
Characterization of Tobacco

Labstat International ULC Test Report



*Prepared for
R.J. Reynolds Tobacco Corporation*

Project Code: M98

Original Date: November 18, 2008

Revision 1 Date: March 31, 2017

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1 Use of Labstat's¹ Analytical Reports²

Labstat International ULC is a recognized centre of analytical excellence related to tobacco and tobacco products. Our clients include major international tobacco manufacturers, various Governments and Government agencies such as the Canadian Federal Department of Health and the Massachusetts Department of Public Health, agricultural interests, university researchers and private research interests. Normally our contractual obligations extend **only** to the provision of data and related reports.

It should be noted³, in this regard, that

All analytical data and reports, provided by Labstat International ULC, are for the exclusive use of the person, partnership, or corporation to whom it is addressed, and neither the data, the report nor the name of the laboratory (Labstat International ULC) nor any member of its staff may be used in connection with the advertising or sale of any product or process without written authorization from the CEO of the company or his designate. Labstat International ULC is not responsible for unauthorized use of test reports.

The following also applies to reported data.

All Labstat reports on testing relate only to the sample received and tested by it at the time of testing. Labstat warrants that all samples submitted were tested in accordance with its standard test procedures. Except as stated herein, there is no warranty expressed or implied, statutory or other wise, as to the results of Labstat tests. Labstat does not warrant or guarantee the fitness of the materials from which the samples have been drawn for any particular purpose including without limitation for consumption as cigarettes, cigars, smokeless tobacco or any other form of tobacco or tobacco-related product.

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³ *Unless superseded by a specific contractual obligation or other written agreement.*

2 Revision History

2.1 Revision 1

This revision was required to incorporate the contents of the data files into the body of the written report.

3 Administrative Information⁴

3.1 Quotation Reference

Quotation Number: T2631R2

Date: October 8, 2008

Recipient's Name: Dr. John Caraway

3.2 Client Identification

R.J. Reynolds Tobacco Corporation
950 Reynolds Boulevard
Winston-Salem NC 27102-1487
USA

3.3 Date of Sample Receipt

3.3.1 Unused Pouches

The unused tobacco samples to be tested for M98 were received on October 09, 2008 via UPS.

3.3.2 Used Pouches

The used tobacco samples to be tested for M98 were received on September 24, 2008, September 30, 2008, October 01, 2008 and October 02, 2008 via Fed-Ex.

3.4 Sample Characteristics

3.4.1 Unused Pouches

The shipment received on October 09, 2008 consisted of 3 tins for each of 18 products.

3.4.2 Used Pouches

The shipment received on September 24, 2008, consisted of 6 plastic bottles for each of 20 products. The shipment received on September 30, 2008, consisted of 6 plastic bottles for each of 9 products. The shipment received on October 01, 2008, consisted of 6 plastic bottles for each of 17 products. The shipment received on October 02, 2008, consisted of 6 plastic bottles for each of 8 products. There was no physical damage to the tins or bottles. Individual tobacco pouches were normal in appearance.

3.5 Test Article Identification

The following sample codes have been used to identify the products associated with the results in each of the tables that are part of this report.

⁴ Provided in accord with International Standard ISO/IEC 17025 "General requirements for the competence of testing and calibration laboratories" Section 5.10

3.5.1 Unused Pouches

Sample ID	Sample Description	Client Description
085274	Camel SNUS Original	CSD-0804-64 Original - Dallas Marketing Research
085275	Camel SNUS Spice	CSD-0804-65 Spice - Dallas Marketing Research
085276	Camel SNUS Frost	CSD-0804-66 Frost - Dallas Marketing Research
085277	Camel SNUS Original	CSD-0804-67 Original - Dallas Carlene
085278	Camel SNUS Spice	CSD-0804-68 Spice - Dallas Carlene
085279	Camel SNUS Frost	CSD-0804-69 Frost - Dallas Carlene
085280	Camel SNUS Original	CSD-0804-70 Original - Dallas Schlesinger
085281	Camel SNUS Spice	CSD-0804-71 Spice - Dallas Schlesinger
085282	Camel SNUS Frost	CSD-0804-72 Frost - Dallas Schlesinger
085283	Camel SNUS Original	CSD-0804-73 Original - Raleigh
085284	Camel SNUS Spice	CSD-0804-74 Spice - Raleigh
085285	Camel SNUS Frost	CSD-0804-75 Frost - Raleigh
085286	Camel SNUS Original	CSD-0804-76 Original - Orlando Schlesinger
085287	Camel SNUS Spice	CSD-0804-77 Spice - Orlando Schlesinger
085288	Camel SNUS Frost	CSD-0804-78 Frost - Orlando Schlesinger
085289	Camel SNUS Original	CSD-0804-79 Original - Kansas City
085290	Camel SNUS Spice	CSD-0804-80 Spice - Kansas City
085291	Camel SNUS Frost	CSD-0804-81 Frost - Kansas City

3.5.2 Used Pouches

Sample ID	Sample Description	Client Description
085292	Camel SNUS frost	CS-0804-1
085293	Camel SNUS original	CS-0804-2
085294	Camel SNUS original	CS-0804-3
085295	Camel SNUS frost	CS-0804-4
085296	Camel SNUS frost	CS-0804-5
085297	Camel SNUS spice	CS-0804-6
085298	Camel SNUS spice	CS-0804-7
085299	Camel SNUS frost	CS-0804-8
085300	Camel SNUS original	CS-0804-9
085301	Camel SNUS spice	CS-0804-10
085302	Camel SNUS frost	CS-0804-21
085303	Camel SNUS spice	CS-0804-22
085304	Camel SNUS original	CS-0804-23
085305	Camel SNUS frost	CS-0804-24
085306	Camel SNUS frost	CS-0804-25
085307	Camel SNUS frost	CS-0804-26
085308	Camel SNUS spice	CS-0804-27
085309	Camel SNUS original	CS-0804-28

