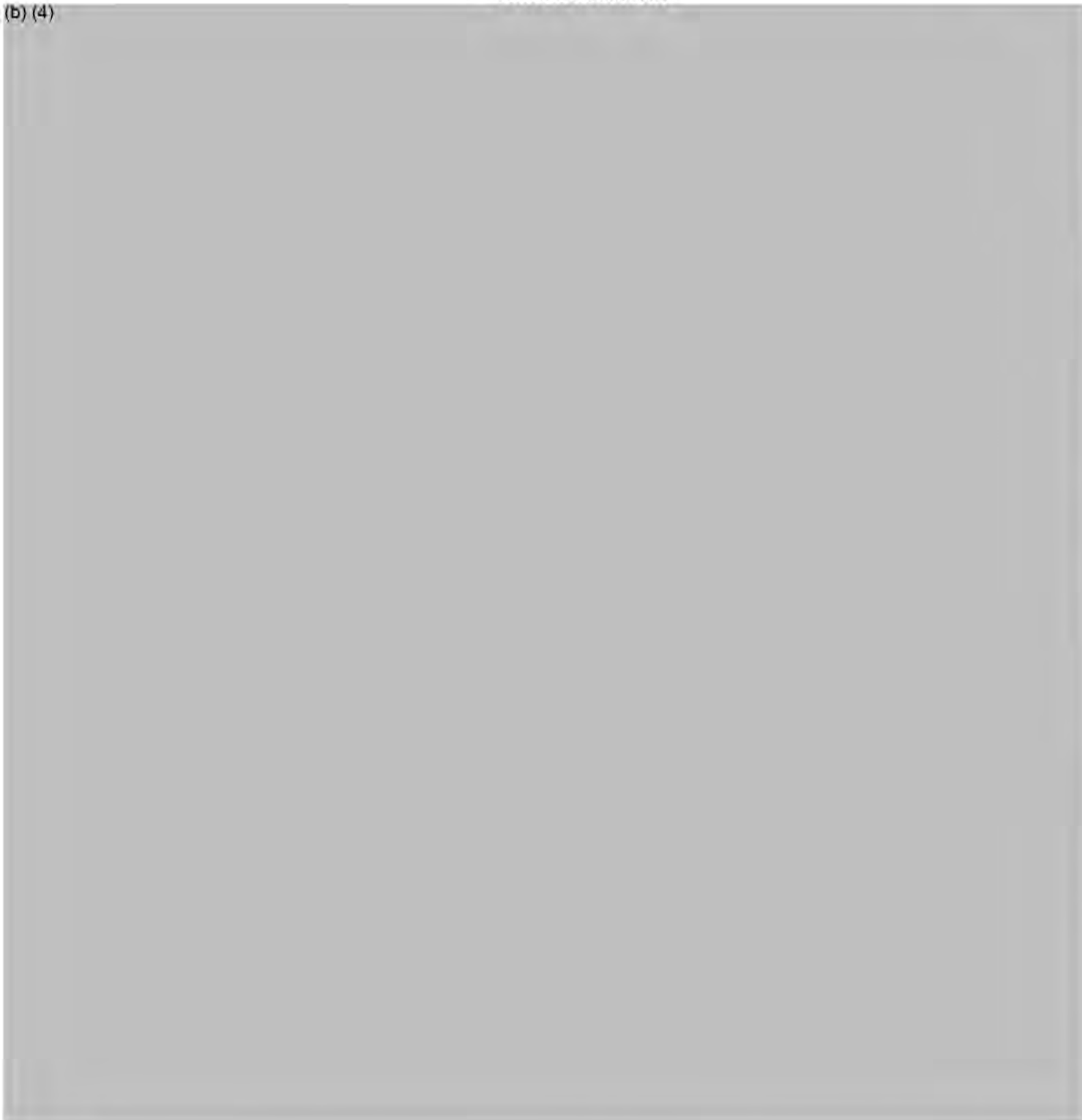
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**Title:** Gas Chromatographic Determination of  
Nicotine and Water in Smoke

**Effective Date:** 1/9/2015

**Document No.:** RJRT-WI-004121

**Revision Level:** 019

**Author:** Candice K Cunningham

**Status:** EXPIRED

**Release Review and Approval**

<u>Role</u>	<u>Actor</u>	<u>Title</u>	<u>Sign-off By</u>	<u>Sign-Off Date &amp; Time(GMT)</u>
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	12/10/2014 16:13
RJRT-AUTHOR	Candice K Cunningham	Sr Scientist	CUNNINC	12/10/2014 21:27
RJRT-RELEASE APPROVER	Jannell M. Rowe	Dir Product Services	ROWEJ	12/11/2014 13:47
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	12/11/2014 15:01

**Periodic Review**

<u>Role</u>	<u>Actor</u>	<u>Title</u>	<u>Sign-off By</u>	<u>Sign-Off Date &amp; Time(GMT)</u>
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**Reason for Revision**

New template

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Document #: RJRT-WI-004121	Revision: 019

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**Title:** Nicotine and Water in Smoke

**Effective Date:** 11/30/2015

**Document No.:** RJRT-WI-004121

**Revision Level:** 020

**Author:** Tracy M. Hefner

**Status:** EXPIRED

**Release Review and Approval**

<u>Role</u>	<u>Actor</u>	<u>Title</u>	<u>Sign-off By</u>	<u>Sign-Off Date &amp; Time(GMT)</u>
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	11/12/2015 14:10
RJRT-AUTHOR	Tracy M. Hefner	Scientist III	HEFNERT	11/12/2015 15:36
RJRT-RELEASE APPROVER	Jannell M. Rowe	Director Product Services	ROWEJ	11/13/2015 3:32
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	11/13/2015 12:50

**Periodic Review**

<u>Role</u>	<u>Actor</u>	<u>Title</u>	<u>Sign-off By</u>	<u>Sign-Off Date &amp; Time(GMT)</u>
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**Reason for Revision**

Updated to reflect current procedure and documentation processes. Change company name, changed title.

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Approvals:

Prepared by:


  
  
Author

Date:

7/21/14

7-21-14


Approved by:

  
Management - LLI

Date:

7/21/14


Approved by:

  
Quality Assurance - LLI

Date:

07/21/14


Approved by:

  
ASM Management - RJRT

Date:

07/21/2014

Approved by:

  
Quality Assurance - LLI Document Control

Date:

07/21/2014

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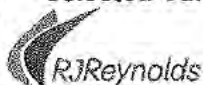
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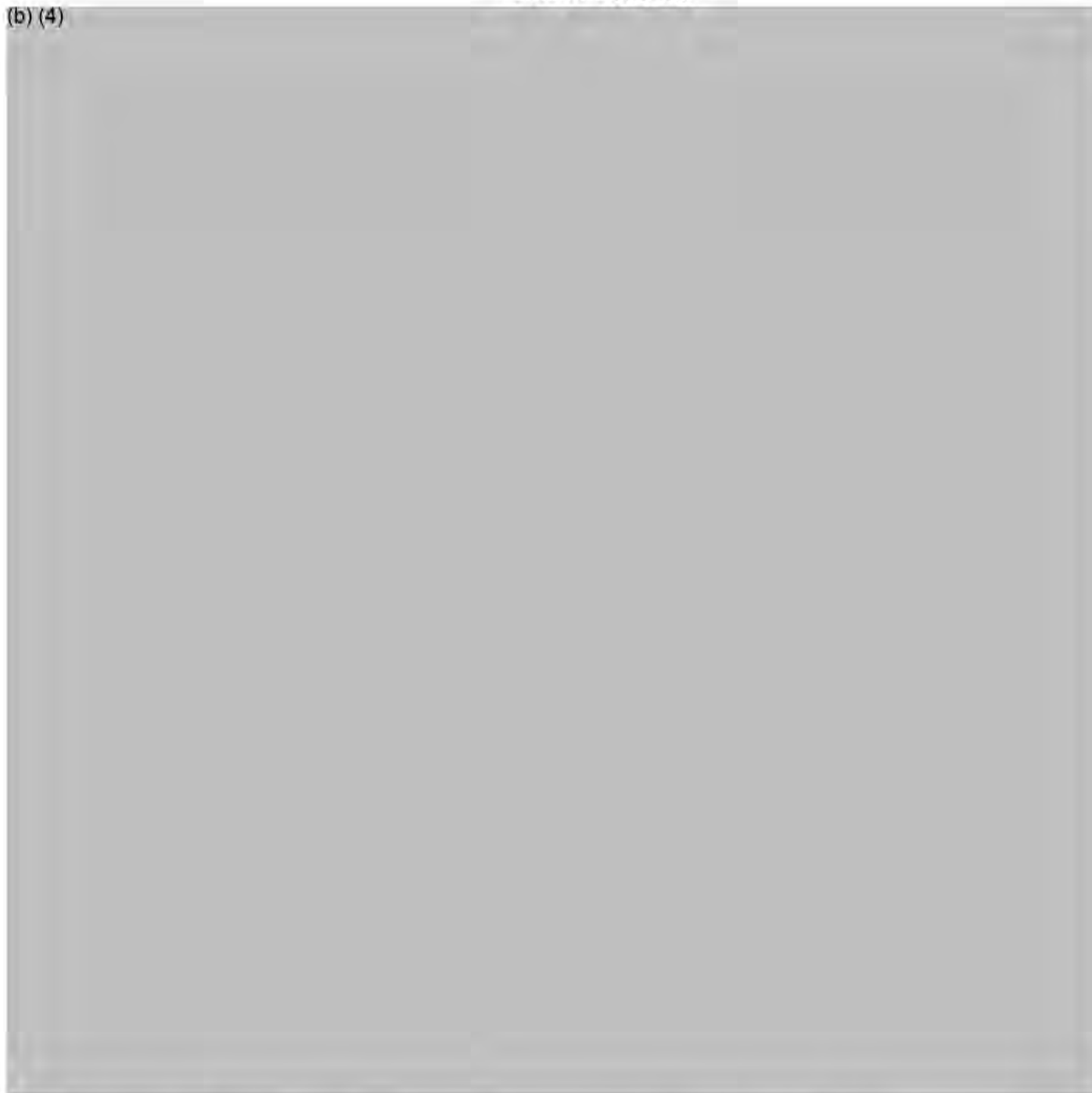
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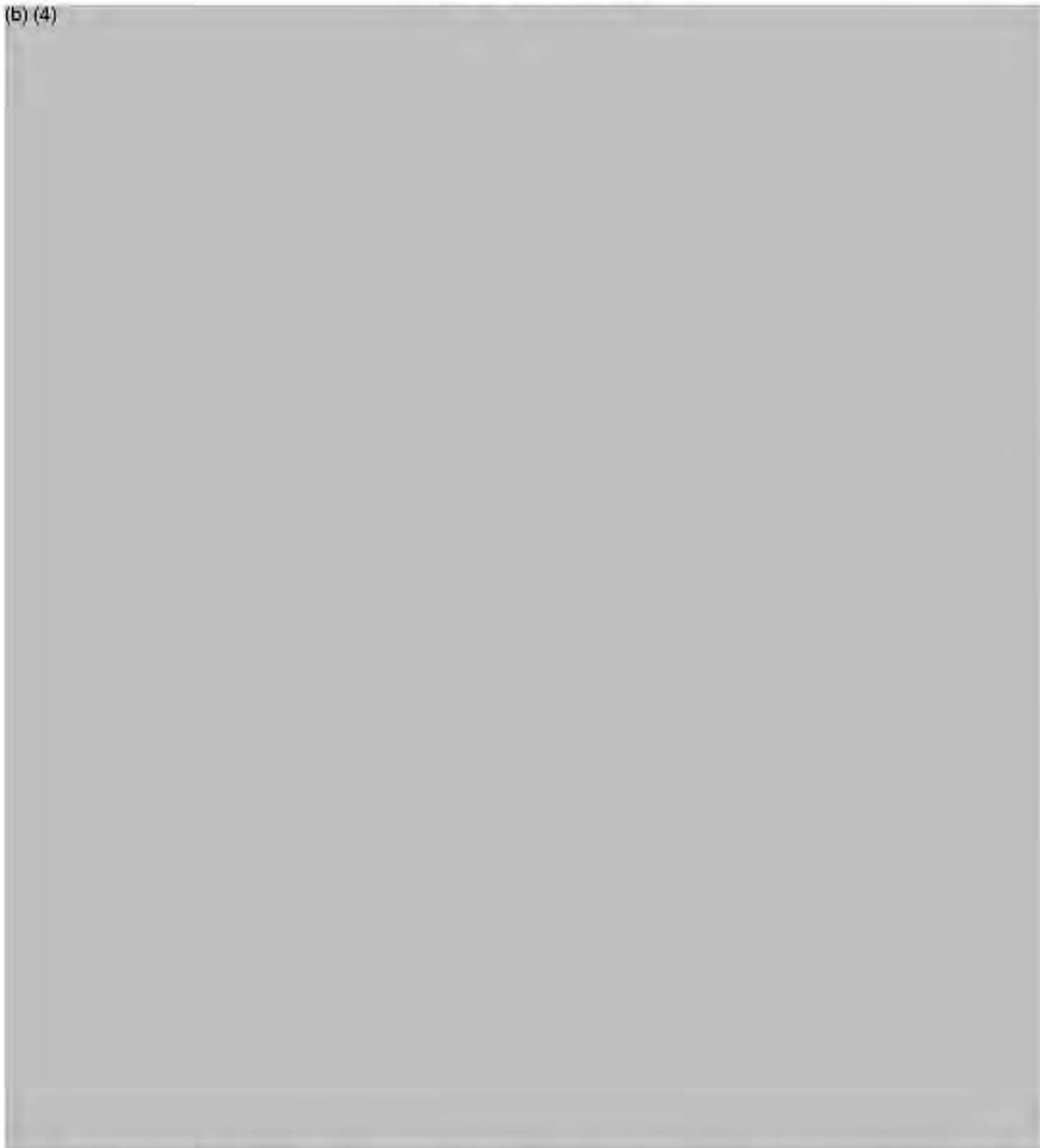
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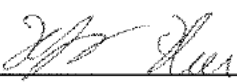


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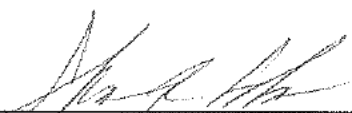
**Approvals:**

Prepared by:   
Author


Date: 8/26/14

Approved by:   
Management - LLI

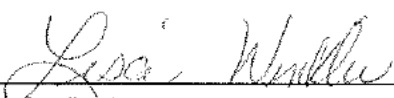
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Date: 08/26/14