Sample ID	Sample Description	Client Description
085310	Camel SNUS original	CS-0804-29
085311	Camel SNUS spice	CS-0804-30
085312	Camel SNUS spice	CS-0804-11
085313	Camel SNUS frost	CS-0804-12
085314	Camel SNUS spice	CS-0804-13
085315	Camel SNUS frost	CS-0804-14
085316	Camel SNUS original	CS-0804-15
085317	Camel SNUS frost	CS-0804-16
085318	Camel SNUS original	CS-0804-17
085319	Camel SNUS original	CS-0804-18
085320	Camel SNUS spice	CS-0804-19
085321	Camel SNUS Frost	CS-0804-31
085322	Camel SNUS Frost	CS-0804-32
085323	Camel SNUS Frost	CS-0804-33
085324	Camel SNUS Spice	CS-0804-34
085325	Camel SNUS Original	CS-0804-35
085326	Camel SNUS Original	CS-0804-36
085327	Camel SNUS Frost	CS-0804-37
085328	Camel SNUS Frost	CS-0804-38
085329	Camel SNUS Spice	CS-0804-46
085330	Camel SNUS Spice	CS-0804-47
085331	Camel SNUS Frost	CS-0804-48
085332	Camel SNUS Frost	CS-0804-49
085333	Camel SNUS Frost	CS-0804-50
085334	Camel SNUS Spice & Camel SNUS Original*	CS-0804-54
085335	Camel SNUS Frost	CS-0804-55
085336	Camel SNUS Frost	CS-0804-57
085337	Camel SNUS Frost	CS-0804-59
085338	Camel SNUS Frost	CS-0804-41
085339	Camel SNUS Spice	CS-0804-42
085340	Camel SNUS Frost	CS-0804-43
085341	Camel SNUS Spice	CS-0804-44
085342	Camel SNUS Frost	CS-0804-45
085343	Camel SNUS Spice	CS-0804-51
085344	Camel SNUS Original	CS-0804-52
085345	Camel SNUS Spice	CS-0804-53

* During the recording of the details for the kits received, it was noted that the tins received for sample CS-0804-54 (Labstat I.D. 085334) were of two types – “Camel Snus Spice” (3 tins) and “Camel Snus Original” (4 tins).

3.6 Special Instructions

The samples were stored in the freezer prior to testing.

3.7 Date of Test Report

November 18, 2008

4 Accreditation

4.1 Scope (refer to [appendix A](#))

Labstat International ULC has been accredited by the Standards Council of Canada to International Standard ISO/IEC 17025 "General requirements for the competence of testing and calibration laboratories" with a scope that includes all of the mandated tobacco-related Health Canada methods (see Tobacco Reporting Regulations dated 26 June 2000, Canada Gazette Part II, Vol. 134, No. 15 Schedules 1, 2 and 3 pages 1780 – 1785). The testing included in this report is within the scope of this accreditation, unless otherwise noted in Section 6.



Accredited LAB 368
(SCC Accreditation & Design Mark is an Official Mark of the Standards Council of Canada, used under license)

4.2 International Recognition of Tests

Our accrediting organization, Standards Council of Canada, is one of a number of such member bodies participating in a global mutual recognition agreement (MRA), known as the ILAC (International Laboratory Accreditation Cooperation) Arrangement. The arrangement, effective January 31, 2001, requires acceptance of technical test data from accredited laboratories by member bodies in numerous international economies.

5 Acceptance of Data

5.1 Overview

In most cases, data are evaluated in two stages. The first consists of a comparison of results for control materials with certified values or Labstat's historical in-house database. If the control results are acceptable and there are three (3) or more samples per analysis brand, then the data obtained from the analysis of samples is subjected to an outlier test. Values identified as outliers are then scrutinized for an assignable cause and, if one is found, the value is removed from the data set. If none is found, the value is assumed to be a legitimate member of the data set and included in all subsequent calculations.

5.2 Evaluation of Results from Control Materials

(b) (4)



5.3 Identification of Outliers⁶

5.3.1 Definition

An outlying observation, or "outlier," is one that appears to deviate markedly from other members of the sample in which it occurs. In this case, there are two alternatives:

1. An outlying observation may be merely an extreme manifestation of the random variability inherent in the data. If this is true, the value is retained and processed in the same manner as the other observations in the sample.

⁵ A minimum of 30 results is normally required for the purpose of this comparison.

⁶ The term "outlier" has been defined in International Standard ISO 3534-1 (1993) entitled "Statistics - Vocabulary and symbols - Part 1: Probability and general statistical terms" Section 2.64

2. The observation may be the result of gross deviation from prescribed experimental procedure or an error in calculating or recording the numerical value. In such cases, an investigation must be carried out. When the experimenter is clearly aware that a gross deviation from prescribed experimental procedure has taken place, the resultant observation is discarded (assignable cause) without recourse to a statistical test. A statistical test may always be used to support a judgment that a physical reason does actually exist for an outlier, or the statistical criterion may be used routinely as a basis to initiate action to find a physical cause.

5.3.2 Statistical Criteria

There are a number of criteria for testing outliers. In all of these, the doubtful observation is included in the calculation of the numerical value of a sample criterion (or statistic) that is then compared with a critical value. The critical value is that which would be exceeded by chance with some specified (small) probability on the assumption that all the observations did indeed constitute a random sample from a single parent population, distribution or universe. The specified small probability is called the "significance level" and can be thought of as the risk of erroneously rejecting a good observation. A level of significance of 0.02 has been chosen in conjunction with the statistical test and tables described in ASTM E178-02⁷.

Significant departures from the expected results (i.e. "outliers") are viewed seriously, requiring an investigation for an assignable cause. This is a documented procedure that, at a minimum, consists of the following steps:

- Review of all associated calculations to ensure that arithmetic errors have not been made
- Review of linearity range for any standards
- Assessment of instrument status
- Review of reagents, columns, standards etc. to ensure that contamination or decomposition has not occurred
- Review of sample preparation and handling procedures as they relate to the result in question

If the outlier is present in the analyte data and an assignable cause is found, the test result is removed from the data set but recorded in the quality control section of the laboratory's record of test results for that project. The analysis must then be repeated. If the outlier is present in the ancillary⁸ data and an assignable cause is found, the test result is not removed, but rather the outlying observation is replaced by the designation "AC" (Assignable Cause). If this investigation fails to determine an assignable cause, the test result is assumed to be a legitimate member of the data set and is included in all subsequent calculations.

⁷ ASTM Designation: E178-02. *Standard Practice for Dealing with Outlying Observations*

⁸ Data, which are related, but not normally required as part of the reporting process (e.g. puff counts, TPM, cigarette weights etc.). Outliers in the analyte data that have an assignable cause are always repeated.

6 Methods

6.1 General References

Test methods for the analysis of processed tobacco are referenced in the table(s) below and were practiced as written unless otherwise indicated (see "Method Deviations").

OFFICIAL METHODS FOR THE COLLECTION OF DATA ON CONSTITUENTS⁹

Item	Constituent	Official Method
1.	(a) Nicotine (b) Nornicotine (c) Anabasine (d) Myosmine (e) Anatabine	Official Method T-301, <i>Determination of Alkaloids in Whole Tobacco</i>
2.	(a) Nickel (b) Lead (c) Cadmium (d) Chromium (e) Arsenic (f) Selenium (g) Mercury	Official Method T-306, <i>Determination of Ni, Pb, Cd, Cr, As, Se and Hg in Whole Tobacco</i>
3.	Benzo[a]pyrene	Official Method T-307, <i>Determination of Benzo[a]pyrene in Whole Tobacco</i>
4.	(a) N-nitrosornicotine (b) 4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (c) N-nitrosoanatabine (d) N-nitrosoanabasine	Official Method T-309, <i>Determination of Nitrosamines in Whole Tobacco</i>

6.2 Method Deviations

(b) (4)

⁹ Canadian Tobacco Reporting Regulations: 2000-01-19 *Canada Gazette Part II, Vol. 134, No. 15* Part 3: Emissions from Designated Tobacco Products. Test method numbers refer to Health Canada methodologies which have been posted by Health Canada on the internet at site http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/legislation/reg/indust/index_e.html

(b) (4)

7 Results

7.1 Quality Control

The control results for the variables of interest were acceptable as defined in section 5.2. Consequently it is reasonable to assume that the values determined for the test samples are reflective of the characteristics of the products as received and tested as described in the Methods Section.

7.2 Analytical Data

Individual results and the corresponding sample statistics may be found on the compact disk (CD) that accompanies this report. The data files have been labeled *M98_Part 1_wt_dataCF.xls* (results for the unused tobacco samples) and *M98_Part 2_wt_dataCF.xls* (results for the used tobacco samples).

7.2.1 Kit Details File

A data file for reporting the details for the individual M98 used tobacco samples received from the client was created by Labstat to the best of our ability. The data file has been labeled *M98_Kit Details.xls*.

7.2.2 Sample Statistic Calculations

In cases where a sample result is below the limit of detection (LOD), the value zero (0) is used in the sample statistic calculation. In cases where a sample result is between the LOD and the limit of quantification (LOQ), the average of the LOD and the LOQ is used in the sample statistic calculation.

8 Authorization

8.1 *Original*

This report has been reviewed by me and is certified, to the best of my knowledge, to be a true and accurate description of the procedures, protocols and test methods used to arrive at the data and/or findings that accompany this report.

Dated: November 18, 2008

A handwritten signature in black ink, appearing to read 'Peter Joza'.

Peter Joza
Technical Director (Chemistry)
Labstat International ULC

8.2 *Revision 1*

This report has been reviewed by me and is certified, to the best of my knowledge, to be a true and accurate description of the procedures, protocols and test methods used to arrive at the data and/or findings that accompany this report.

Dated: March 31, 2017

A handwritten signature in black ink, appearing to read 'Peter Joza'.

Peter Joza
Director, Science & Technology
Labstat International ULC

9 Appendix A: Scope of Accreditation



Standards Council of Canada
Conseil canadien des normes

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SCOPE OF ACCREDITATION

LABSTAT INTERNATIONAL ULC
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Accredited Laboratory No. 368
(Conforms with requirements of CAN-P-4E (ISO/IEC 17025:2005))

CONTACT: Mr. Lucian Hirtie
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EMAIL: lhirtie@labstat.com

CLIENTS SERVED: All interested parties

FIELDS OF TESTING: Biological, Chemical/Physical

ISSUED ON: 2008-10-06

VALID TO: 2012-01-22

Remarque: La présente portée d'accréditation existe également en français, sous la forme d'un document distinct.

Note: This scope of accreditation is also available in French as a separately issued document.

ANIMAL AND PLANTS (AGRICULTURE)

Agricultural products: (except food and chemicals)

Tobacco

AOAC 966.02	Moisture in Tobacco
ASTM E2187	Standard Test Method for Measuring the Ignition Strength of Cigarettes
ISO 10315	Cigarettes – Determination of Nicotine in Smoke Condensates Gas-Chromatographic Method
ISO 10362-1	Cigarettes – Determination of Water in Smoke Condensates – Part 1:

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	Gas-Chromatographic Method
ISO 15592-2	Fine-cut Tobacco and smoking articles made from it – Methods of sampling, conditioning and analysis – Part 2: Atmosphere for conditioning and testing
ISO 15592-3	Fine-cut Tobacco and smoking articles made from it – Methods of sampling, conditioning and analysis – Part 3: Determination of total particulate matter of smoking articles using a routine analytical smoking machine, preparation for the determination of water and nicotine, and calculation of nicotine-free dry particulate matter
ISO 3308	Routine Analytical Cigarette-Smoking Machine– Definitions and Standard Conditions
ISO 3402	Tobacco and Tobacco Products – Atmosphere for Conditioning and Testing
ISO 4387	Cigarettes – Determination of Total and Nicotine-Free Dry Particulate Matter Using a Routine Analytical Smoking Machine
ISO 6565	Tobacco and Tobacco Products – Draw Resistance of Cigarettes and Pressure Drop of Filter Rods–Standard Conditions and Measurement
ISO 8454	Cigarettes – Determination of Carbon Monoxide in the Vapour Phase of Cigarette Smoke – NDIR method
TMS-118	Determination of Volatile Nitrosamines in Mainstream Tobacco Smoke
TMS-120	Determination of Selected Polynuclear Aromatic Hydrocarbons (PAHs) in Mainstream Tobacco Smoke
TMS-124	Determination of Vinyl Chloride, 1,3-Butadiene, Isoprene, Acrylonitrile, Benzene, Toluene, Styrene and Acetamide in Mainstream Tobacco Smoke (Expanded List)
TMS-127	Determination of Selected Polynuclear Aromatic Hydrocarbons (PAHs) And Aza-Arenes in the Particulate Phase of Mainstream Tobacco Smoke
TMS-128	Determination of Aromatic Amines in Mainstream Tobacco smoke (Expanded list: Aniline, o-Toluidine, m-Toluidine, p-Toluidine, o-Anisidine, 1- and 2-Aminonaphthalene and 3- and 4-Aminobiphenyl)
TMS-132	Determination of Gas Phase and Particulate Phase Free Radicals in Mainstream Tobacco Smoke
TMS-133	Determination of Selected Heterocyclic Aromatic Amines (HAAs) in Mainstream Tobacco Smoke
TMS-135	Determination of Tobacco Specific Nitrosamines in Mainstream Tobacco Smoke by Liquid Chromatography–Tandem Mass Spectrometry
TMS-137	Determination of Acetamide and Acrylamide in Mainstream Tobacco Smoke
TSS-219	Determination of Selected Polynuclear Aromatic Hydrocarbons (PAHs) in Sidestream Tobacco Smoke
TSS-222	Determination of Sidestream Tobacco Smoke pH
TWT-303	Determination of Carbonyls in Tobacco Samples
TWT-320	Determination of 1- and 2- Aminonaphthalene and 3- and 4-Aminobiphenyl in Tobacco Samples
TWT-321	

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	Determination Of Nicotine Alkaloids And Reducing Sugars In Tobacco Samples
TWT-324	Determination of Nicotine in Tobacco Samples (CDC method)
TWT-332	Determination of Volatile Nitrosamines in Tobacco Samples
TWT-333	Determination of Tobacco Specific Nitrosamines in Tobacco Samples by Liquid Chromatography–Tandem Mass Spectrometry
TWT-334	Determination of Chloride in Tobacco Samples
TWT-335	Determination of Selected Polycyclic Aromatic Hydrocarbons (PAHs) in Tobacco Samples
TWT-336	Determination of Acrylamide in Tobacco Samples by Liquid Chromatography – Tandem Mass Spectrometry
TWT-337	Determination of 1,3–Butadiene and Benzene in Tobacco Samples