Approved by:   
ASM Management - RJRT

Date: 08/26/2014

Approved by:   
Quality Assurance - LLI Document Control

Date: 08/26/2014

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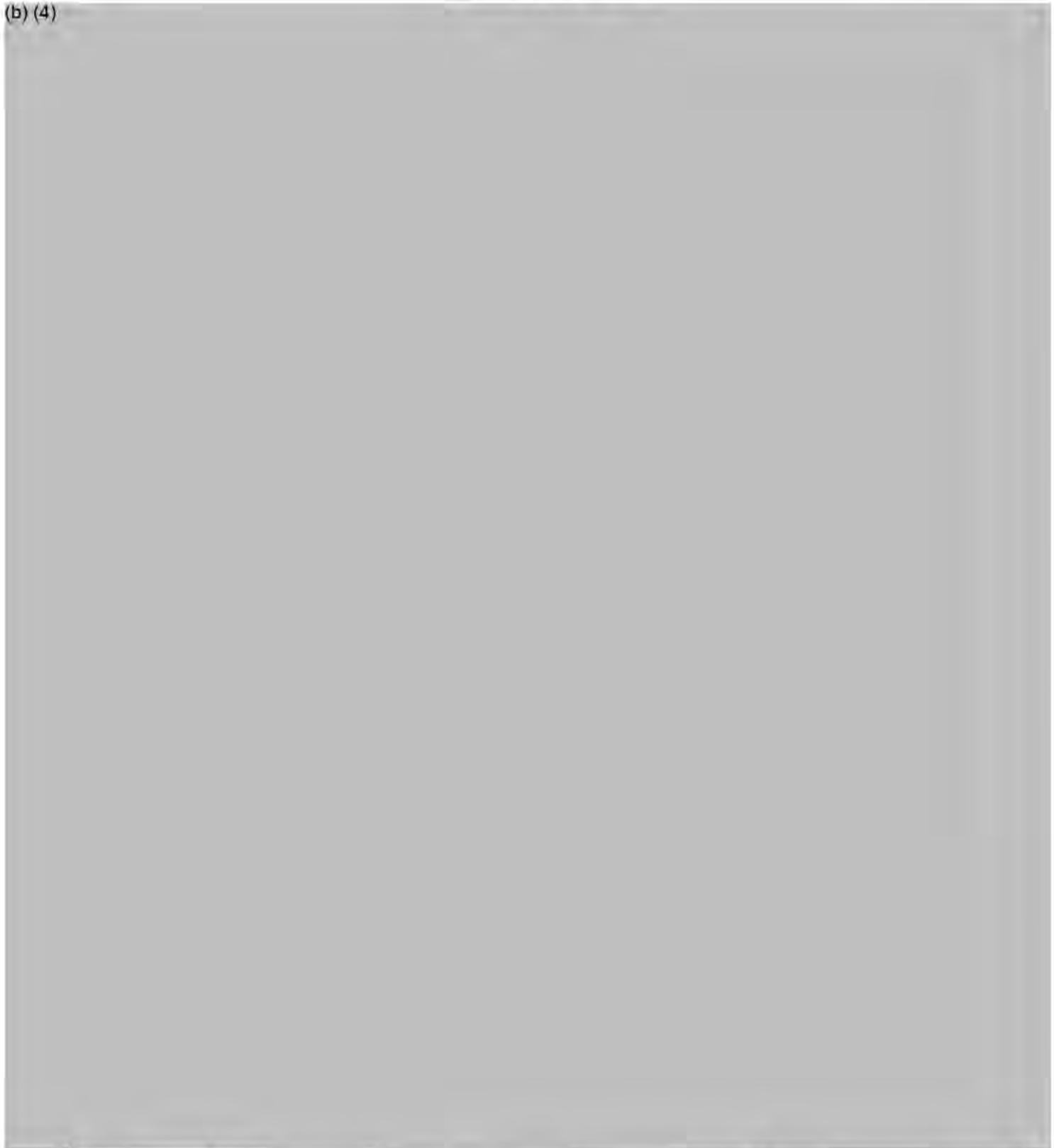
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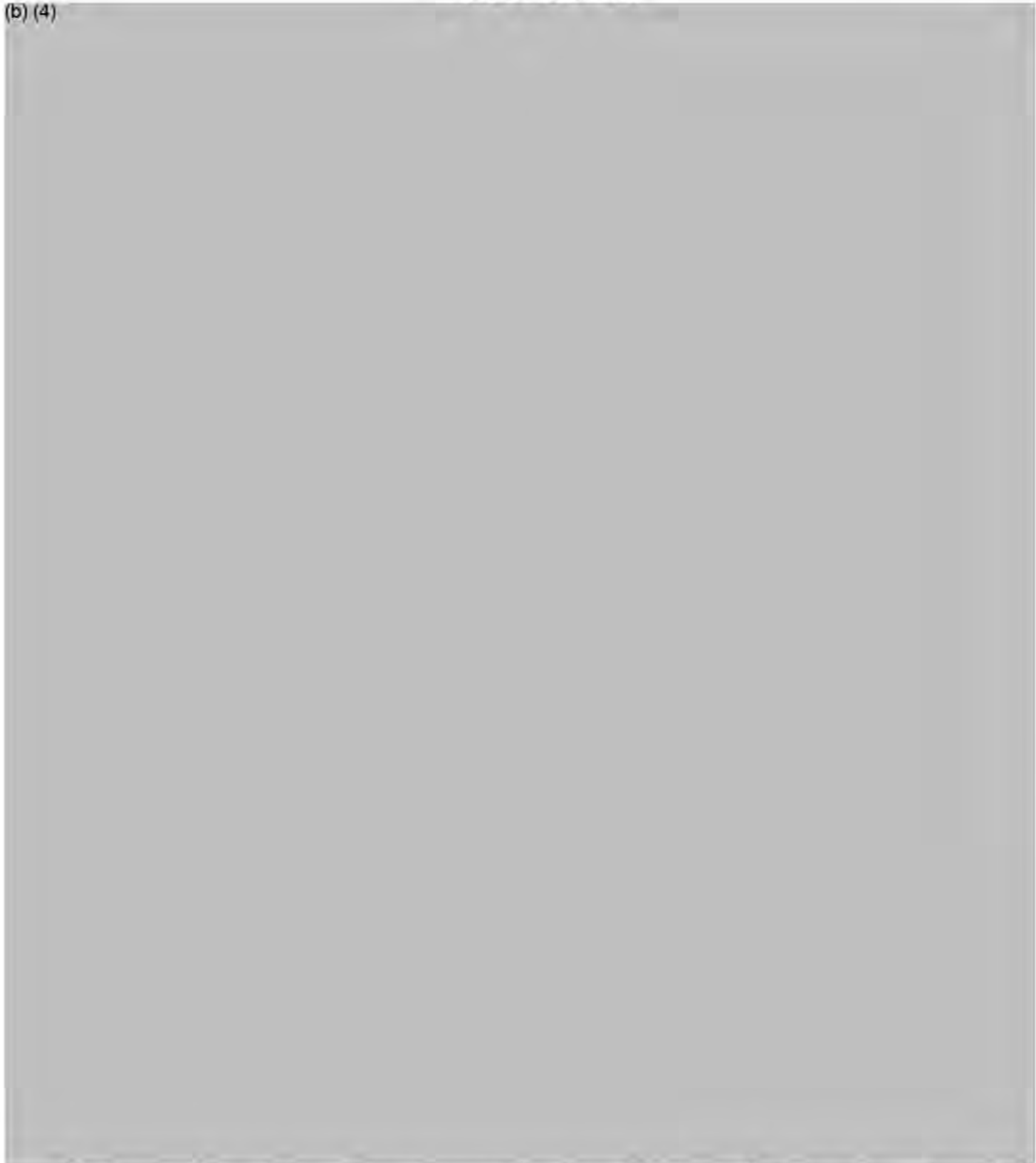
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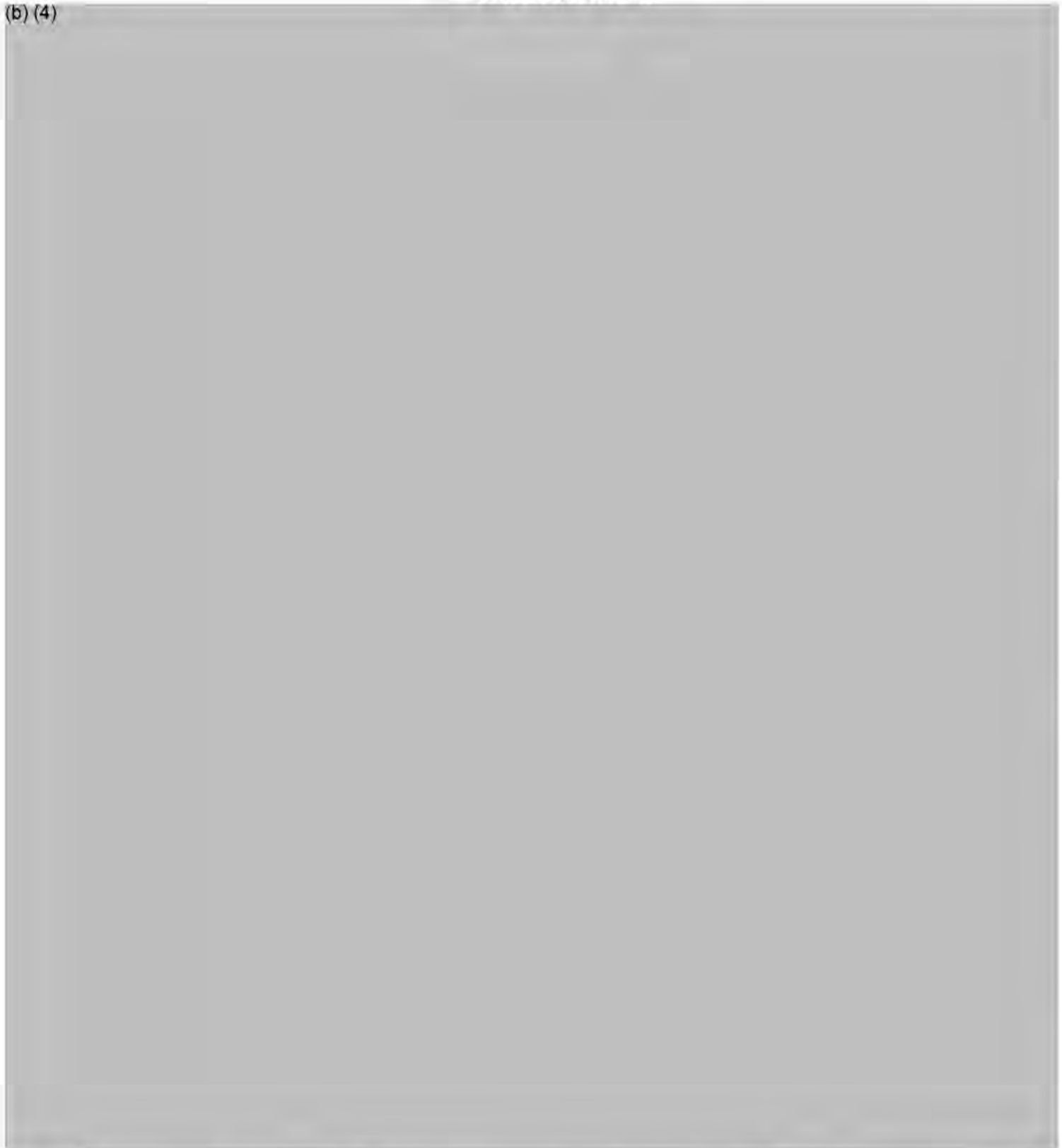
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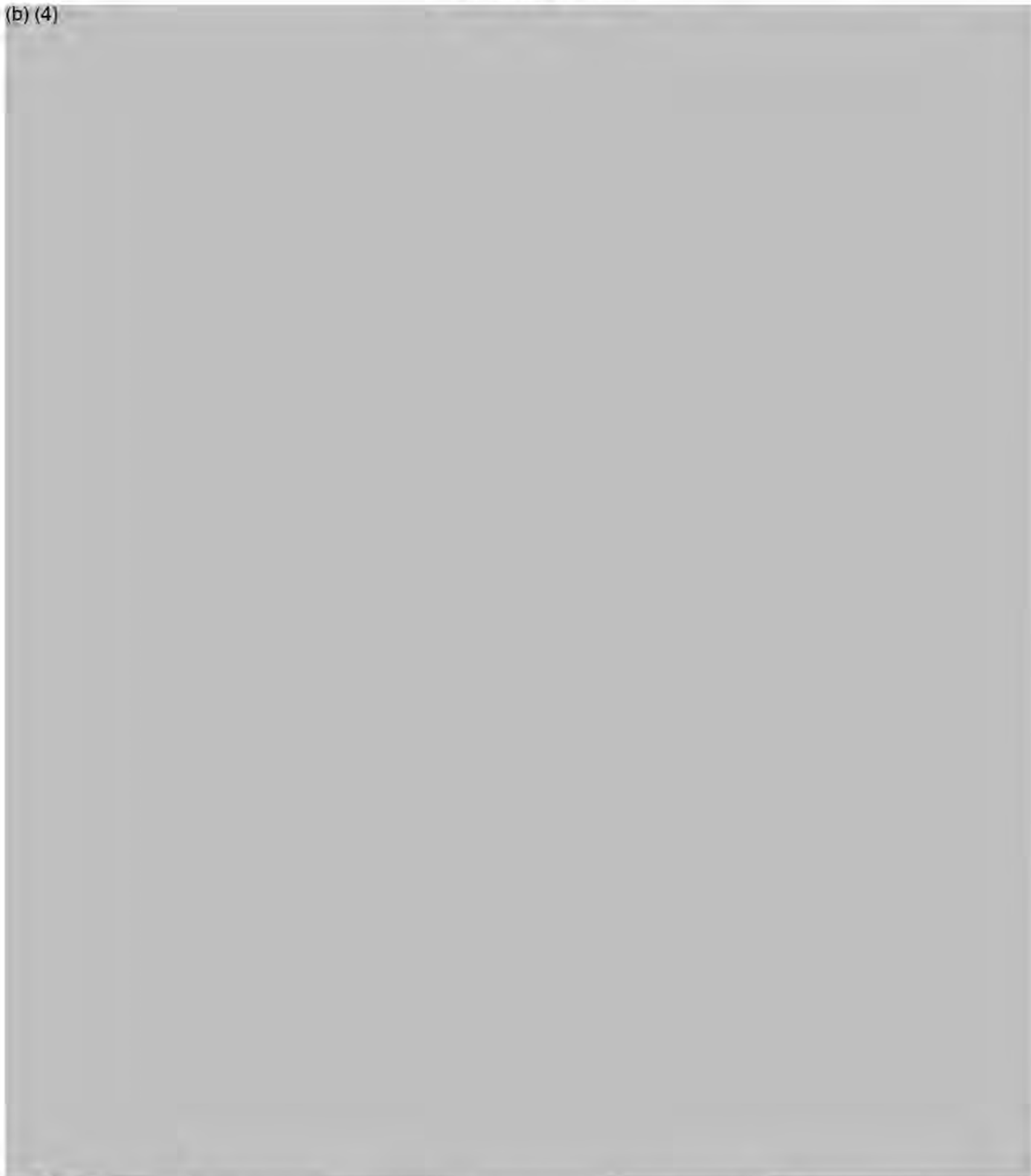
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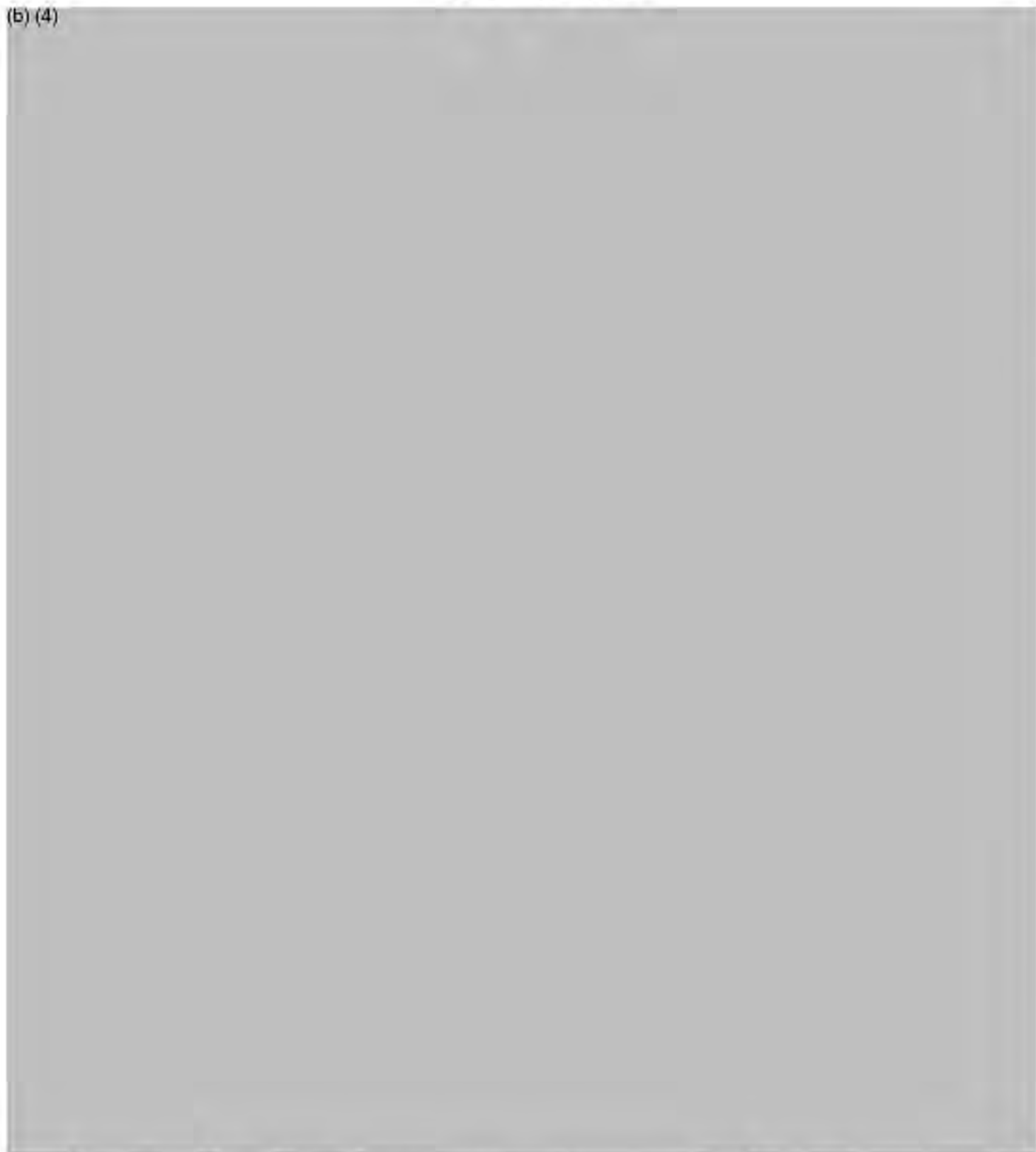
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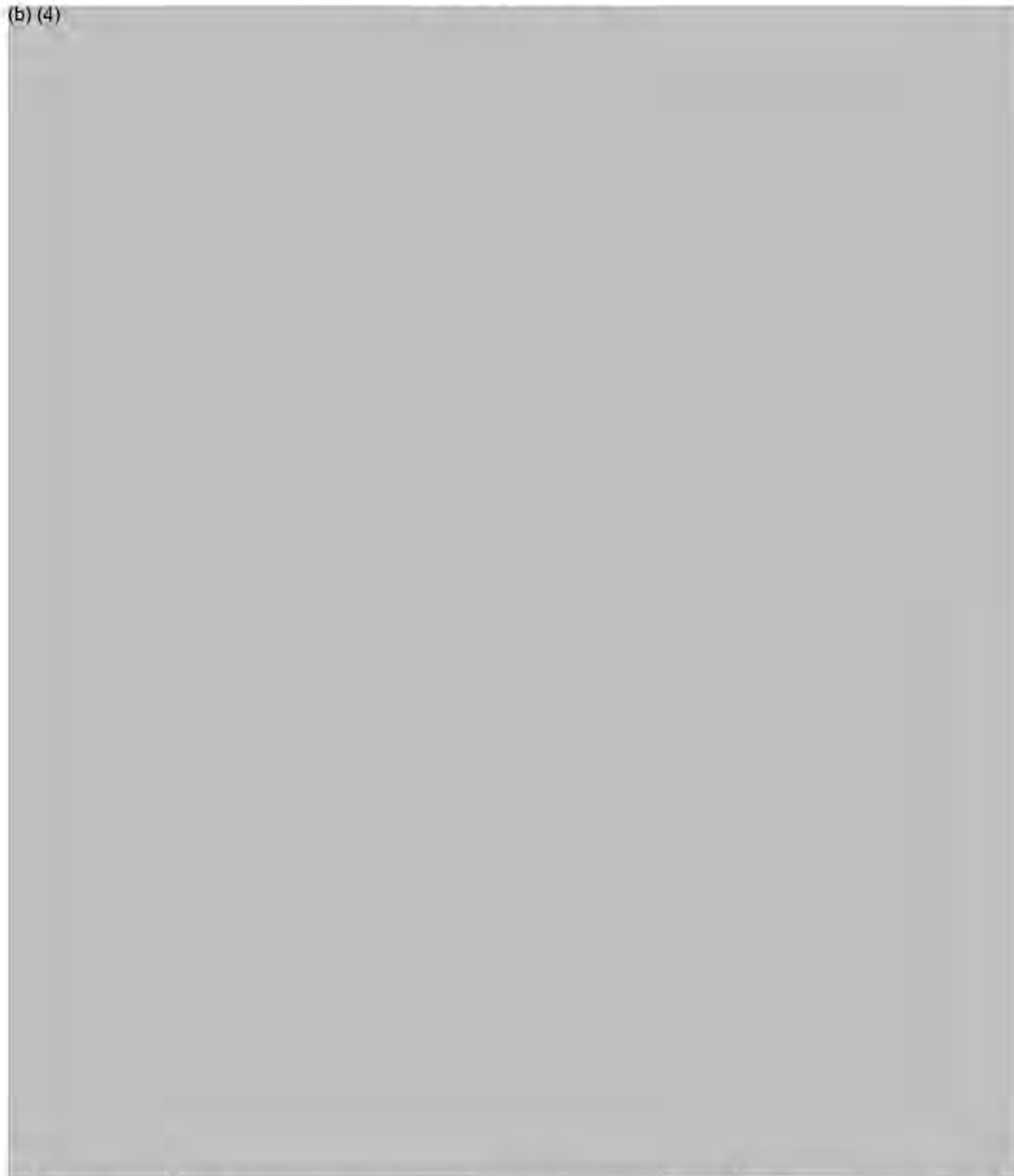