(Health Canada Tobacco Reporting Regulations Official Methods)

T-101	Determination of Ammonia in Mainstream Tobacco Smoke
T-102	Determination of 1– and 2– Aminonaphthalene and 3– and 4– Aminobiphenyl in Mainstream Tobacco Smoke
T-103	Determination of Benzo[a]pyrene in Mainstream Tobacco Smoke
T-104	Determination of Selected Carbonyls in Mainstream Tobacco Smoke
T-105	Determination of Eugenol in Mainstream Tobacco Smoke
T-106	Determination of Filter Efficiency in Mainstream Tobacco Smoke
T-107	Determination of Hydrogen Cyanide in Mainstream Tobacco Smoke
T-108	Determination of Mercury in Mainstream Tobacco Smoke
T-109	Determination of Ni, Pb, Cd, Cr, As and Se in Mainstream Tobacco Smoke
T-110	Determination of Oxides of Nitrogen in Mainstream Tobacco Smoke
T-111	Determination of Nitrosamines in Mainstream Tobacco Smoke
T-112	Determination of Pyridine, Quinoline and Styrene in Mainstream Tobacco Smoke
T-113	Determination of Mainstream Tobacco Smoke pH
T-114	Determination of Phenolic Compounds in Mainstream Tobacco Smoke
T-115	Determination of Tar, Nicotine and Carbon Monoxide in Mainstream Tobacco Smoke
T-116	Determination of 1,3– Butadiene, Isoprene, Acrylonitrile, Benzene and Toluene in Mainstream Tobacco Smoke
T-201	Determination of Ammonia in Sidestream Tobacco Smoke
T-202	Determination of 1– and 2– Aminonaphthalene and 3– and 4– Aminobiphenyl in Sidestream Tobacco Smoke
T-203	Determination of Benzo[a]pyrene in Sidestream Tobacco Smoke
T-203A	Determination of Benzo[a]pyrene in Sidestream Tobacco Smoke (GC/MS)
T-204	Determination of Selected Carbonyls in Sidestream Tobacco Smoke
T-205	Determination of Hydrogen Cyanide in Sidestream Tobacco Smoke
T-206	Determination of Mercury in Sidestream Tobacco Smoke
T-207	Determination of Toxic Trace Metals in Sidestream Smoke

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T-208	Determination of Oxides of Nitrogen in Sidestream Tobacco Smoke
T-209	Determination of Nitrosamines in Sidestream Tobacco Smoke
T-210	Determination of Pyridine and Quinoline in Sidestream Tobacco Smoke
T-211	Determination of Phenolic Compounds in Sidestream Tobacco Smoke
T-212	Determination of "Tar" and Nicotine in Sidestream Tobacco Smoke
T-213	Determination of 1,3 Butadiene, Isoprene, Acrylonitrile, Benzene, Toluene and Styrene in Sidestream Tobacco Smoke
T-214	Determination of Carbon Monoxide (CO) in Sidestream Tobacco Smoke
T-301	Determination of Alkaloids in Whole Tobacco
T-302	Determination of Ammonia in Whole Tobacco
T-304	Determination of Humectants in Whole Tobacco
T-306	Determination of Ni, Pb, Cd, Cr, As, Se and Hg in Whole Tobacco
T-307	Determination of Benzo[a]pyrene in Whole Tobacco
T-308	Determination of Nitrate from Whole Tobacco
T-309	Determination of Nitrosamines in Whole Tobacco
T-310	Determination of Whole Tobacco pH
T-311	Determination of Triacetin in Whole Tobacco
T-312	Determination of Sodium Propionate in Whole Tobacco
T-313	Determination of Sorbic Acid in Whole Tobacco
T-314	Determination of Eugenol in Whole Tobacco
T-401	Preparation of Cigarettes from Packaged Leaf Tobacco for Testing
T-402	Preparation of Cigarettes, Cigarette Tobacco, Cigars, Kreteks, Bidis, Packaged Leaf Tobacco, Pipe Tobacco and Smokeless Tobacco for testing

(Microbiology Tests)

T-501	Bacterial Reverse Mutation Assay for Mainstream Tobacco Smoke
T-502	Neutral Red Uptake Assay for Mainstream Tobacco Smoke
T-503	In Vitro Micronucleus Assay for Mainstream Tobacco Smoke
TBA-504	<i>In vitro</i> Sister Chromatid Exchange (SCE) Assay for Mainstream Tobacco Smoke

(Other: Measures of Exposure)

TME-001	Determination of Nicotine, Cotinine and Caffeine in Physiological Fluid Samples
TME-002	Determination of Creatinine in Urine
TME-003	Determination of 3-Hydroxycotinine in Physiological Fluid Samples
TME-004	<i>Salmonella Typhimurium</i> Reverse Mutation Assay: Microsuspension Method For Testing Urine Mutagenicity
TME-005	Determination of Nicotine and its Major Metabolites in Urine by Liquid Chromatography – Tandem Mass Spectrometry

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TME-006	Determination of S-Phenylmercapturic Acid (S-PMA) in Urine by Liquid Chromatography – Tandem Mass Spectrometry
TME-007	Determination of 8-Hydroxy-2'-Deoxyguanosine (8-OHdG) in Urine by Liquid Chromatography – Tandem Mass Spectrometry
TME-008	Determination of 1-Hydroxypyrene (1-HOP) in Urine by Liquid Chromatography – Tandem Mass Spectrometry
TME-009	Determination of 4-(Methyl-Nitrosamino)-1-(3-Pyridyl)-1-Butanol (NNAL) and its Glucuronides in Urine by Liquid Chromatography – Tandem Mass Spectrometry
TME-010	Determination of 1,3-Butadiene Urinary Metabolites by Liquid Chromatography – Tandem Mass Spectrometry
TME-011	Determination of 3-Hydroxypropylmercapturic Acid (3-HPMA) in Urine by Liquid Chromatography – Tandem Mass Spectrometry
TME-012	Determination of Selected Arylamines in Urine by Gas Chromatography – Mass Spectrometry (GC-MS)

Notes:

AOAC: Association of Official Analytical Chemists

ASTM: American Society for Testing and Materials

CAN-P-4E (ISO/IEC 17025): General Requirements for the Competence of Testing and Calibration Laboratories (ISO/IEC 17025-2005)

CDC: Centers for Disease Control and Prevention

ISO: International Organization for Standardization

T: Health Canada Tobacco Reporting Regulations Official Methods

TBA: Test Method, Biological Activity

TME: Test Method, Measures of Exposure

TMS: Test method, Mainstream Smoke

TSS: Test method, Sidestream Smoke

TWT: Test method, Whole Tobacco

P. Paladino, P. Eng., Director, Conformity Assessment

Date: 2008-10-06

Number of Scope Listings: 93
SCC 1003-15/420

The approved and most recent version of this document can be viewed on the SCC website at <http://palcan.scc.ca/SpecsSearch/GLSearchForm.do>

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Standards Council of Canada Accredited Laboratory No. 368

Partner File #0

Partner: None

10 Appendix B1: Kit Details

Snus-After-Use Adopter Study

Labstat Ref. ID T2631R1

Test Kit ID #s	Snus (Description)	Labstat SID	Bottle 1 # of pouches	Bottle 2 # of pouches	Bottle 3 # of pouches	Bottle 4 # of pouches	Bottle 5 # of pouches	Bottle 6 # of pouches	Total # of pouches	# reps nicotine	# reps TSNA
CS-0804-1	Camel SNUS Frost	085292	5	6	4	6	4	5	30	2	3
CS-0804-2	Camel Snus original	085293	4	3	4	3	1	5	20	4	2
CS-0804-3	Camel Snus original	085294	4	2	2	2	2	3	15	3	1
CS-0804-4	Camel Snus frost	085295	15	5	4	6	5	7	42	4	3
CS-0804-5	Camel Snus frost	085296	6	5	5	6	5	5	32	4	3
CS-0804-6	Camel Snus spice	085297	3	2	2	2	2	3	14	2	1
CS-0804-7	Camel Snus spice	085298	4	3	2	3	2	2	16	4	1
CS-0804-8	Camel Snus frost	085299	2	2	2	2	2	3	13	1	1
CS-0804-9	Camel Snus original	085300	2	1	1	1	1	2	8	4	1
CS-0804-10	Camel Snus spice	085301	4	1	1	3	1	1	11	3	1
CS-0804-11	Camel Snus spice	085312	3	2	3	2	2	3	15	3	1
CS-0804-12	Camel Snus frost	085313	3	2	4	2	2	2	15	3	1
CS-0804-13	Camel Snus spice	085314	5	2	2	3	3	3	18	2	2
CS-0804-14	Camel Snus frost	085315	4	2	1	2	2	3	14	2	1
CS-0804-15	Camel Snus original	085316	3	2	2	3	2	3	15	3	1
CS-0804-16	Camel Snus frost	085317	2	2	3	5	2	5	19	3	2
CS-0804-17	Camel Snus original	085318	4	3	3	3	3	7	23	3	2
CS-0804-18	Camel Snus original	085319	3	2	2	2	2	3	14	2	1
CS-0804-19	Camel Snus spice	085320	3	3	2	3	2	2	15	3	1
CS-0804-20									0		
CS-0804-21	Camel Snus frost	085302	10	5	6	5	4	3	33	1	3
CS-0804-22	Camel Snus spice	085303	7	3	4	4	3	6	27	3	3
CS-0804-23	Camel Snus original	085304	2	3	3	4	3	7	22	2	2
CS-0804-24	Camel Snus frost	085305	3	1	2	2	1	3	12	4	1
CS-0804-25	Camel Snus frost	085306	4	3	0	2	3	0	12	4	1
CS-0804-26	Camel Snus frost	085307	5	5	4	5	6	4	29	1	3
CS-0804-27	Camel Snus spice	085308	4	2	1	0	0	2	9	1	1
CS-0804-28	Camel Snus original	085309	6	4	4	4	4	5	27	3	3
CS-0804-29	Camel Snus original	085310	3	2	1	2	3	5	16	4	1
CS-0804-30	Camel Snus spice	085311	3	2	2	2	3	3	15	3	1
CS-0804-31	Camel SNUS Frost	085321	11	8	2	6	6	6	39	3	3
CS-0804-32	Camel SNUS Frost	085322	7	4	3	3	5	5	27	3	3
CS-0804-33	Camel SNUS Frost	085323	6	1	3	3	1	0	14	2	1
CS-0804-34	Camel SNUS Spice	085324	13	17	10	19	17	8	84	4	3
CS-0804-35	Camel SNUS Original	085325	11	7	8	9	8	7	50	4	3
CS-0804-36	Camel SNUS Original	085326	3	2	2	2	3	2	14	2	1
CS-0804-37	Camel SNUS Frost	085327	4	4	4	5	5	8	30	2	3
CS-0804-38	Camel SNUS Frost	085328	6	5	4	6	4	4	27	3	3
CS-0804-41	Camel SNUS Frost	085338	5	4	6	1	3	8	27	3	3
CS-0804-42	Camel SNUS Spice	085339	5	1	1	2	3	7	19	3	2
CS-0804-43	Camel SNUS Frost	085340	6	5	7	6	4	4	32	4	3
CS-0804-44	Camel SNUS Spice	085341	6	5	5	6	9	3	34	2	3
CS-0804-45	Camel SNUS Frost	085342	4	4	3	3	4	3	21	1	2
CS-0804-46	Camel SNUS Spice	085329	2	2	2	2	2	3	13	1	1
CS-0804-47	Camel SNUS Spice	085330	7	8	5	8	4	8	40	4	3
CS-0804-48	Camel SNUS Frost	085331	1	4	7	2	4	3	21	1	2
CS-0804-49	Camel SNUS Frost	085332	3	1	1	1	1	1	8	4	1
CS-0804-50	Camel SNUS Frost	085333	10	10	2	2	2	7	33	1	3
CS-0804-51	Camel SNUS Spice	085343	2	2	2	2	2	3	13	1	1
CS-0804-52	Camel SNUS Original	085344	3	2	2	3	2	0	12	4	1
CS-0804-53	Camel SNUS Spice	085345	3	2	2	0	2	5	14	2	1
CS-0804-54	Camel SNUS Spice & Camel SNUS Original	085334	18	10	7	5	6	4	50	4	3
CS-0804-55	Camel SNUS Frost	085335	4	2	3	3	2	2	16	4	1
CS-0804-56									0		
CS-0804-57	Camel SNUS Frost	085336	2	3	4	6	3	0	18	2	2
CS-0804-58									0		
CS-0804-59	Camel SNUS Frost	085337	0	2	1	2	3	1	9	1	1