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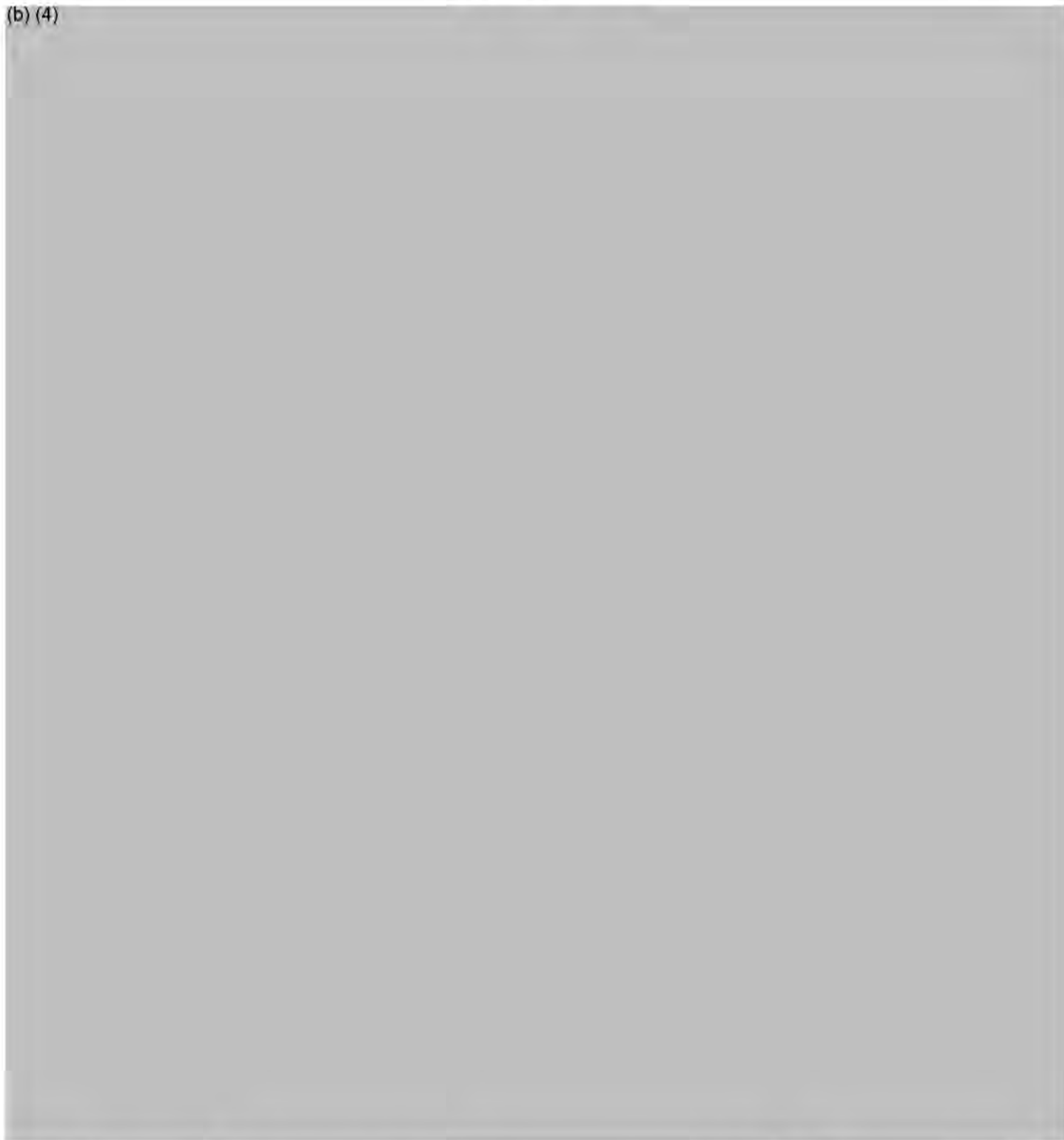
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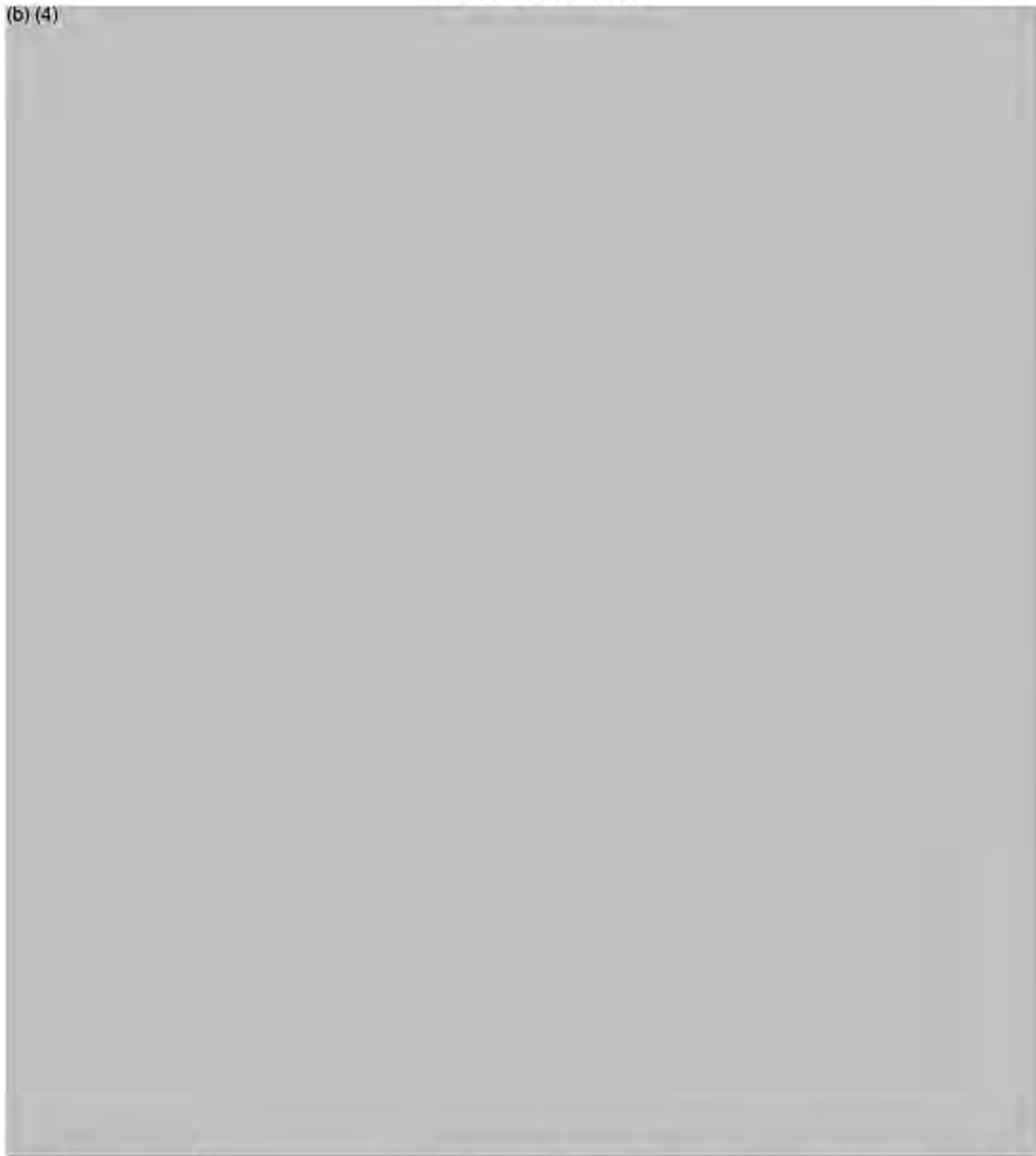
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**Determination of Selected Carbonyl Compounds in  
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**Determination of Selected Carbonyl Compounds in  
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**Determination of Selected Carbonyl Compounds in  
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Doc: ACD0050STM  
Rev: 21  
Date Issued: 08/26/2014



**Title:** Determination of Carbonyls in Mainstream  
Tobacco Smoke

**Effective Date:** 3/20/2015

**Document No.:** RJRT-WI-004112

**Revision Level:** 022

**Author:** Candice K Cunningham

**Status:** EXPIRED

**Release Review and Approval**

<u>Role</u>	<u>Actor</u>	<u>Title</u>	<u>Sign-off By</u>	<u>Sign-Off Date &amp; Time(GMT)</u>
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	03/01/2015 19:37
RJRT-AUTHOR	Candice K Cunningham	Sr Scientist	CUNNINC	03/10/2015 16:18
RJRT-RELEASE APPROVER	Jannell M. Rowe	Dir Product Services	ROWEJ	03/11/2015 11:23
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	03/11/2015 11:56

**Periodic Review**

<u>Role</u>	<u>Actor</u>	<u>Title</u>	<u>Sign-off By</u>	<u>Sign-Off Date &amp; Time(GMT)</u>
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**Reason for Revision**

New template

Title: Determination of Carbonyls in Mainstream Tobacco Smoke	Effective Date: 3/20/2015
Document #: RJRT-WI-004112	Revision: 022

**Level 3 Document**

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Title: Determination of Carbonyls in Mainstream Tobacco  
Smoke

Effective Date: 3/20/2015

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Title: Determination of Carbonyls in Mainstream Tobacco Smoke	Effective Date: 3/20/2015
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**Determination of Pyridine, Quinoline and Acrylamide in Cigarette Smoke via Gas Chromatography/Mass Spectrometry**

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Cigarette Smoke via Gas Chromatography/Mass  
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Doc: ACD0308STM  
Rev.: 9  
Date Issued: 07/31/2014



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**Level 3 Document**

**Approvals:**

Prepared by:

  
Author

Date:

7-31/14 / 7/31/14

Approved by:

  
Management - LLI

Date:

7-31-14


Approved by:

  
Quality Assurance - LLI

Date:

07/31/14

Approved by:

  
ASM Management - RJRT

Date:


7-31-14

Approved by:

  
Quality Assurance - LLI Document Control

Date:

07/31/2014

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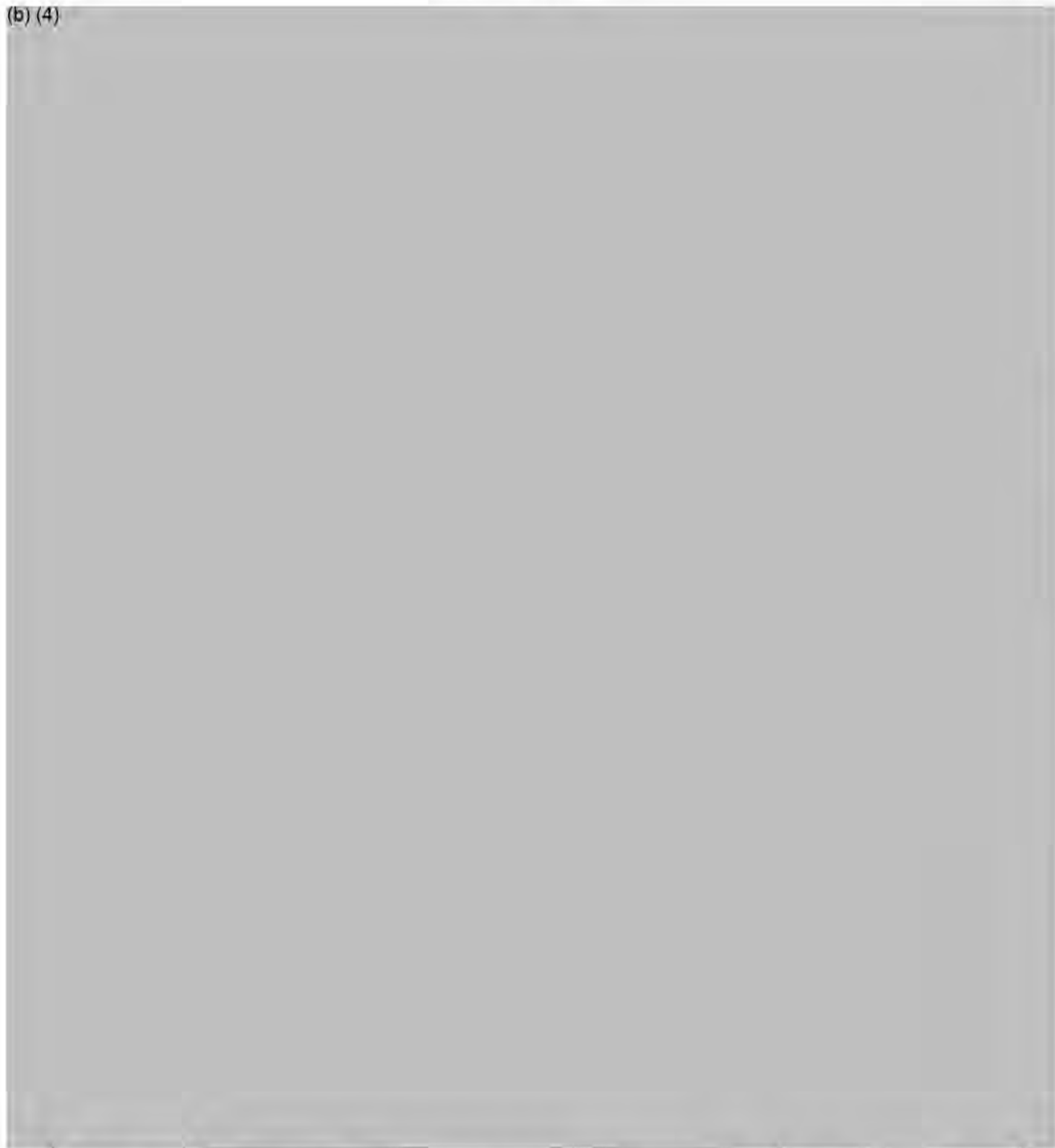
**Determination of Pyridine, Quinoline and Acrylamide in  
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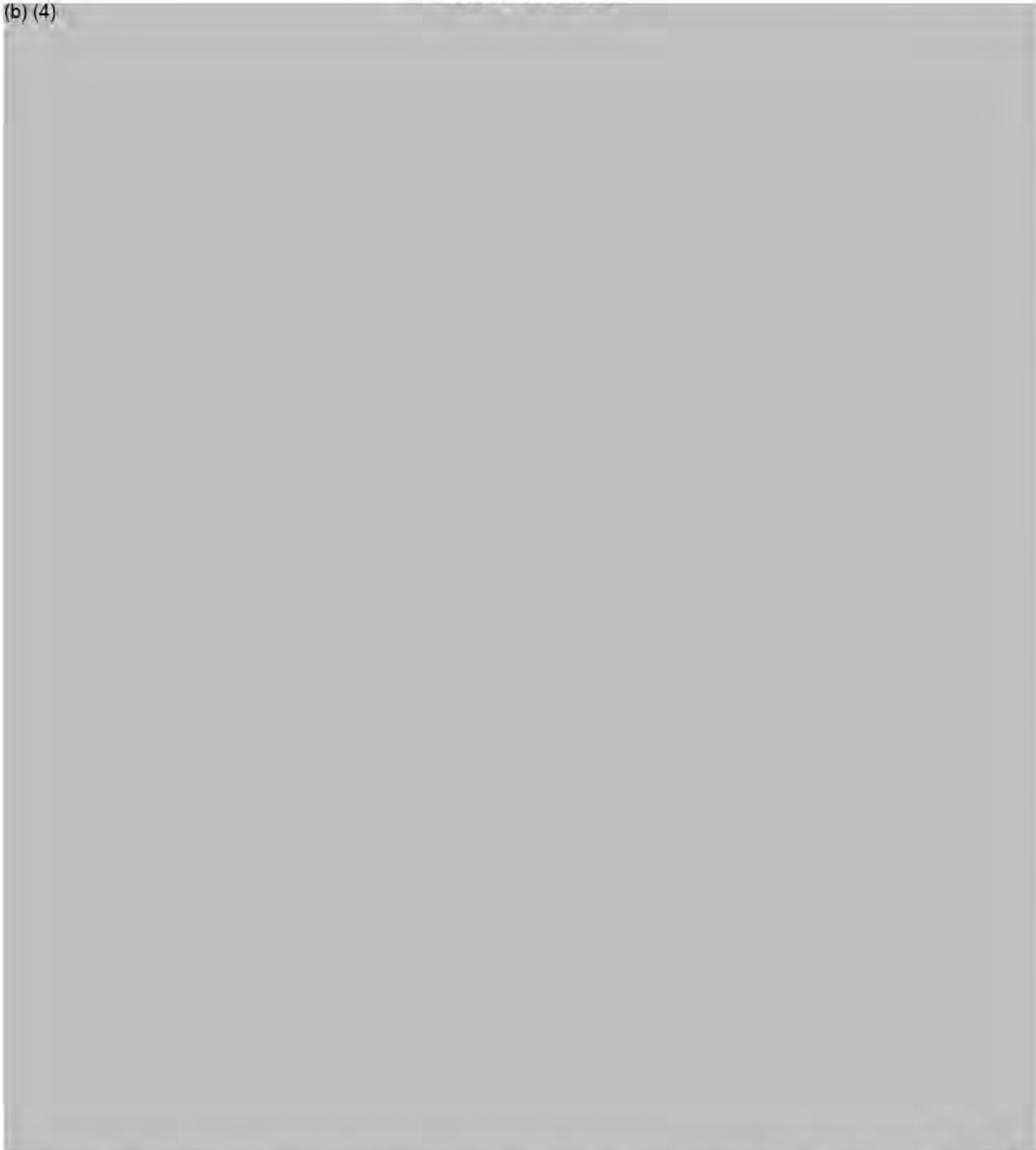
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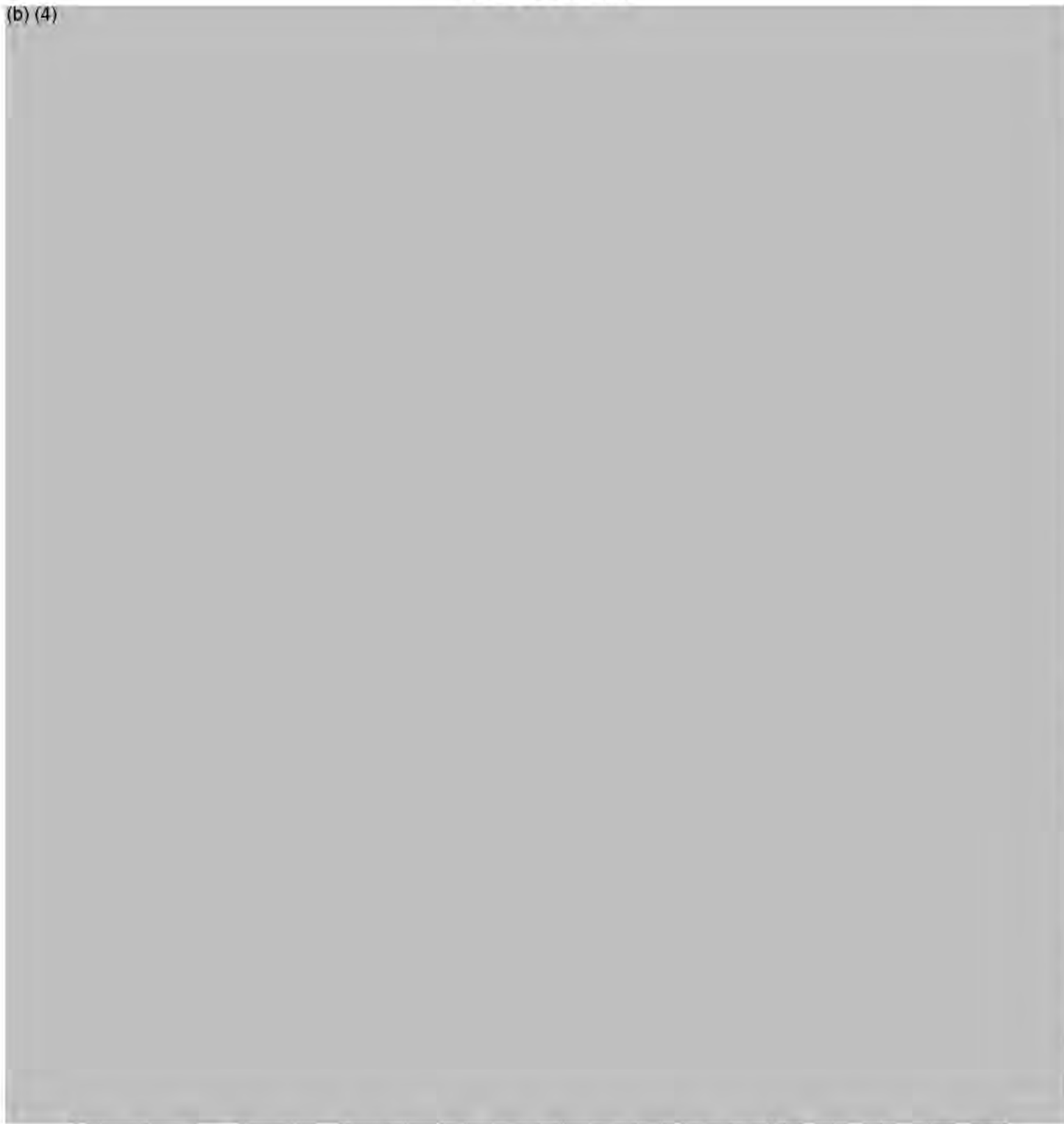
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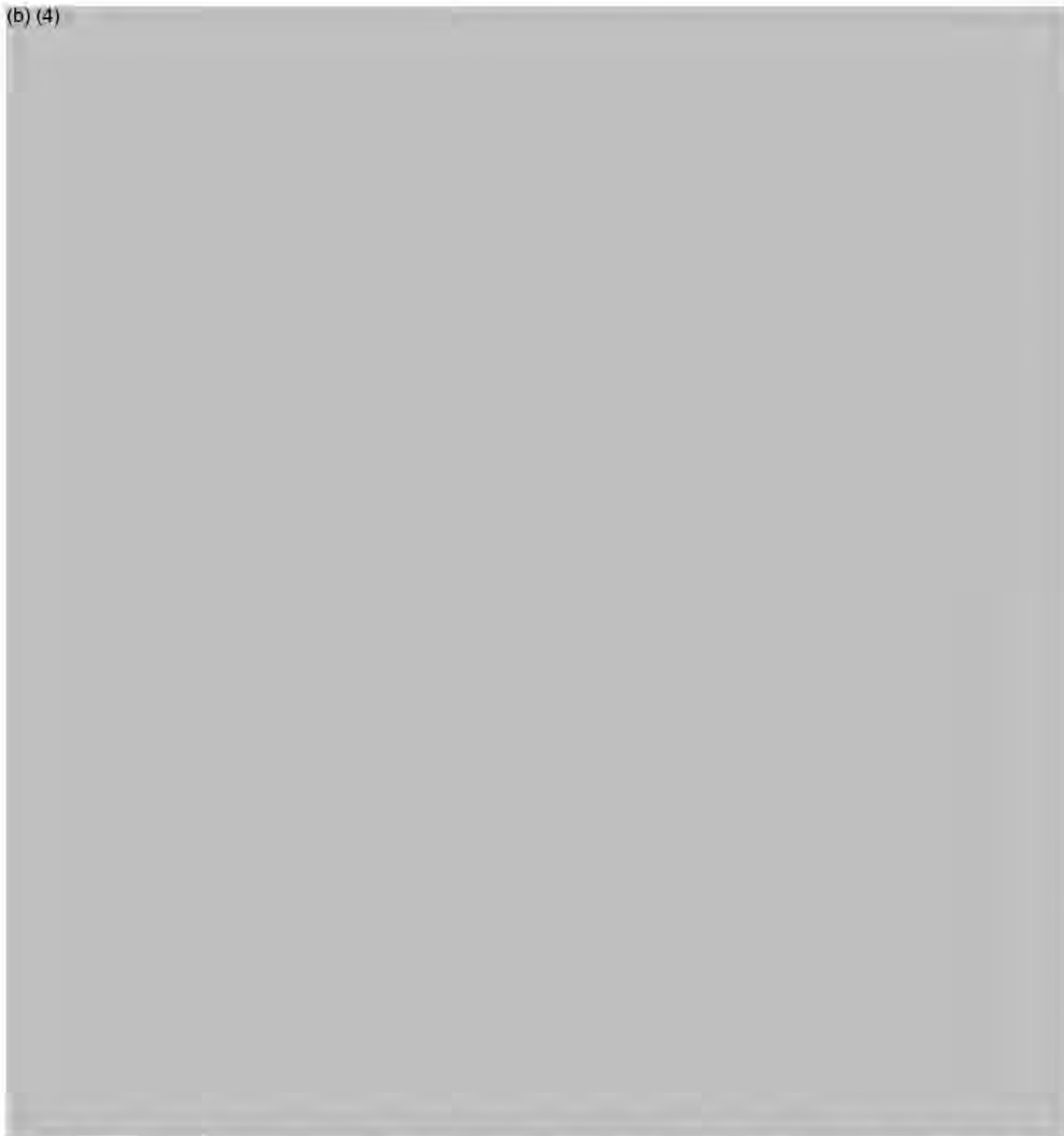
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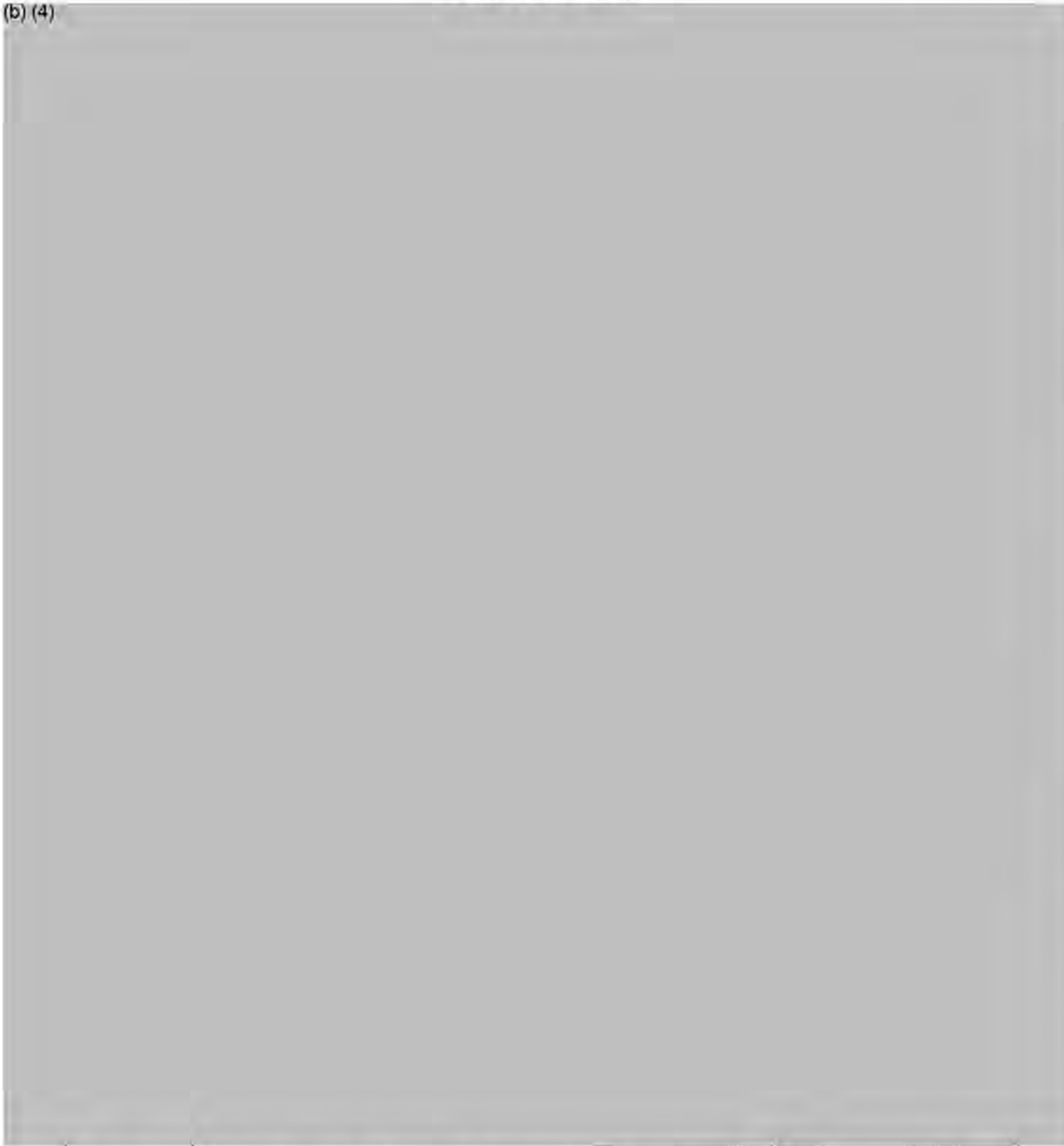
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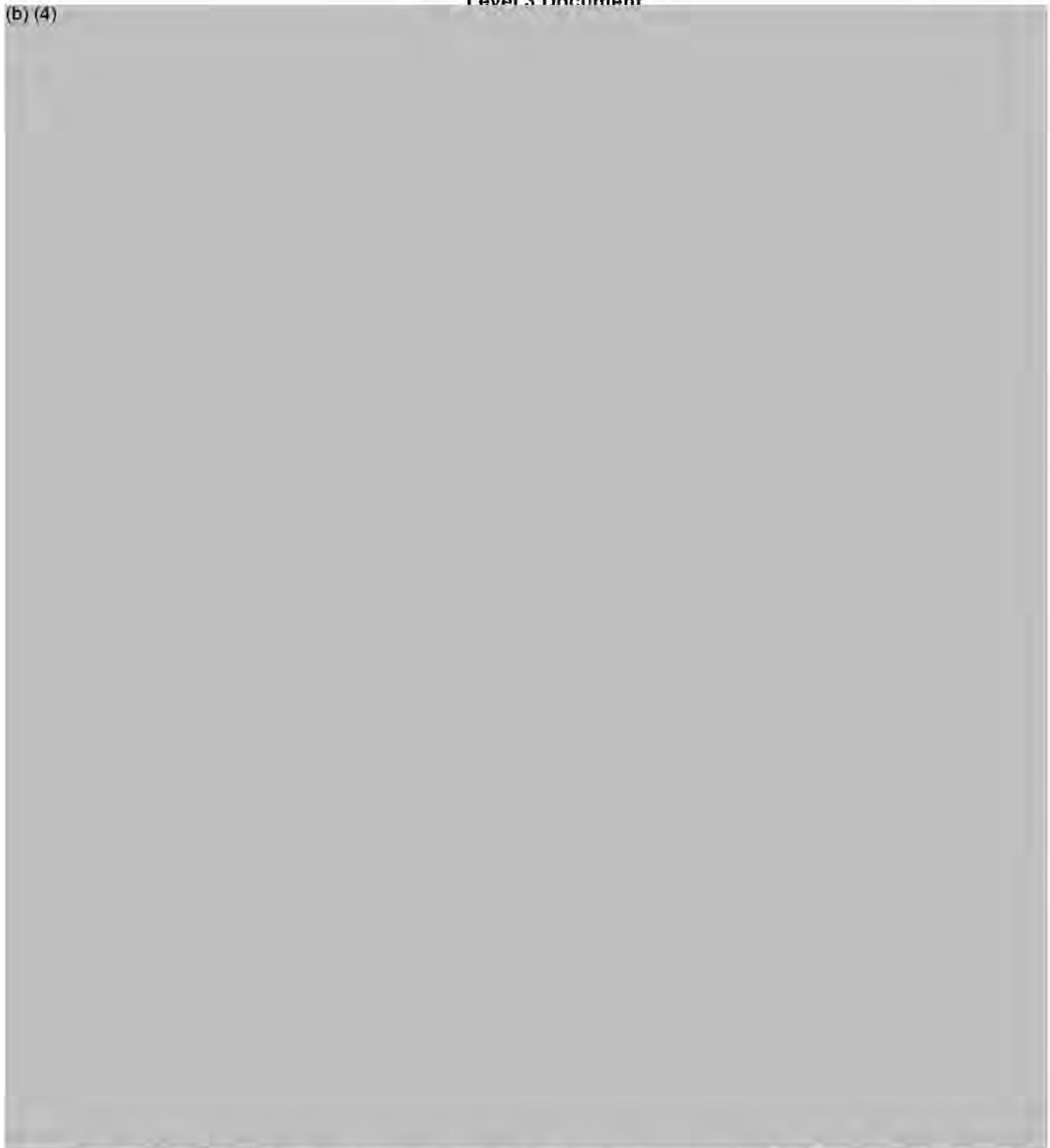
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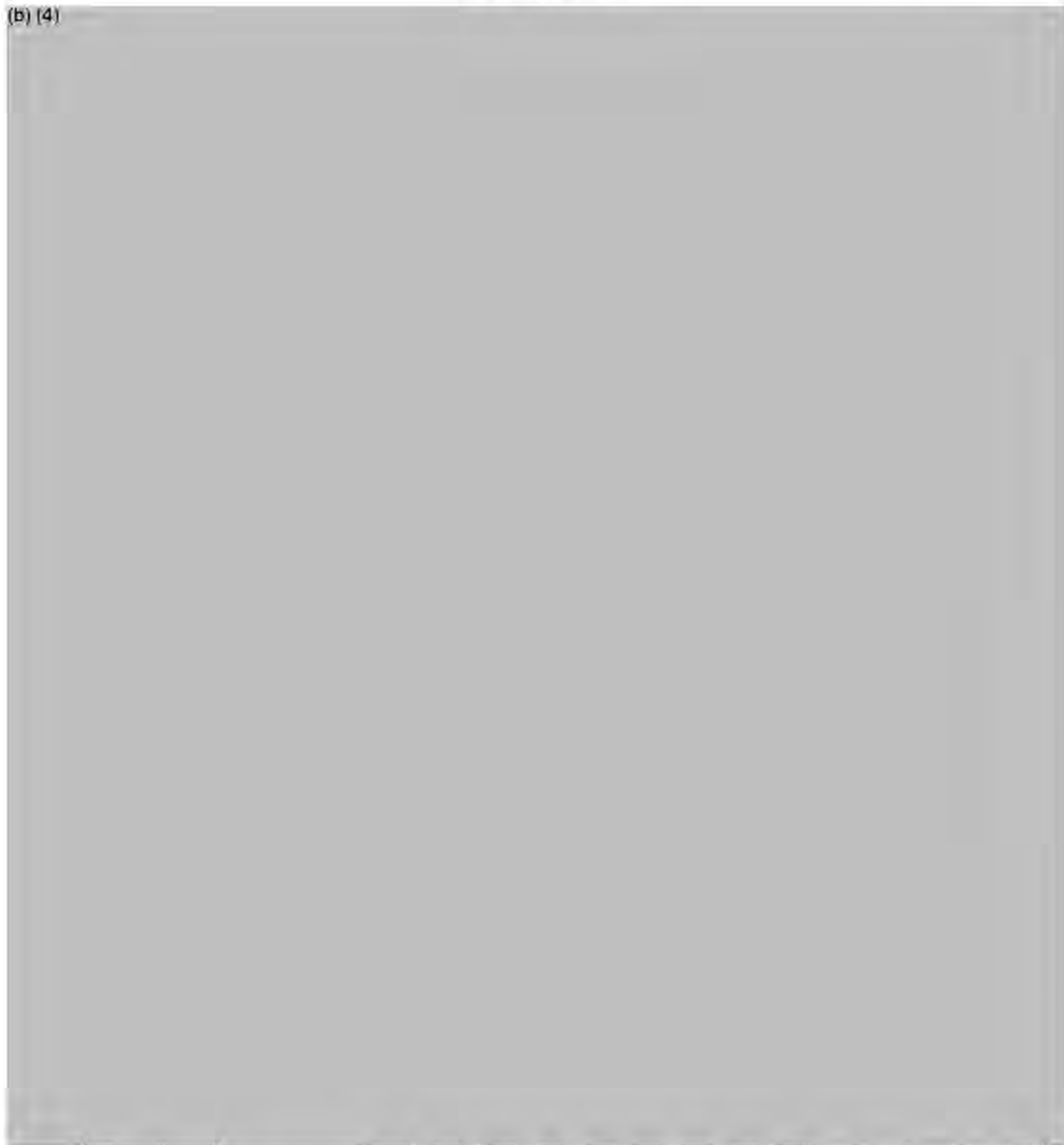
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Doc: ACD0308STM  
Rev.: 9  
Date Issued: 07/31/2014



**Title:** Determination of Pyridine and Quinoline in  
Cigarette Smoke via Gas  
Chromatography/Mass Spectrometry

**Effective Date:** 3/23/2015

**Document No.:** RJRT-WI-004196

**Revision Level:** 010

**Author:** Keith J Green

**Status:** EXPIRED

### **Release Review and Approval**

<u>Role</u>	<u>Actor</u>	<u>Title</u>	<u>Sign-off By</u>	<u>Sign-Off Date &amp; Time(GMT)</u>
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	03/11/2015 3:21
RJRT-AUTHOR	Keith J Green	Scientist IV	GREENK1	03/12/2015 19:31
RJRT-RELEASE APPROVER	Jannell M. Rowe	Dir Product Services	ROWEJ	03/15/2015 17:07
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	03/15/2015 19:19

### **Periodic Review**

<u>Role</u>	<u>Actor</u>	<u>Title</u>	<u>Sign-off By</u>	<u>Sign-Off Date &amp; Time(GMT)</u>
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### **Reason for Revision**

New template

Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
Document #: RJRT-WI-004196	Revision: 010

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Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
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Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
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Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
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Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
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Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
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Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
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Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
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Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
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Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
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Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
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Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
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Title: Determination of Pyridine and Quinoline in Cigarette Smoke via Gas Chromatography/Mass Spectrometry	Effective Date: 3/23/2015
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**Title:** Quantitation of Pyridine, Quinoline, and  
Acrylamide in Cigarette Smoke by GCMS

**Effective Date:** 11/30/2015

**Document No.:** RJRT-WI-004196

**Revision Level:** 011

**Author:** Tracy M. Hefner

**Status:** CURRENT

### **Release Review and Approval**

<b><u>Role</u></b>	<b><u>Actor</u></b>	<b><u>Title</u></b>	<b><u>Sign-off By</u></b>	<b><u>Sign-Off Date &amp; Time(GMT)</u></b>
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	11/12/2015 13:40
RJRT-AUTHOR	Tracy M. Hefner	Sr Technician	HEFNERT	11/12/2015 15:37
RJRT-RELEASE APPROVER	Jannell M. Rowe	Dir Product Services	ROWEJ	11/13/2015 3:32
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	11/13/2015 12:51

### **Periodic Review**

<b><u>Role</u></b>	<b><u>Actor</u></b>	<b><u>Title</u></b>	<b><u>Sign-off By</u></b>	<b><u>Sign-Off Date &amp; Time(GMT)</u></b>
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### **Reason for Revision**

Adjust to new Pilgrim format; Add clarifying language and organization to the document. Change Title, Change company name

Title: Quantitation of Pyridine, Quinoline, and Acrylamide in Cigarette Smoke by GCMS	Effective Date: 11/30/2015
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Title: Quantitation of Pyridine, Quinoline, and Acrylamide in Cigarette Smoke by GCMS	Effective Date: 11/30/2015
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Title: Quantitation of Pyridine, Quinoline, and Acrylamide in Cigarette Smoke by GCMS	Effective Date: 11/30/2015
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Title: Quantitation of Pyridine, Quinoline, and Acrylamide in  
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Title: Quantitation of Pyridine, Quinoline, and Acrylamide in Cigarette Smoke by GCMS	Effective Date: 11/30/2015
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Title: Quantitation of Pyridine, Quinoline, and Acrylamide in  
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Title: Quantitation of Pyridine, Quinoline, and Acrylamide in Cigarette Smoke by GCMS	Effective Date: 11/30/2015
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Title: Quantitation of Pyridine, Quinoline, and Acrylamide in Cigarette Smoke by GCMS	Effective Date: 11/30/2015
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Doc: ACD1113STM  
Rev: 4  
Date Issued: 02/21/2014

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**Approvals:**


Prepared by: Dan L. Stiles Date: 2-21-14  
Author

Approved by: Marty Ines Date: 2-21-14  
Management - LLI

Approved by: Sharon E. Lee Date: 02/21/14  
Quality Assurance - LLI

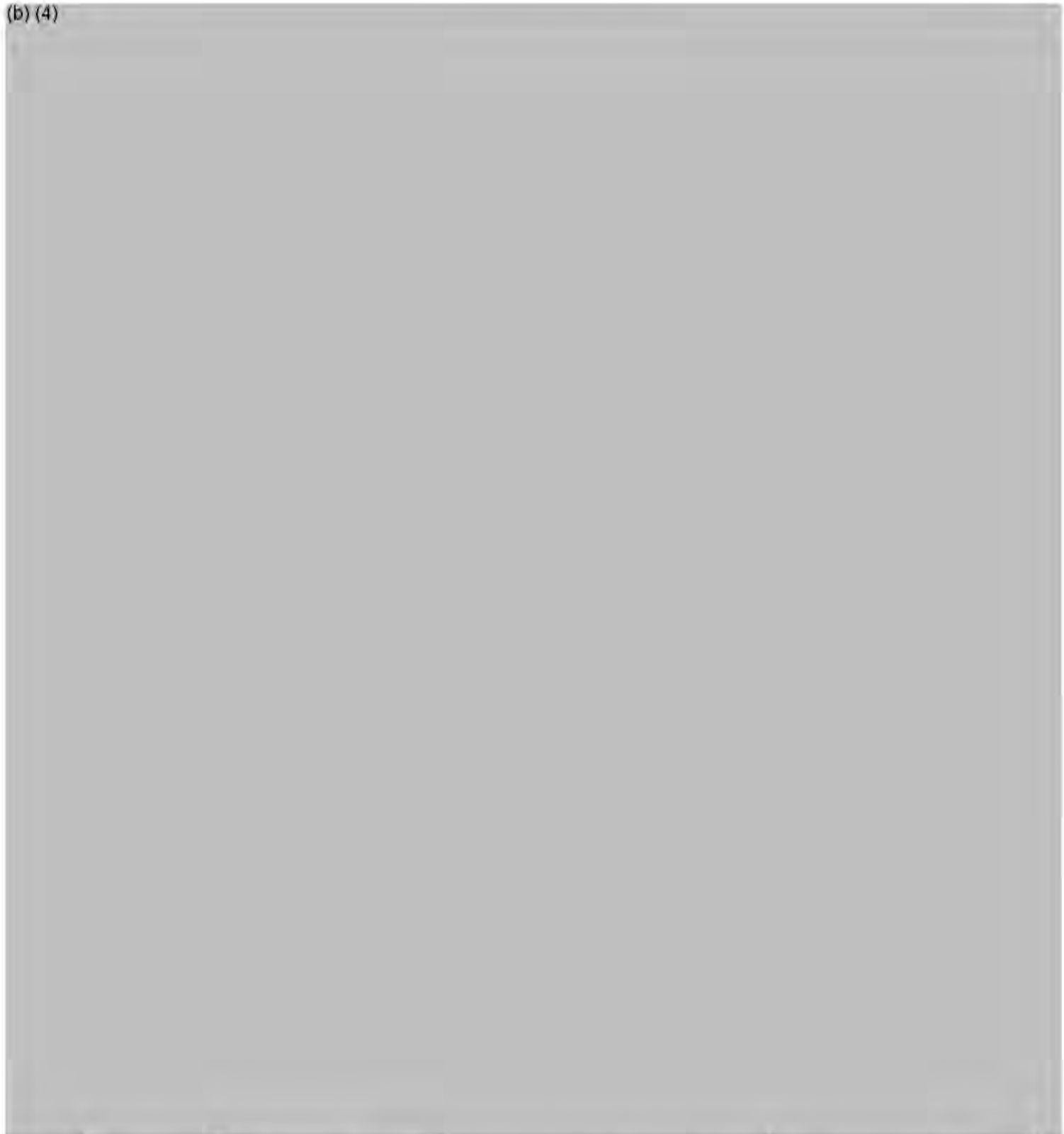
Approved by: Jannell M. Rave Date: 02/24/2014  
ASM Management - RJRT


Approved by: \_\_\_\_\_ Date: \_\_\_\_\_  
Quality Assurance -- LLI Document Control

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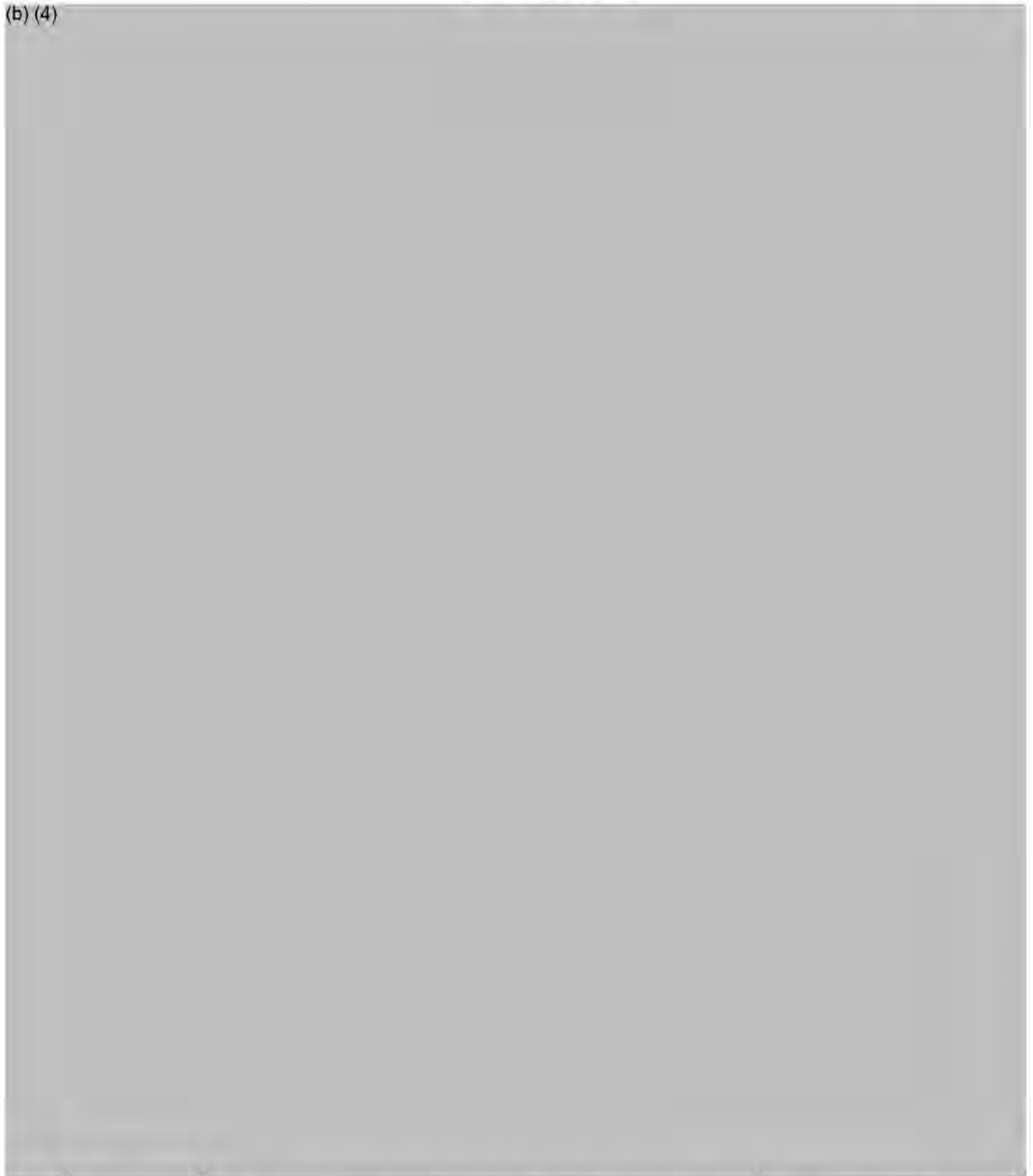
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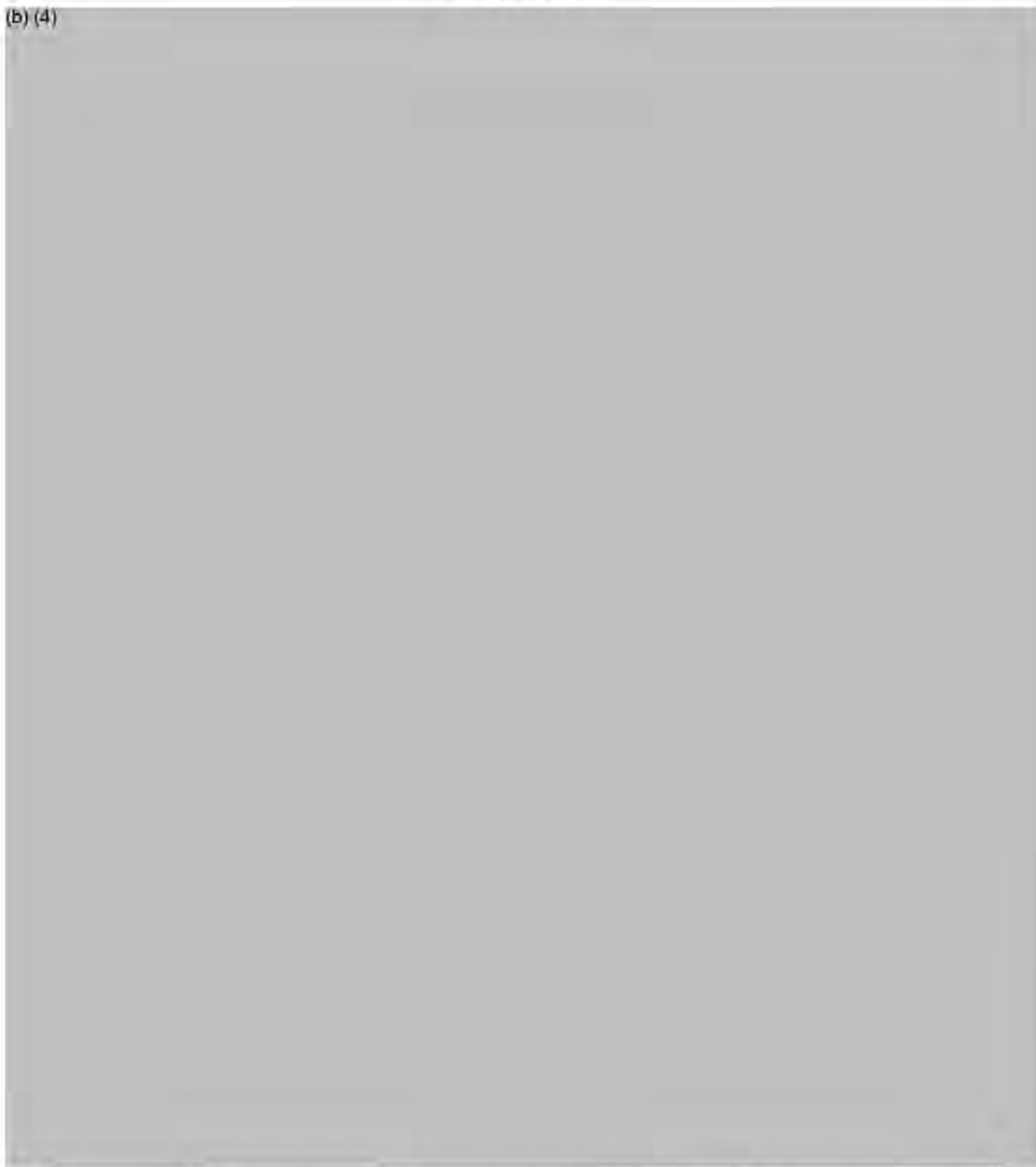
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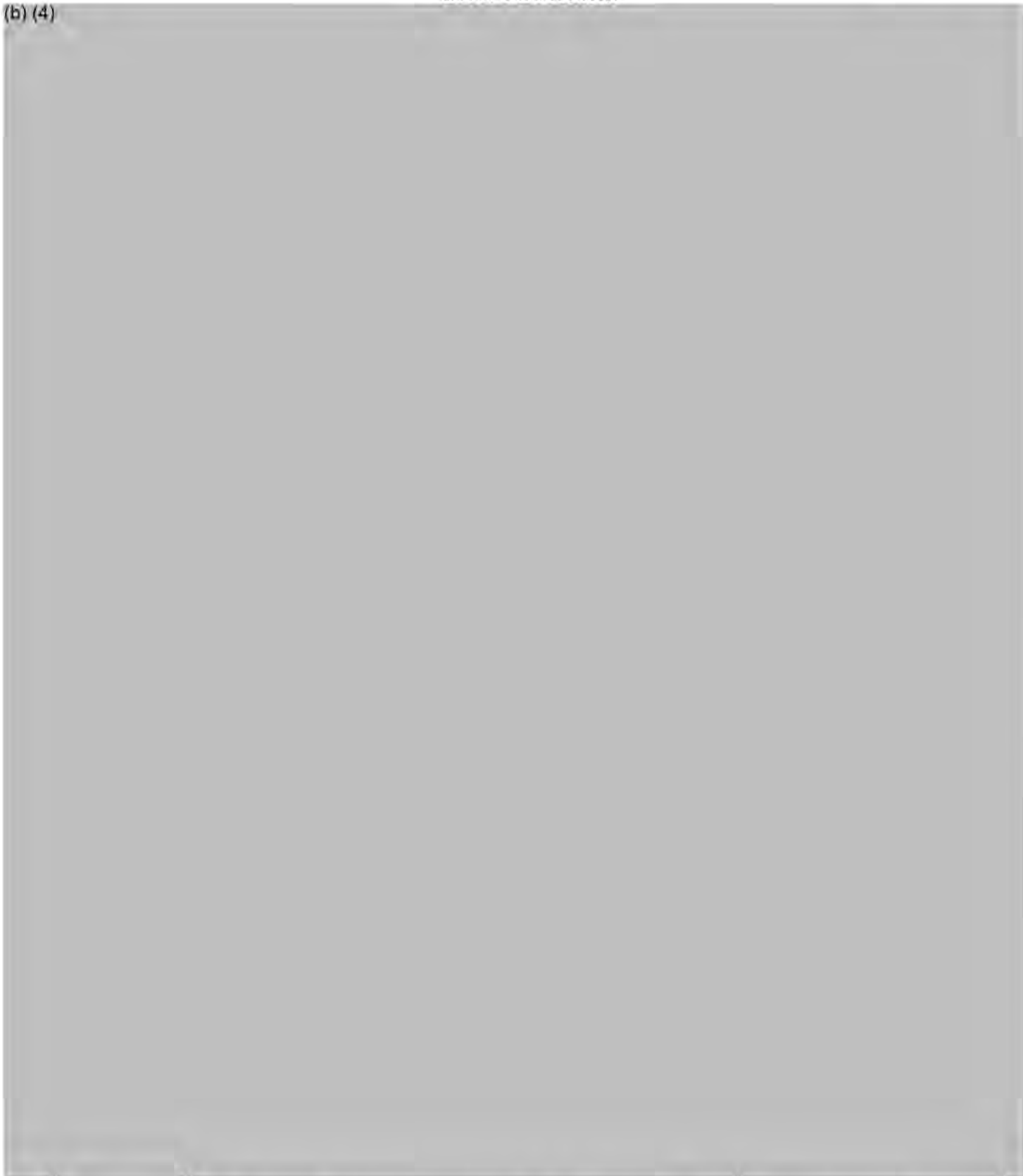
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**Title:** Standard Operating Procedures for the  
Digestion and Analysis of Metals in Mainstream  
Smoke Condensate by ICP-MS

**Effective Date:** 11/3/2014

**Document No.:** RJRT-WI-004231

**Revision Level:** 005

**Author:** Keith J Green

**Status:** EXPIRED

### **Release Review and Approval**

<b><u>Role</u></b>	<b><u>Actor</u></b>	<b><u>Title</u></b>	<b><u>Sign-off By</u></b>	<b><u>Sign-Off Date &amp; Time(GMT)</u></b>
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	10/20/2014 14:43
RJRT-AUTHOR	Keith J Green	Scientist IV	GREENK1	10/20/2014 15:09
RJRT-RELEASE APPROVER	Jannell M. Rowe	Dir Product Services	ROWEJ	10/20/2014 16:23
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	10/20/2014 16:54

### **Periodic Review**

<b><u>Role</u></b>	<b><u>Actor</u></b>	<b><u>Title</u></b>	<b><u>Sign-off By</u></b>	<b><u>Sign-Off Date &amp; Time(GMT)</u></b>
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### **Reason for Revision**

New template

Title: Standard Operating Procedures for the Digestion and Analysis of Metals in Mainstream Smoke Condensate by ICP-MS	Effective Date: 11/3/2014
Document #: RJRT-WI-004231	Revision: 005

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Title: Standard Operating Procedures for the Digestion and Analysis of Metals in Mainstream Smoke Condensate by ICP-MS	Effective Date: 11/3/2014
Document #: RJRT-WI-004231	Revision: 005

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Title: Standard Operating Procedures for the Digestion and Analysis of Metals in Mainstream Smoke Condensate by ICP-MS	Effective Date: 11/3/2014
Document #: RJRT-WI-004231	Revision: 005

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Title: Standard Operating Procedures for the Digestion and Analysis of Metals in Mainstream Smoke Condensate by ICP-MS	Effective Date: 11/3/2014
Document #: RJRT-WI-004231	Revision: 005

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Title: Standard Operating Procedures for the Digestion and Analysis of Metals in Mainstream Smoke Condensate by ICP-MS	Effective Date: 11/3/2014
Document #: RJRT-WI-004231	Revision: 005

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Title: Standard Operating Procedures for the Digestion and Analysis of Metals in Mainstream Smoke Condensate by ICP-MS	Effective Date: 11/3/2014
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Title: Standard Operating Procedures for the Digestion and Analysis of Metals in Mainstream Smoke Condensate by ICP-MS	Effective Date: 11/3/2014
Document #: RJRT-WI-004231	Revision: 005

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Title: Standard Operating Procedures for the Digestion and Analysis of Metals in Mainstream Smoke Condensate by ICP-MS	Effective Date: 11/3/2014
Document #: RJRT-WI-004231	Revision: 005

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Title: Standard Operating Procedures for the Digestion and Analysis of Metals in Mainstream Smoke Condensate by ICP-MS	Effective Date: 11/3/2014
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Title: Standard Operating Procedures for the Digestion and Analysis of Metals in Mainstream Smoke Condensate by ICP-MS	Effective Date: 11/3/2014
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Title: Standard Operating Procedures for the Digestion and Analysis of Metals in Mainstream Smoke Condensate by ICP-MS	Effective Date: 11/3/2014
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**Quantitative Determination of Polycyclic Aromatic Hydrocarbons (PAHs) in Cigarettes  
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**Approvals:**

Prepared by:

Author

Date:

Approved by:

Management – LLI

Date:

Approved by:

Quality Assurance – LLI

Date:

Approved by:

ASM Management – RJRT

Date:

Approved by:

Quality Assurance – LLI Document Control

Date:

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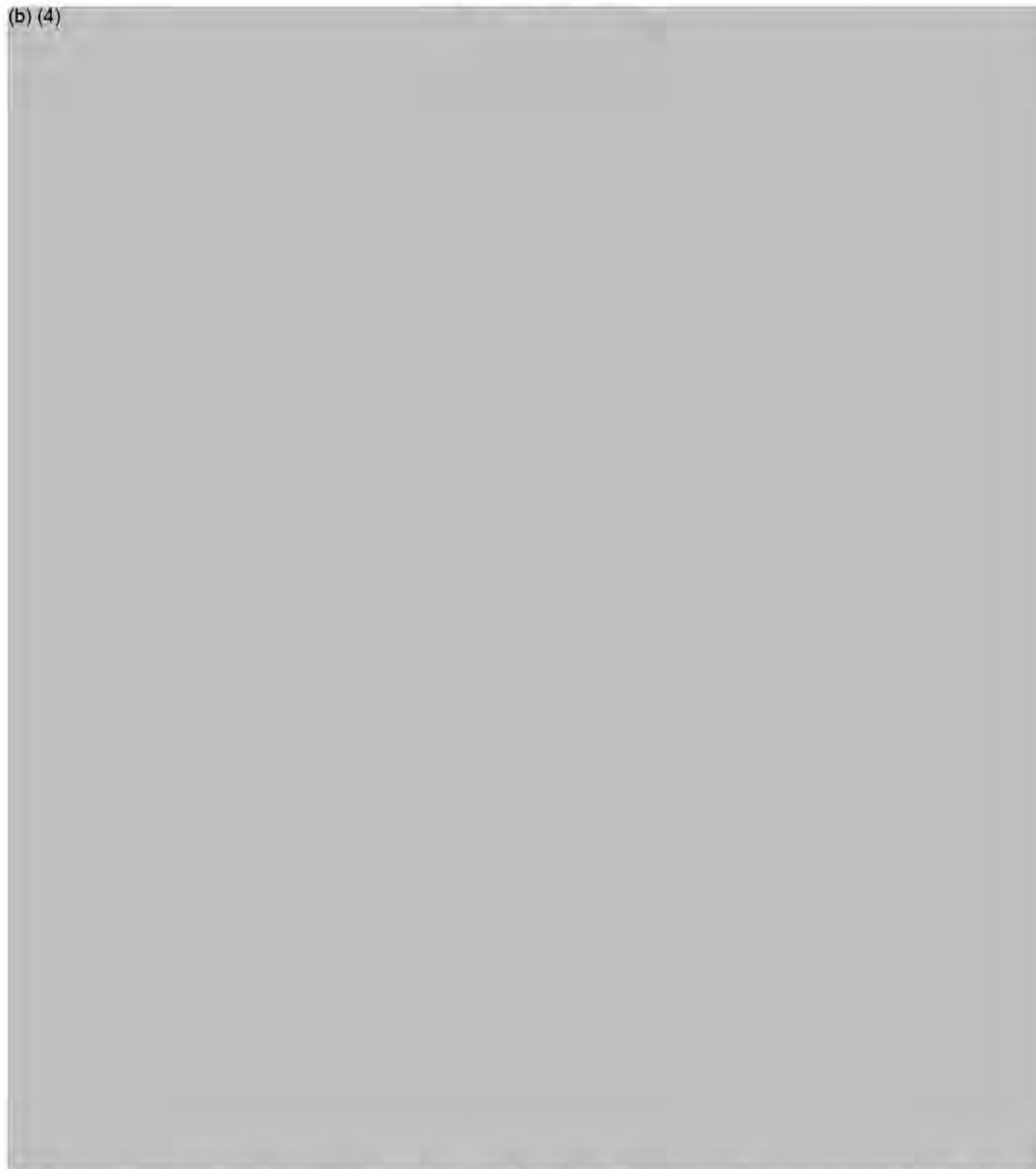
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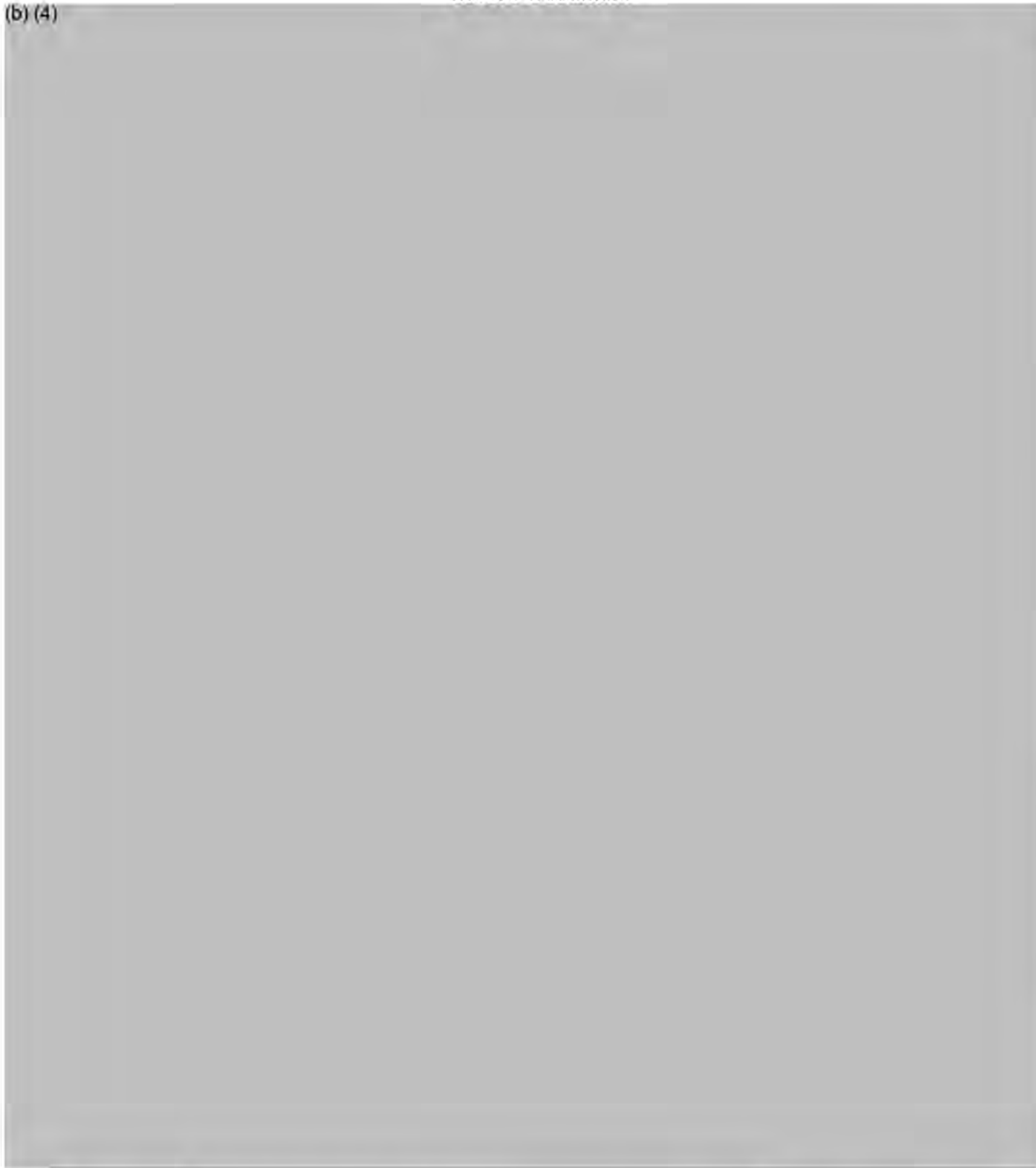



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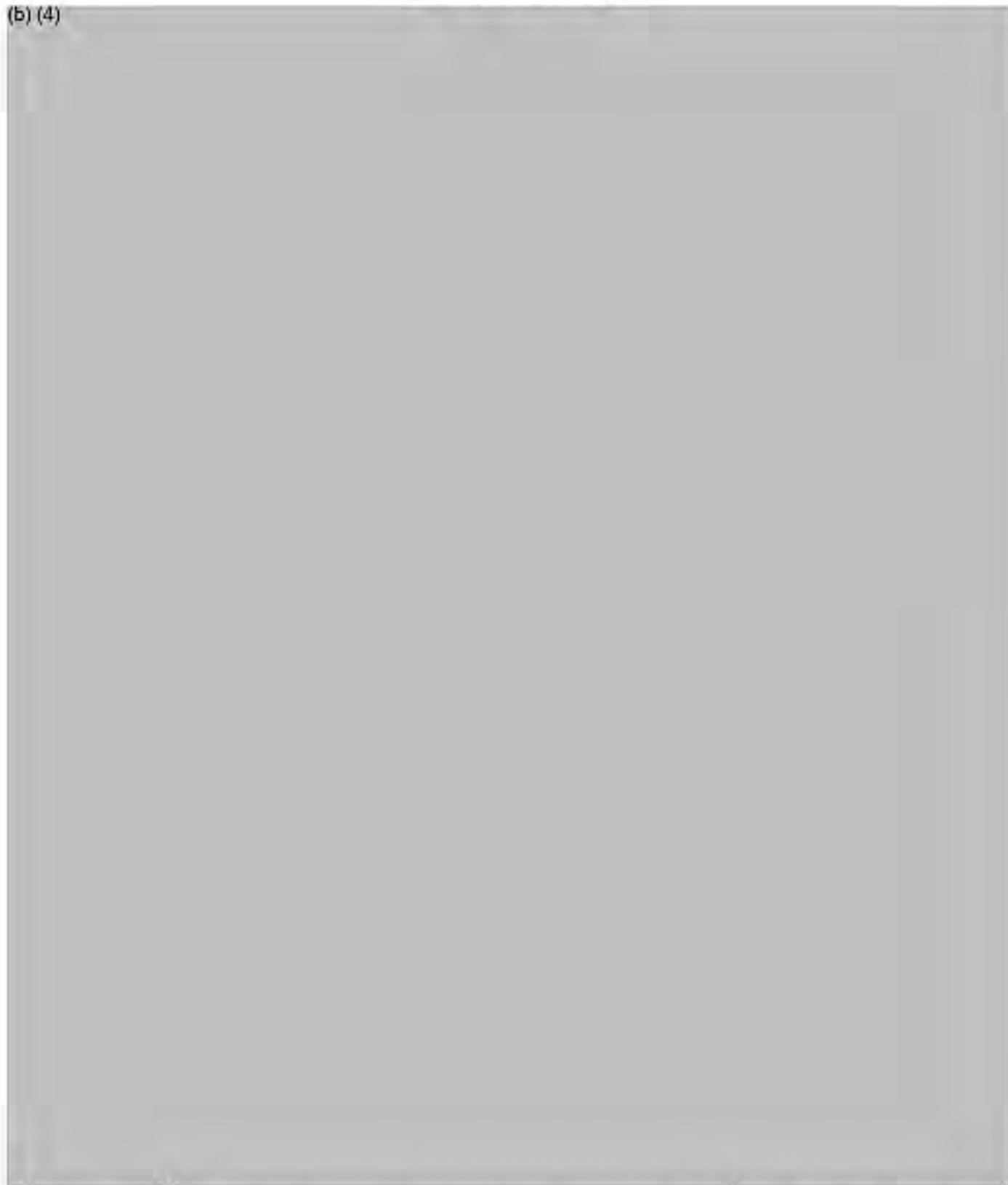
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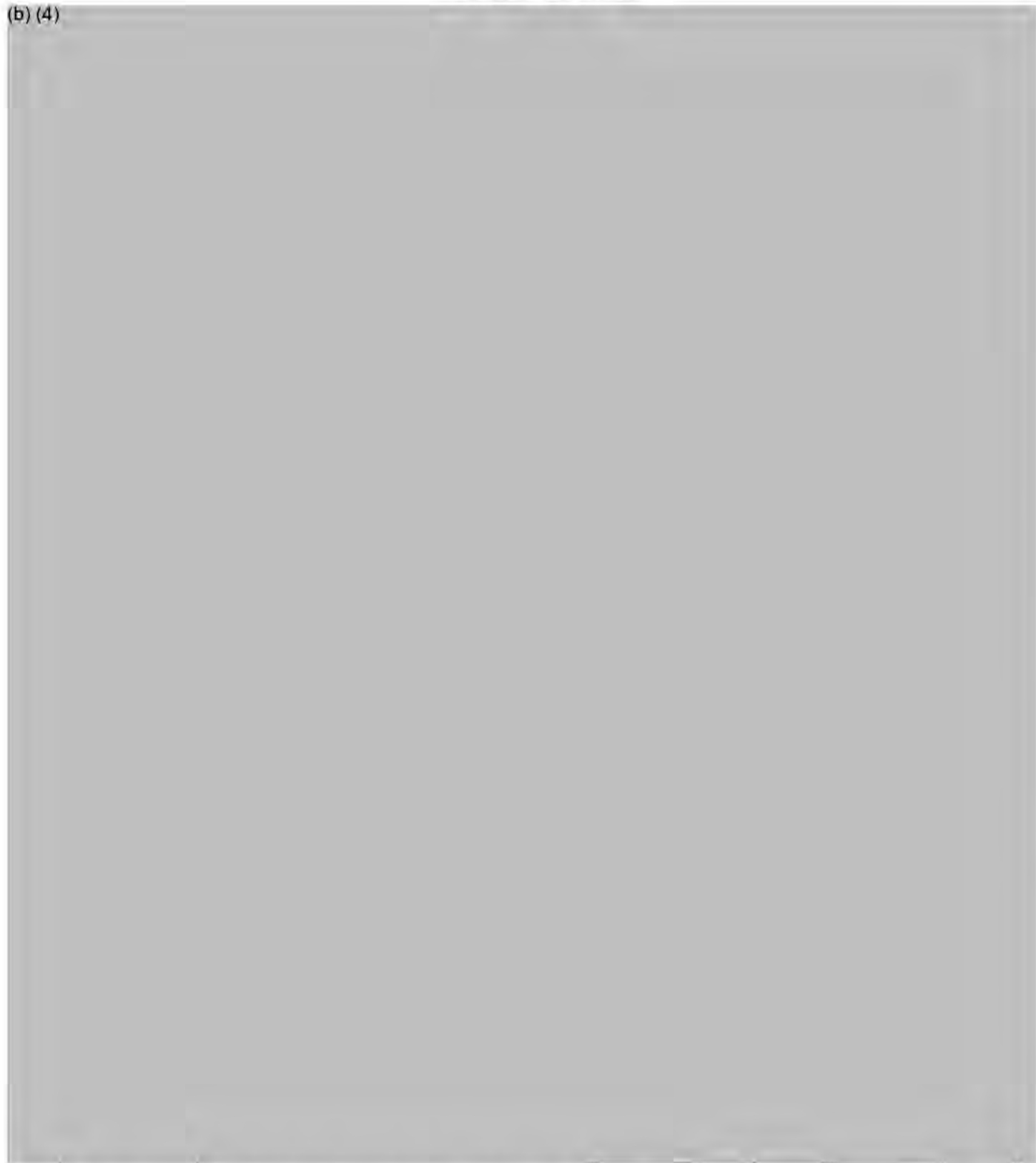
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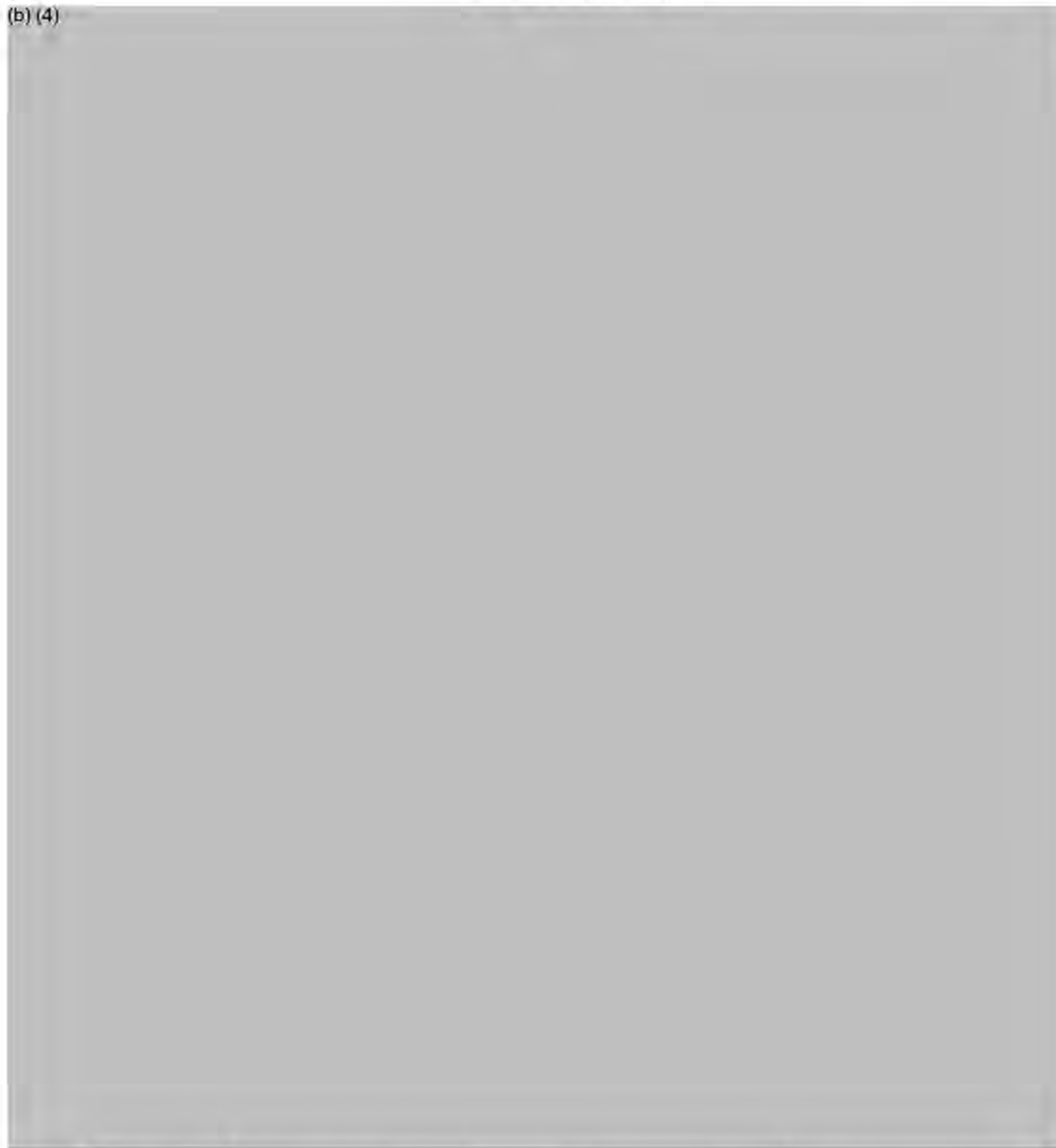
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**Title:** Quantitative Determination of Polycyclic  
Aromatic Hydrocarbons (PAHs) in Cigarettes  
and Tobacco Products by GC-MS

**Effective Date:** 3/25/2015

**Document No.:** RJRT-WI-004227

**Revision Level:** 011

**Author:** Tracy M. Hefner

**Status:** EXPIRED

### **Release Review and Approval**

<b><u>Role</u></b>	<b><u>Actor</u></b>	<b><u>Title</u></b>	<b><u>Sign-off By</u></b>	<b><u>Sign-Off Date &amp; Time(GMT)</u></b>
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	03/19/2015 17:18
RJRT-AUTHOR	Tracy M. Hefner	Sr Technician	HEFNERT	03/19/2015 17:55
RJRT-RELEASE APPROVER	Jannell M. Rowe	Dir Product Services	ROWEJ	03/20/2015 11:13
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	03/20/2015 13:00

### **Periodic Review**

<b><u>Role</u></b>	<b><u>Actor</u></b>	<b><u>Title</u></b>	<b><u>Sign-off By</u></b>	<b><u>Sign-Off Date &amp; Time(GMT)</u></b>
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### **Reason for Revision**

Title Changed to shorten it. : Made corrections, deleted any references to analytes in mixes that are not being reported; added clarification about what analytes to report for which matrix; added section about data to be entered into LIMS; re-organized the flow of the WI to make it easier to follow.

Title: Quantitative Determination of Polycyclic Aromatic Hydrocarbons (PAHs) in Cigarettes and Tobacco Products by GC-MS	Effective Date: 3/25/2015
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Title: Quantitative Determination of Polycyclic Aromatic Hydrocarbons (PAHs) in Cigarettes and Tobacco Products by GC-MS	Effective Date: 3/25/2015
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**Title:** Quantitative Determination of Polycyclic  
Aromatic Hydrocarbons (PAHs) in Cigarettes  
and Tobacco Products by GC-MS

**Effective Date:** 10/8/2015

**Document No.:** RJRT-WI-004227

**Revision Level:** 012

**Author:** Tracy M. Hefner

**Status:** EXPIRED

### **Release Review and Approval**

<u>Role</u>	<u>Actor</u>	<u>Title</u>	<u>Sign-off By</u>	<u>Sign-Off Date &amp; Time(GMT)</u>
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	09/28/2015 13:00
RJRT-AUTHOR	Tracy M. Hefner	Sr Technician	HEFNERT	09/28/2015 14:17
RJRT-RELEASE APPROVER	Jannell M. Rowe	Dir Product Services	ROWEJ	09/29/2015 21:02
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	10/01/2015 13:58

### **Periodic Review**

<u>Role</u>	<u>Actor</u>	<u>Title</u>	<u>Sign-off By</u>	<u>Sign-Off Date &amp; Time(GMT)</u>
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### **Reason for Revision**

Title Change; Clarity; remove obsolete sections, update to documentation requirements. Changed company name.