Snus-After-Use Adopter Study

Labstat Ref. ID T2631R1

Test Kit ID #s	Snus (Description)	Labstat SID	# reps metals	# reps BaP	OBS.	Lot # of Snus tin
						2 tins Lot #M044E3N 02Oct 08
CS-0804-1	Camel SNUS Frost	085292	2	2		
CS-0804-2	Camel Snus original	085293	1	1		C002GJK 25 Dec 08 and for the second tin unable to read the lot #
CS-0804-3	Camel Snus original	085294	1	1		B937EUN 24Sept 08
CS-0804-4	Camel Snus frost	085295	3	3		B939EHO 11Sept 08; 2 tins -M032DPN 20Aug08 & M029CZK 30 Jul08
CS-0804-5	Camel Snus frost	085296	2	2		B003FSN 04Dec 08 & A003FSN 04 Dec 08
CS-0804-6	Camel Snus spice	085297	1	1		N043ESN 22Sept 08
CS-0804-7	Camel Snus spice	085298	1	1		2 tins- M035D2H 01Sept 08
CS-0804-8	Camel Snus frost	085299	1	1		M035DJO 14 Aug 08 & M044E4M 03Oct 08
CS-0804-9	Camel Snus original	085300				A937EEK 08Sept 08
CS-0804-10	Camel Snus spice	085301	1	0		N043ESM 22 Sept 08
CS-0804-11	Camel Snus spice	085312	1	1		A941E2Q 01 Oct. 08
CS-0804-12	Camel Snus frost	085313	1	1		M044E4L 03 Oct. 08
CS-0804-13	Camel Snus spice	085314	1	1	First Empty tin - no Lot#	M043ESL 22 Sept. 08
CS-0804-14	Camel Snus frost	085315	1	1		M044E3N 02 Oct. 08
CS-0804-15	Camel Snus original	085316	1	1		M034DVJ 26 Aug. 08
CS-0804-16	Camel Snus frost	085317	1	1		E003ESL 04 Dec 08 & M044E4L 03Oct 08
CS-0804-17	Camel Snus original	085318	2	1		A937EUK 24Sept 08 & A002F1M 12 Dec 08
CS-0804-18	Camel Snus original	085319	1	1		A002GJI 25 Dec. 08
CS-0804-19	Camel Snus spice	085320	1	1		A941E2Q 01 Oct. 08
CS-0804-20					Not Received	
CS-0804-21	Camel Snus frost	085302	3	2		B004GHM 23Dec 08 & 2 Tins - MG44E4J 03Oct 08
CS-0804-22	Camel Snus spice	085303	2	1		Unable to read the Lot # for first tin - for second tin- N043ESM 22 Sept 08
CS-0804-23	Camel Snus original	085304	2	1		2 tins - M036EML 16 Sept 08
CS-0804-24	Camel Snus frost	085305	1	0		B939ENJ 17 Sept 08 & A0005GKN 26Dec 08
CS-0804-25	Camel Snus frost	085306	1	0		A005GKN 26Dec 08
CS-0804-26	Camel Snus frost	085307	2	2		2 tins - M044E3N
CS-0804-27	Camel Snus spice	085308	1	0		A941E2P 01Oct 08
CS-0804-28	Camel Snus original	085309	2	1		M036EML16 Sept 08& M042EMN 16 Sept 08
CS-0804-29	Camel Snus original	085310	1	1		M028DCH 07Aug 08
CS-0804-30	Camel Snus spice	085311	1	1		M043ESL 22 Sept 08
CS-0804-31	Camel SNUS Frost	085321	3	3		A003FRH 03 Dec 08 & M044E3J 02 Oct 08
CS-0804-32	Camel SNUS Frost	085322	2	1		C004GIO 24 Dec 08 & A005GKG 26 Dec 08
CS-0804-33	Camel SNUS Frost	085323	1	1		Not able to read the lot # 6 tins with # B941EVP 25 Sept 08
CS-0804-34	Camel SNUS Spice	085324	3	3		
CS-0804-35	Camel SNUS Original	085325	3	3		M036D4K 03Sept 08 & C003GJN 25 Dec 08
CS-0804-36	Camel SNUS Original	085326	1	1		A002FXN 09 Dec 08
CS-0804-37	Camel SNUS Frost	085327	2	2		B004GIO 24Dec 08 & A002FQH 2Dec 08
CS-0804-38	Camel SNUS Frost	085328	2	1		2 tins with M044E3I 02 Oct 08
CS-0804-41	Camel SNUS Frost	085338	2	1		M044E1K 30Sept 08 & B003FSL 04Dec08
CS-0804-42	Camel SNUS Spice	085339	1	1		M043ESL 22Sept 08 & A001FYL 10Dec08
CS-0804-43	Camel SNUS Frost	085340	2	2		B003FSN 04 Dec 08 & A003FSK 04Dec 08
CS-0804-44	Camel SNUS Spice	085341	3	2		M035DYL 29Aug 08 & 2 Tins-M030DAY 05Aug 08
CS-0804-45	Camel SNUS Frost	085342	2	1		M040EHI 11Sept 08 & B003FSL 04Dec 08
CS-0804-46	Camel SNUS Spice	085329	1	1		A941E2N 01 Oct 08
CS-0804-47	Camel SNUS Spice	085330	3	3		M027CKK 15 Jul 08 & 2 Tins- M043ETI 23 Sept 08
CS-0804-48	Camel SNUS Frost	085331	2	1		2 tins-A003FSL 04 Dec 08
CS-0804-49	Camel SNUS Frost	085332	0	0		Not able to read the lot#
CS-0804-50	Camel SNUS Frost	085333	2	2		2 tins-A003FSL 04 Dec 08
CS-0804-51	Camel SNUS Spice	085343	1	1		J035DWO 07Aug 08
CS-0804-52	Camel SNUS Original	085344	1	0		M005GJL 30Oct 07 and the second tin not able to read the lot #
CS-0804-53	Camel SNUS Spice	085345	1	1		B943FMY 10 Dec 08 & B941EWL 26 Sept 08
CS-0804-54	Camel SNUS Spice & Camel SNUS Original	085334	3	3		B943FYM 10Dec 08 (1tin -frost), C943FYN 10Dec 08(2tins frost)& C002GJK 25Dec08(1tin Original) & A002GJK(2 tins-Original)C943FYN 10Dec 08(1tin Original)
CS-0804-55	Camel SNUS Frost	085335	1	1		M040EUM 24Sept 08 & M032DNK 18Aug 08
CS-0804-56					Not Received	
CS-0804-57	Camel SNUS Frost	085336	1	1		B003FSO 04Dec 08 (for the second tin unable to read the lot #)
CS-0804-58					Not Received	
CS-0804-59	Camel SNUS Frost	085337	1	0		E002FKJ 26 Nov 08