Title: Quantitative Determination of Polycyclic Aromatic Hydrocarbons (PAHs) in Cigarettes and Tobacco Products by GC-MS	Effective Date: 10/8/2015
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Title: Quantitative Determination of Polycyclic Aromatic Hydrocarbons (PAHs) in Cigarettes and Tobacco Products by GC-MS	Effective Date: 10/8/2015
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**Quantitative Determination of Tobacco Specific Nitrosamines by High Performance  
Liquid Chromatography Tandem Mass Spectrometry (HPLC-MS-MS)**

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Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_  
Author

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_  
Management - LLI

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_  
Quality Assurance – LLI

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_  
ASM Management - RJRT

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_  
Quality Assurance - LLI Document Control


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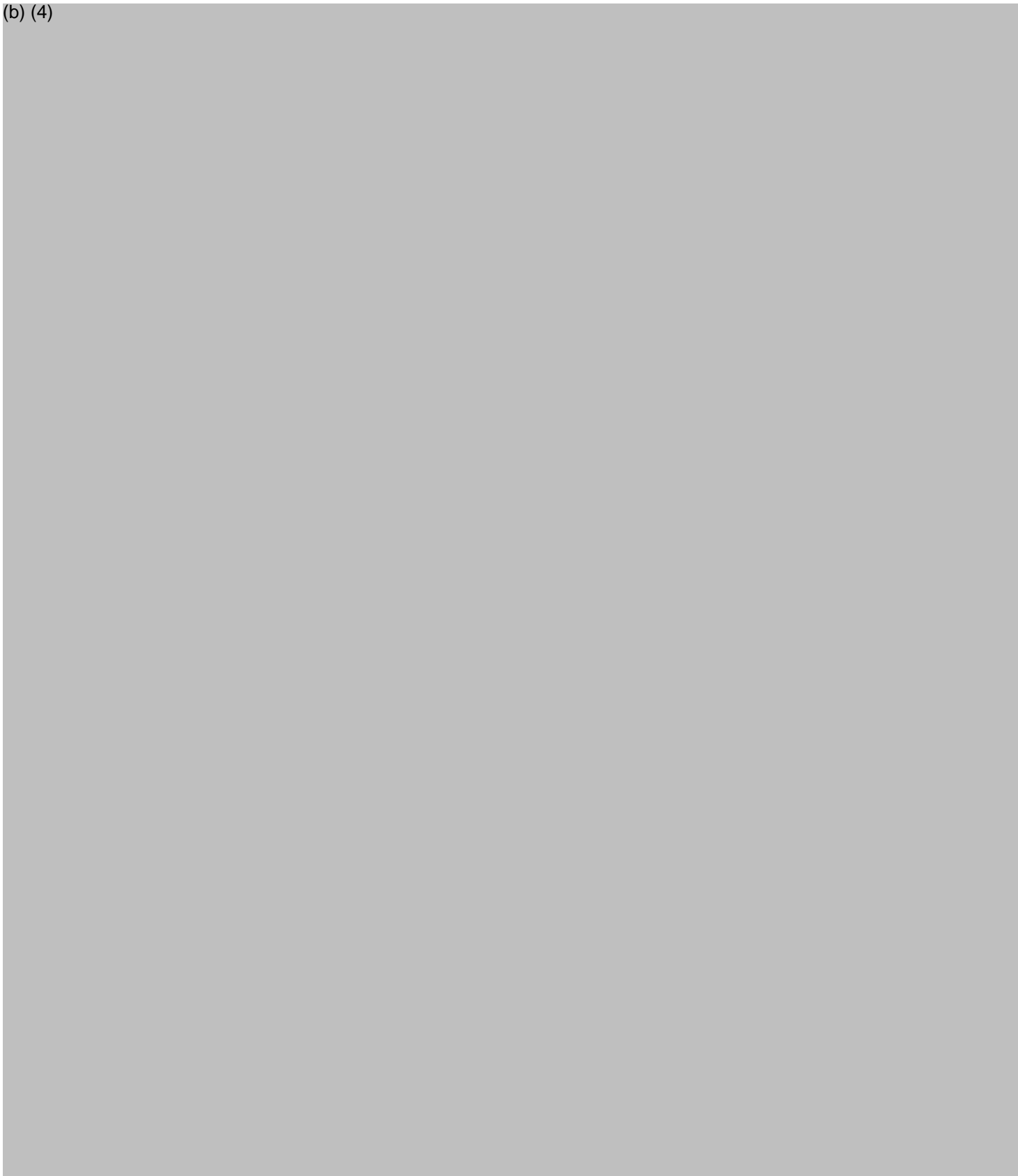
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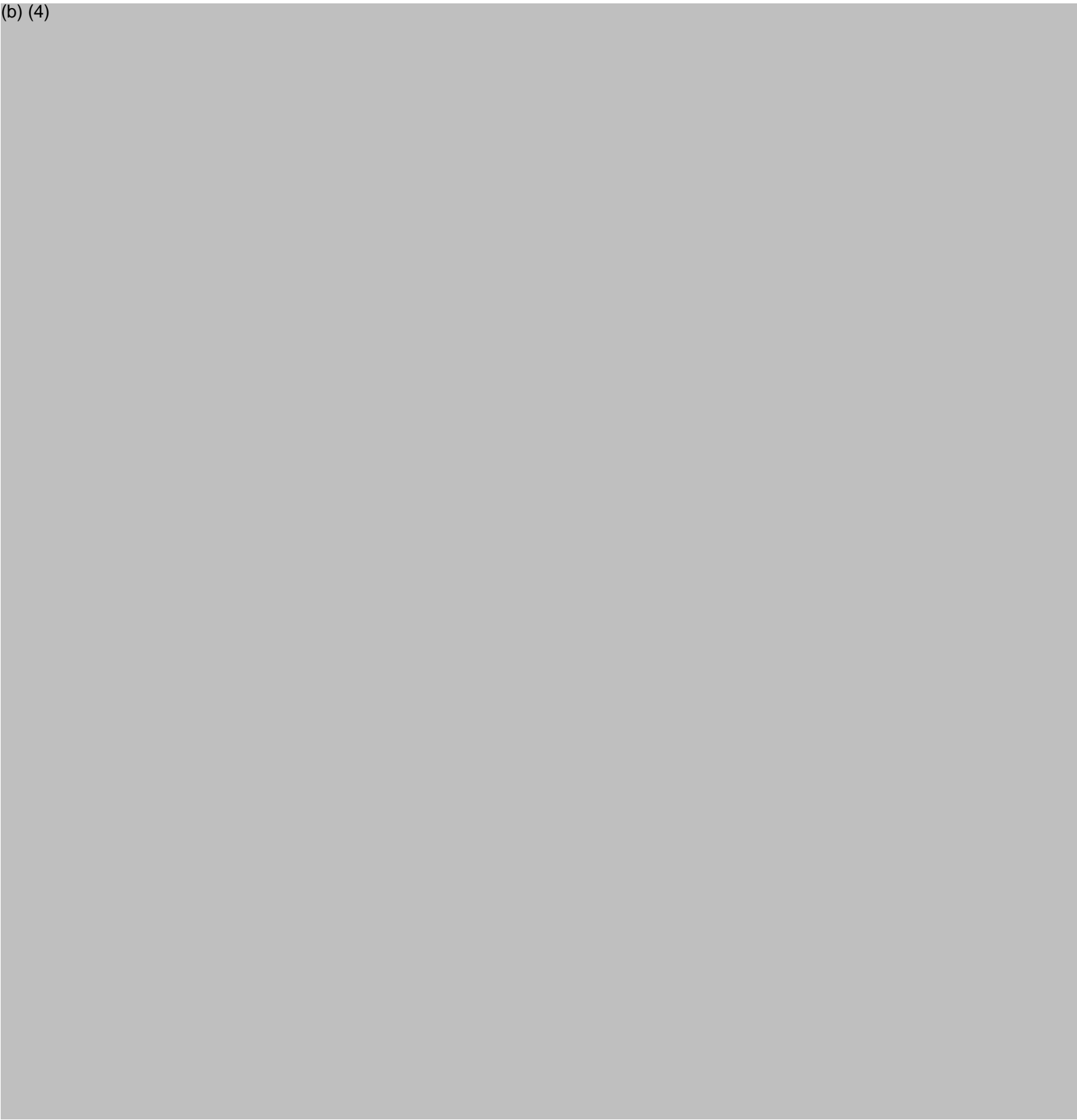
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Approvals:

Prepared by:   
Author

Date: 8/28/14

Approved by:   
Management - LLI


Date: 8/28/14

Approved by:   
Quality Assurance - LLI

Date: 08/28/14

Approved by:   
ASM Management - RJRT

Date: 08/28/2014

Approved by:   
Quality Assurance - LLI Document Control

Date: 08/28/2014

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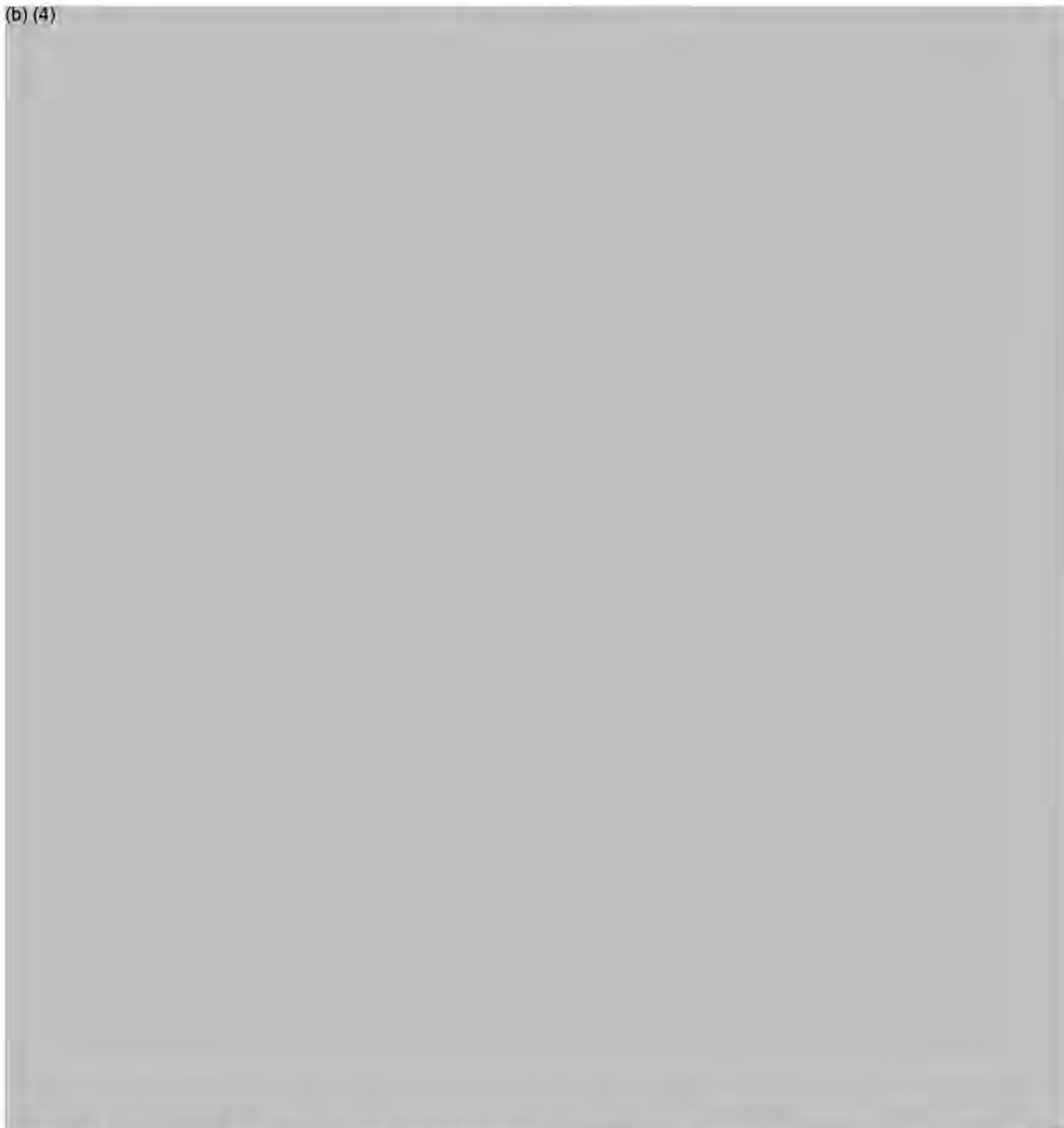
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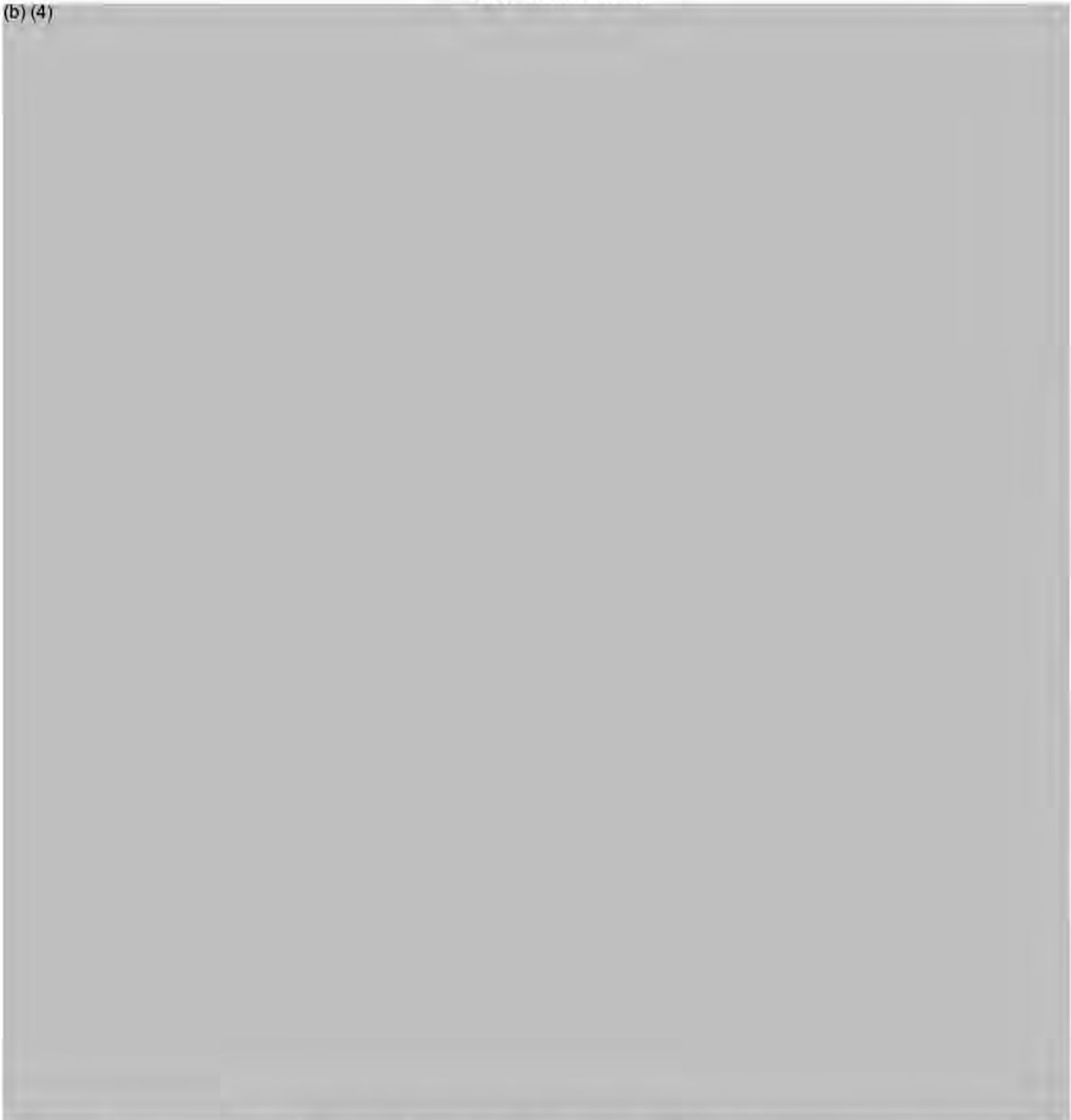
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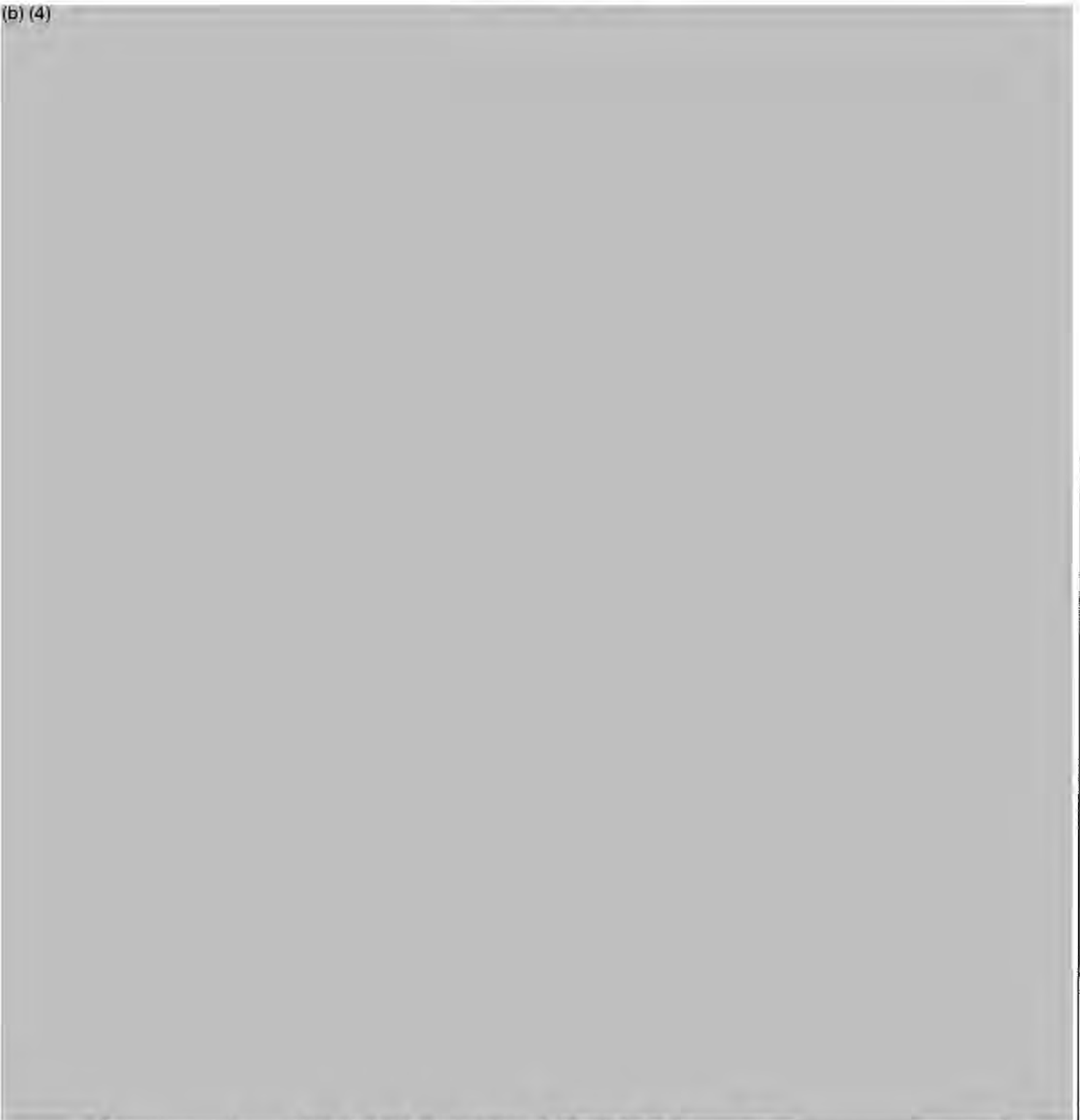
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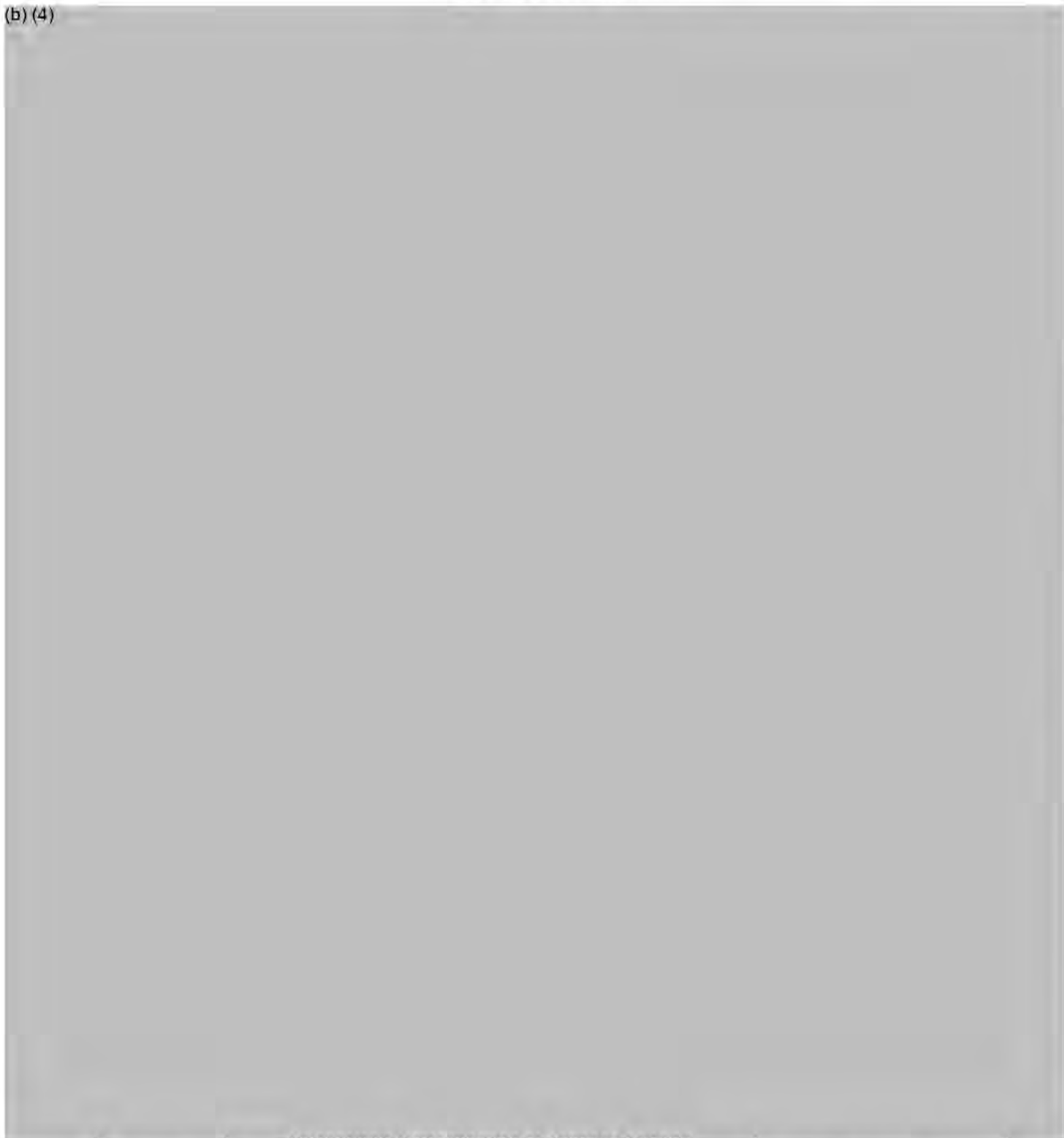
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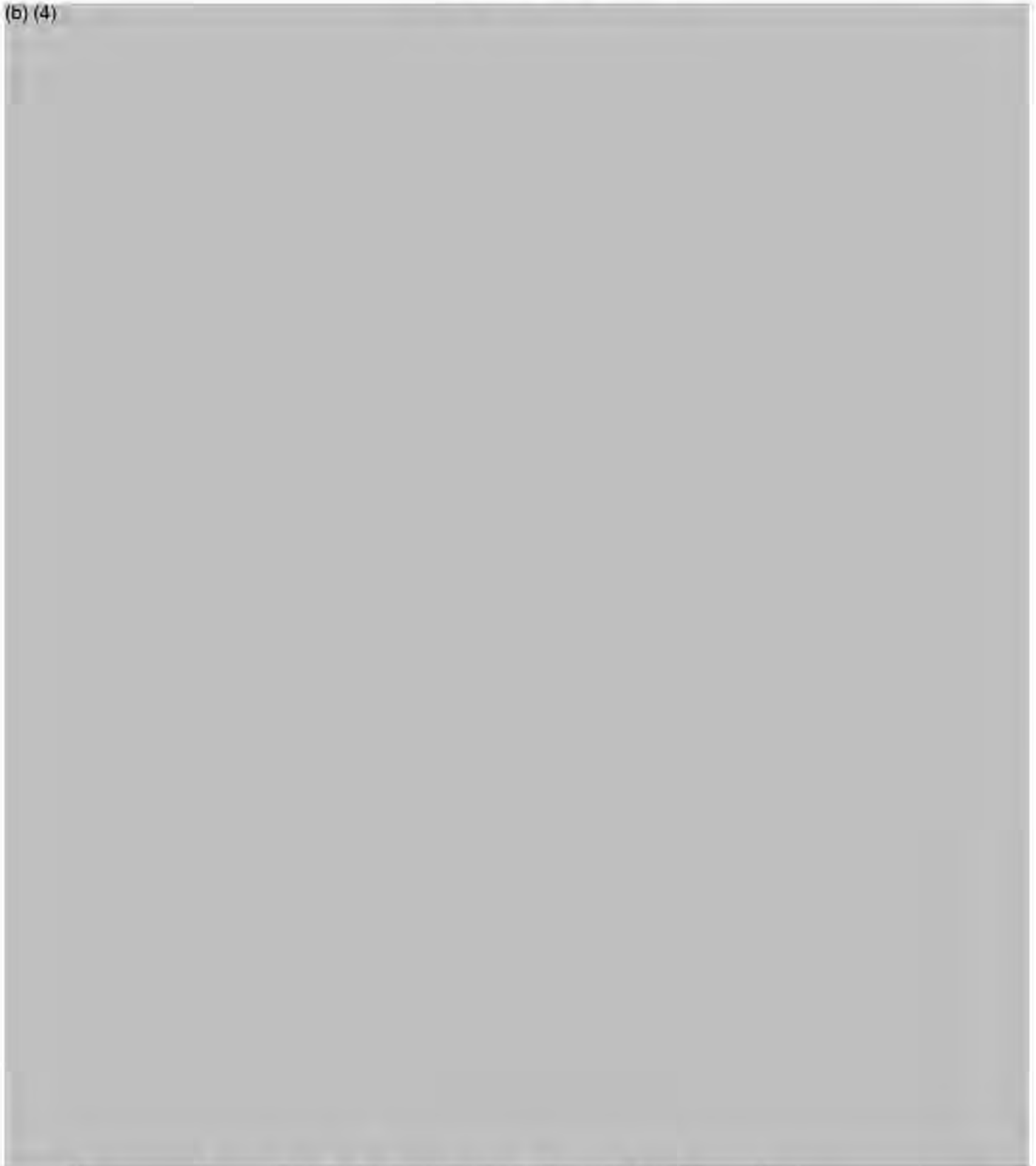
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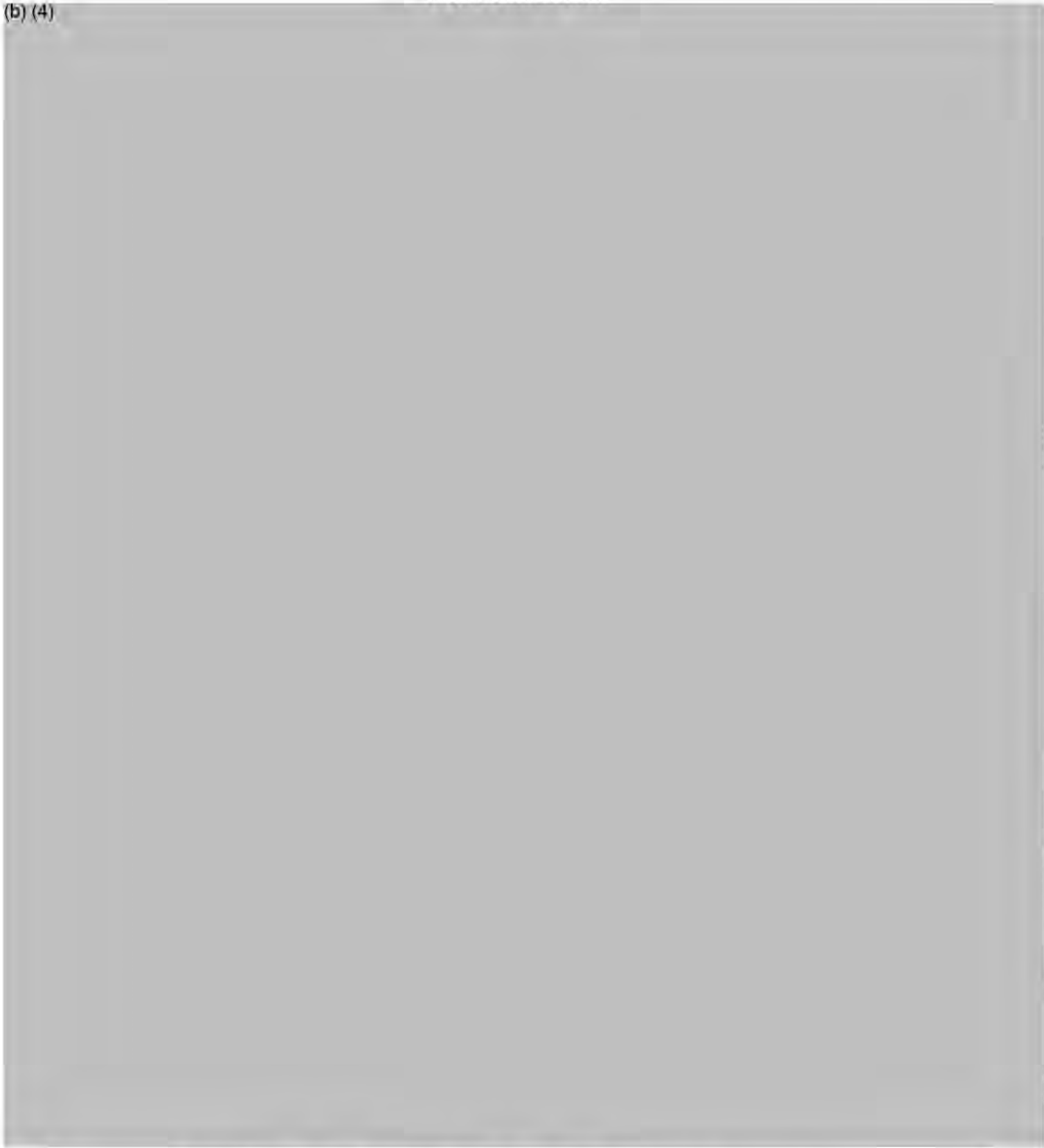
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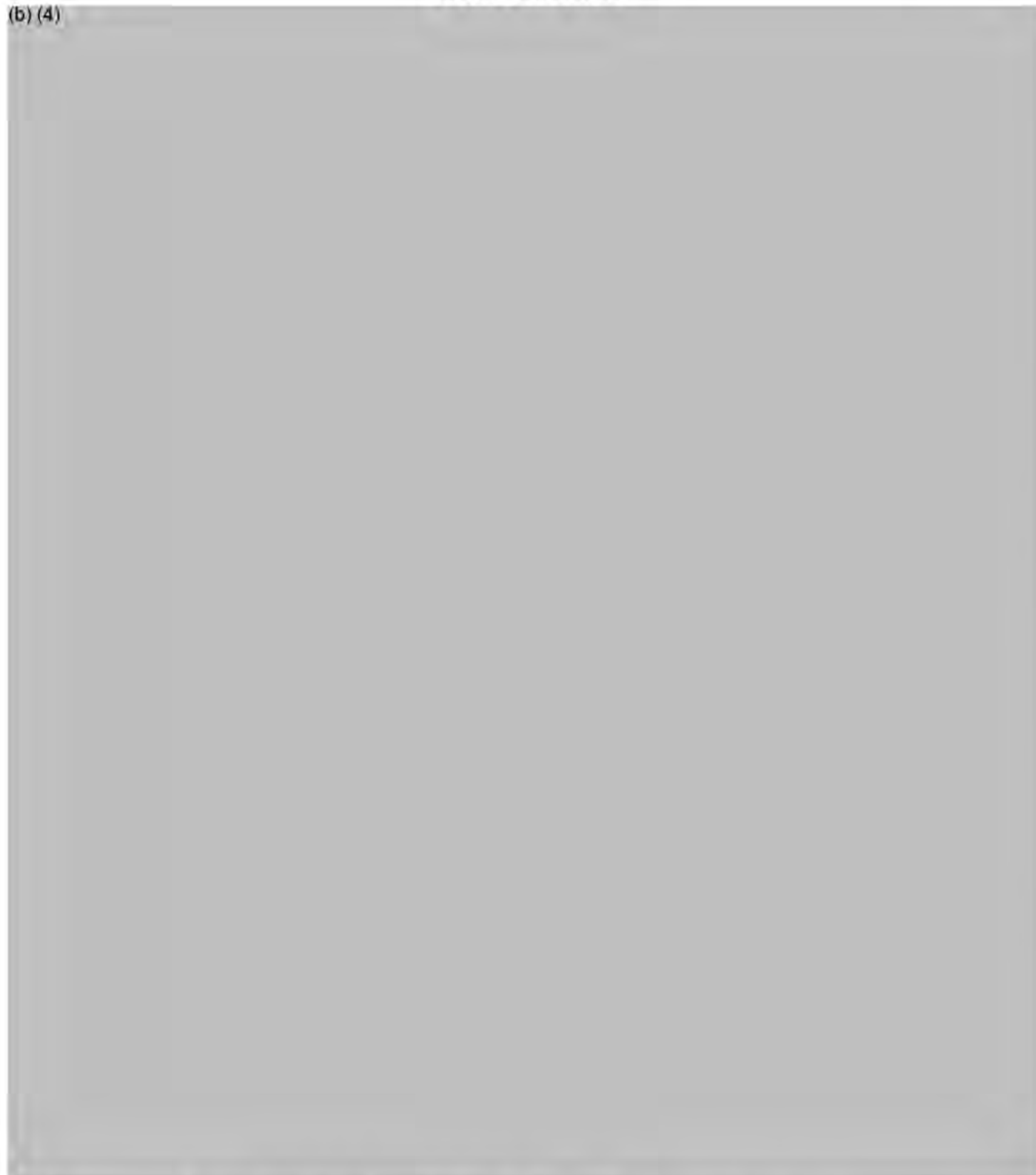
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**Title:** Determination of Tobacco Specific  
Nitrosamines by HPLC-MS-MS

**Effective Date:** 3/17/2015

**Document No.:** RJRT-WI-004216

**Revision Level:** 013

**Author:** Keith J Green

**Status:** EXPIRED

### **Release Review and Approval**

<b><u>Role</u></b>	<b><u>Actor</u></b>	<b><u>Title</u></b>	<b><u>Sign-off By</u></b>	<b><u>Sign-Off Date &amp; Time(GMT)</u></b>
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	03/02/2015 17:39
RJRT-AUTHOR	Keith J Green	Scientist IV	GREENK1	03/03/2015 20:10
RJRT-RELEASE APPROVER	Jannell M. Rowe	Dir Product Services	ROWEJ	03/04/2015 12:24
RJRT-DOCUMENT COORDINATOR	Erica R McClung	Scientist III	MCCLUNE	03/04/2015 13:32

### **Periodic Review**

<b><u>Role</u></b>	<b><u>Actor</u></b>	<b><u>Title</u></b>	<b><u>Sign-off By</u></b>	<b><u>Sign-Off Date &amp; Time(GMT)</u></b>
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### **Reason for Revision**

New template

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Document #: RJRT-WI-004216	Revision: 013

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## Appendix C Chemical Accreditation

Appendix C (Chemical Accreditation June 2018)



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

R. J. REYNOLDS TOBACCO COMPANY<sup>1</sup>  
Product Services Analytical Testing Laboratories  
950 Reynolds Blvd.  
Winston Salem, NC 27105  
Jannell Rowe Phone: 336 741 4121

CHEMICAL

Valid To: June 30, 2018

Certificate Number: 1137.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following types of tests on cigarettes, cigarette smoke and related processes and materials:

Test Description	Test Procedures	Test Method
<b>I. Cigarette Smoke Parameters</b>		
TNCO in Mainstream Smoke by Cambridge Filter pad Method	32 FR 11178	RJRT-WI-004120
TNCO in Mainstream Smoke by ISO Methods 4387 and 8454	45 FR 46483 ISO 4387 TIOJ Method	RJRT-WI-004181
Nicotine	32 FR 11178 45 FR 46483 ISO 10315	RJRT-WI-004181
Carbon Monoxide	45 FR 46483 ISO 8454	RJRT-WI-004181
Water	32 CFR 11178 45 CFR 46483 ISO 10362-1	RJRT-WI-004181
<b>II. Ignition Properties</b>		
Ignition Strength of Cigarettes	ASTM E2187-09 Appendix A to Part 429 of Title 19 NYCRR Regulation	RJRT-WI-004194
Eclipse (Non-Burn Down) Testing Procedure for NYS Free Air Extinction		RJRT-WI-004195
<b>III. Spectroscopy</b>		
<b>Inductively Coupled Plasma Optical Emission Spectroscopy</b>		
ICPOES Analysis of Tobacco and Paper after Digestion		RJRT-WI-004118
<b>ICP/Mass Spectroscopy</b>		
Elemental Content		RJRT-WI-004210
Digestion and Analysis of Metals in Mainstream Smoke Condensate		RJRT-WI-004231

(A2LA Cert No. 1137.01) 06/03/2016

*[Signature]*

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## Appendix D Mechanical Accreditation

Appendix D (Mechanical Accreditation June 2018)



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

R.J. REYNOLDS TOBACCO COMPANY  
Product Services Physical and Materials Testing Labs  
950 Reynolds Blvd. Bldg 611-9  
Winston-Salem, NC 27102  
Jannell Rowe Phone: 336 741 4121

MECHANICAL

Valid To: June 30, 2018

Certificate Number: 1137.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following types of tests on cigarettes and related materials:

Test Technology	Test Method
Filling Capacity D51	RJRT-WI-004261
Cigarette Loose Ends	RJRT-WI-004262
Cigarette Hardness	RJRT-WI-004263
Component Weight	RJRT-WI-004264
Expanded Tobacco	RJRT-WI-004265
Cigarette QTM	RJRT-WI-004266
Oven Volatiles	RJRT-WI-004267
Stem Analysis	RJRT-WI-004268
Filter QTM	RJRT-WI-004270
Circumference DTL	RJRT-WI-004271
Cigarette QTM SU	RJRT-WI-004274
Filter Segment QTM	RJRT-WI-004277
Filter Hardness	RJRT-WI-004278
Physical Lab Capsule Analyses	RJRT-WI-004279
Flashpoint Mimiflash FLP	RJRT-WI-004282
Filling Capacity D61	RJRT-WI-004352
Brightness	RJRT-WI-004285

(A2LA Cert. No. 1137.02) 06/03/2016

*Jannell Rowe*

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