Snus-After-Use Adopter Study
Labstat Ref. ID T2631R1

Test Kit ID #s	Snus (Description)	Labstat SID	Kit ID-Empty Bag (With Tin)	Kit ID-Empty Bags (without tins)	Others
CS-0804-1	Camel SNUS Frost	085292	CS-0804-1-1 & CS-0804-1-2		Empty small plastic container
CS-0804-2	Camel Snus original	085293	CS-0804-2-1 & CS-0804-2-2		
CS-0804-3	Camel Snus original	085294	CS-0804-3-1	CS-0804-3-2	
CS-0804-4	Camel Snus frost	085295	CS-0804-4-1; CS-0804-4-2 CS-0804-4-3 & CS-0804-4-4		
CS-0804-5	Camel Snus frost	085296	CS-0804-5-1 & CS-0804-5-2		Empty small plastic container
CS-0804-6	Camel Snus spice	085297	CS-0804-6-1	CS-0804-6-2	Empty small plastic container
CS-0804-7	Camel Snus spice	085298	CS-0804-7-1 & CS-0804-7-2		
CS-0804-8	Camel Snus frost	085299	CS-0804-8-1 & CS-0804-8-2		
CS-0804-9	Camel Snus original	085300	CS-0804-9-1	CS-0804-9-2	
CS-0804-10	Camel Snus spice	085301	CS-0804-10-3		
CS-0804-11	Camel Snus spice	085312	CS-0804-11-1	CS-0804-11-2	
CS-0804-12	Camel Snus frost	085313	CS-0804-12-1	CS-0804-12-2 & CS-0804-12-3	Empty small plastic container
CS-0804-13	Camel Snus spice	085314	CS-0804-13-1 & CS-0804-13-2	CS-0804-13-3	
CS-0804-14	Camel Snus frost	085315	CS-0804-14-1	CS-0804-14-2 & CS-0804-14-3	Empty small plastic container
CS-0804-15	Camel Snus original	085316	CS-0804-15-1	CS-0804-15-2 & CS-0804-15-3	Empty small plastic container
CS-0804-16	Camel Snus frost	085317	CS-0804-16-2 & CS-0804-16-3	CS-0804-16-1	
CS-0804-17	Camel Snus original	085318	CS-0804-17-1 & CS-0804-17-2	CS-0804-17-3	
CS-0804-18	Camel Snus original	085319	CS-0804-18-1		
CS-0804-19	Camel Snus spice	085320	CS-0804-19-1	CS-0804-19-2 & CS-0804-19-3	
CS-0804-20					
CS-0804-21	Camel Snus frost	085302	CS-0804-21-1; CS-0804-21-2 & CS-0804-21-3		
CS-0804-22	Camel Snus spice	085303	CS-0804-22-1 & CS-0804-22-2		
CS-0804-23	Camel Snus original	085304	CS-0804-23-1 & CS-0804-23-2	CS-0804-23-3	
CS-0804-24	Camel Snus frost	085305	CS-0804-24-1 & CS-0804-24-3	CS-0804-24-2	
CS-0804-25	Camel Snus frost	085306	CS-0804-25-1	CS-0804-25-2 & CS-0804-25-3	
CS-0804-26	Camel Snus frost	085307	CS-0804-26-1 & CS-0804-26-2	CS-0804-26-2	
CS-0804-27	Camel Snus spice	085308	CS-0804-27-1	CS-0804-27-2 & CS-0804-27-3	
CS-0804-28	Camel Snus original	085309	CS-0804-28-1	CS-0804-28-2 & CS-0804-28-3	
CS-0804-29	Camel Snus original	085310	CS-0804-29-1	CS-0804-29-2 & CS-0804-29-3	
CS-0804-30	Camel Snus spice	085311	CS-0804-30-1	CS-0804-30-2 & CS-0804-30-3	
CS-0804-31	Camel SNUS Frost	085321	CS-0804-31-2 & CS-0804-31-3		
CS-0804-32	Camel SNUS Frost	085322	CS-0804-32-1 & CS-0804-32-2		
CS-0804-33	Camel SNUS Frost	085323	CS-0804-33-1		
CS-0804-34	Camel SNUS Spice	085324	CS-0804-34-1 , CS-0804-34-2,CS-0804-34-3,CS-0804-34-4,CS-0804-34-5&CS-0804-34-6		
CS-0804-35	Camel SNUS Original	085325	CS-0804-35-1 & CS-0804-35-2		
CS-0804-36	Camel SNUS Original	085326	CS-0804-36-1	CS-0804-36-2	
CS-0804-37	Camel SNUS Frost	085327	CS-0804-37-1 & CS-0804-37-2		
CS-0804-38	Camel SNUS Frost	085328	CS-0804-38-1 & CS-0804-38-2		
CS-0804-41	Camel SNUS Frost	085338	CS-0804-41-1 & CS-0804-41-2		
CS-0804-42	Camel SNUS Spice	085339	CS-0804-42-1 & CS-0804-42-2		
CS-0804-43	Camel SNUS Frost	085340	CS-0804-43-1 & CS-0804-43-2		
CS-0804-44	Camel SNUS Spice	085341	CS-0804-43-1;CS-0804-43-2 & CS-0804-43-3		
CS-0804-45	Camel SNUS Frost	085342	CS-0804-44-1 & CS-0804-44-2		
CS-0804-46	Camel SNUS Spice	085329	CS-0804-46-2		
CS-0804-47	Camel SNUS Spice	085330	CS-0804-47-1 , CS-0804-47-2 & CS-0804-47-3		
CS-0804-48	Camel SNUS Frost	085331	CS-0804-48-1 & CS-0804-48-2		
CS-0804-49	Camel SNUS Frost	085332	CS-0804-49-1		
CS-0804-50	Camel SNUS Frost	085333	CS-0804-50-1 & CS-0804-50-2		
CS-0804-51	Camel SNUS Spice	085343	CS-0804-51-1	CS-0804-51-2	
CS-0804-52	Camel SNUS Original	085344	CS-0804-52-1 & CS-0804-52-2		
CS-0804-53	Camel SNUS Spice	085345	CS-0804-53-1 & CS-0804-53-2		
CS-0804-54	Camel SNUS Spice & Camel SNUS Original	085334	CS-0804-54-1(Frost)& CS-0804-54-2(Original- 15 pouches in the tin)		
CS-0804-55	Camel SNUS Frost	085335			
CS-0804-56					
CS-0804-57	Camel SNUS Frost	085336	CS-0804-57-1 & CS-0804-57-2		
CS-0804-58					
CS-0804-59	Camel SNUS Frost	085337	CS-0804-59-1 & CS-0804-59-2	An empty black plastic container	

11 Appendix B2: Part 1 Analytical Data

Use of Labstat's¹ Analytical Reports²

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¹. Labstat International ULC,
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Sample ID	Sample Description	Client Description
085274	Camel SNUS Original	CSD-0804-64 Original - Dallas Marketing Research
085275	Camel SNUS Spice	CSD-0804-65 Spice - Dallas Marketing Research
085276	Camel SNUS Frost	CSD-0804-66 Frost - Dallas Marketing Research
085277	Camel SNUS Original	CSD-0804-67 Original - Dallas Carlene
085278	Camel SNUS Spice	CSD-0804-68 Spice - Dallas Carlene
085279	Camel SNUS Frost	CSD-0804-69 Frost - Dallas Carlene
085280	Camel SNUS Original	CSD-0804-70 Original - Dallas Schlesinger
085281	Camel SNUS Spice	CSD-0804-71 Spice - Dallas Schlesinger
085282	Camel SNUS Frost	CSD-0804-72 Frost - Dallas Schlesinger
085283	Camel SNUS Original	CSD-0804-73 Original - Raleigh
085284	Camel SNUS Spice	CSD-0804-74 Spice - Raleigh
085285	Camel SNUS Frost	CSD-0804-75 Frost - Raleigh
085286	Camel SNUS Original	CSD-0804-76 Original - Orlando Schlesinger
085287	Camel SNUS Spice	CSD-0804-77 Spice - Orlando Schlesinger
085288	Camel SNUS Frost	CSD-0804-78 Frost - Orlando Schlesinger
085289	Camel SNUS Original	CSD-0804-79 Original - Kansas City
085290	Camel SNUS Spice	CSD-0804-80 Spice - Kansas City
085291	Camel SNUS Frost	CSD-0804-81 Frost - Kansas City

Matrix Code	Sample ID	Nicotine (µg/pouch)				Nornicotine (µg/pouch)				Anabasine (µg/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085274	6759	439	5669	7850	74.3	3.1	66.5	82.1	NQ	NQ	N/A	N/A
WT	085275	6331	168	5913	6750	63.8	5.0	51.2	76.3	NQ	NQ	N/A	N/A
WT	085276	6383	163	5978	6789	72.5	10.6	46.2	98.7	NQ	NQ	N/A	N/A
WT	085277	6273	224	5717	6828	81.6	17.6	37.9	125.4	NQ	NQ	N/A	N/A
WT	085278	6584	235	6000	7169	68.4	6.6	52.1	84.7	NQ	NQ	N/A	N/A
WT	085279	7190	245	6580	7800	79.9	2.9	72.7	87.2	NQ	NQ	N/A	N/A
WT	085280	7368	264	6712	8024	85.8	0.5	84.6	86.9	31.8	1.2	28.8	34.7
WT	085281	5975	163	5570	6379	59.9	3.9	50.2	69.6	NQ	NQ	N/A	N/A
WT	085282	7918	410	6900	8937	92.3	6.2	77.0	107.6	35.6	1.7	31.2	39.9
WT	085283	8105	580	6663	9547	85.2	6.3	69.5	100.9	35.6	2.6	29.3	42.0
WT	085284	6722	362	5822	7623	70.7	4.9	58.6	82.9	NQ	NQ	N/A	N/A
WT	085285	8013	398	7024	9002	89.0	14.6	52.8	125.3	36.2	2.1	30.8	41.5
WT	085286	6568	188	6102	7034	78.7	3.1	71.0	86.3	NQ	NQ	N/A	N/A
WT	085287	6778	236	6193	7364	64.5	11.1	36.8	92.2	NQ	NQ	N/A	N/A
WT	085288	6503	228	5937	7070	74.7	15.0	37.5	111.9	NQ	NQ	N/A	N/A
WT	085289	6458	122	6155	6760	69.0	2.8	61.9	76.0	NQ	NQ	N/A	N/A
WT	085290	6708	171	6284	7133	70.2	1.2	67.2	73.2	NQ	NQ	N/A	N/A
WT	085291	7695	289	6978	8412	89.0	9.3	65.9	112.2	33.8	2.0	28.8	38.8

Matrix Code	Sample ID	Myosmine (µg/pouch)				Anatabine (µg/pouch)				Cadmium (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085274	NQ	NQ	N/A	N/A	44.8	2.9	37.5	52.1	188	5	176	200
WT	085275	NQ	NQ	N/A	N/A	34.6	1.2	31.7	37.4	180	9	158	202
WT	085276	NQ	NQ	N/A	N/A	32.1	1.3	28.8	35.4	196	3	187	204
WT	085277	NQ	NQ	N/A	N/A	39.1	1.4	35.6	42.5	196	2	191	201
WT	085278	NQ	NQ	N/A	N/A	34.9	0.4	33.8	35.9	200	4	189	210
WT	085279	NQ	NQ	N/A	N/A	46.5	2.2	41.0	51.9	199	15	162	236
WT	085280	NQ	NQ	N/A	N/A	48.7	2.9	41.6	55.8	200	11	173	227
WT	085281	NQ	NQ	N/A	N/A	32.1	1.4	28.6	35.6	197	13	164	230
WT	085282	NQ	NQ	N/A	N/A	55.8	1.9	51.1	60.6	186	1	182	189
WT	085283	NQ	NQ	N/A	N/A	59.5	2.4	53.6	65.4	196	5	184	209
WT	085284	NQ	NQ	N/A	N/A	54.9	2.6	48.4	61.4	200	11	173	228
WT	085285	NQ	NQ	N/A	N/A	58.6	3.5	49.9	67.3	180	10	155	205
WT	085286	NQ	NQ	N/A	N/A	43.1	0.7	41.4	44.8	199	16	160	238
WT	085287	NQ	NQ	N/A	N/A	36.0	1.0	33.6	38.4	195	8	176	215
WT	085288	NQ	NQ	N/A	N/A	40.2	1.2	37.1	43.3	195	10	169	221
WT	085289	NQ	NQ	N/A	N/A	31.6	0.9	29.3	33.9	200	7	181	218
WT	085290	NQ	NQ	N/A	N/A	53.7	1.2	50.6	56.7	201	12	171	230
WT	085291	NQ	NQ	N/A	N/A	55.0	1.8	50.7	59.4	225	15	187	264

Matrix Code	Sample ID	Chromium (ng/pouch)				Nickel (ng/pouch)				Lead (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085274	235	7	217	254	348	13	316	381	70.0	1.3	66.7	73.3
WT	085275	235	7	217	252	321	14	287	355	62.1	4.0	52.1	72.1
WT	085276	265	11	237	292	344	2	339	350	74.1	6.6	57.7	90.4
WT	085277	280	4	270	289	370	5	359	381	64.5	2.3	58.8	70.3
WT	085278	278	11	252	304	380	12	350	410	69.8	2.5	63.4	76.1
WT	085279	271	13	238	304	378	22	322	433	71.0	3.3	62.7	79.2
WT	085280	251	9	229	274	368	13	335	401	70.8	4.4	59.9	81.7
WT	085281	255	18	211	299	344	24	284	404	67.7	8.2	47.4	88.1
WT	085282	252	6	237	268	413	9	390	435	73.9	2.3	68.1	79.7
WT	085283	247	20	196	297	397	72	217	577	73.6	3.6	64.7	82.4
WT	085284	222	15	185	258	331	20	282	381	66.3	7.2	48.5	84.2
WT	085285	246	17	203	288	407	12	378	436	75.2	6.1	60.1	90.4
WT	085286	255	16	215	295	329	18	284	373	75.9	4.8	64.0	87.8
WT	085287	304	54	171	437	341	13	308	375	70.2	5.5	56.7	83.8
WT	085288	276	39	181	372	365	23	308	421	69.0	6.4	53.1	84.9
WT	085289	279	13	246	312	392	13	360	423	73.3	3.4	64.8	81.9
WT	085290	219	3	212	226	340	7	322	357	67.5	4.0	57.6	77.3
WT	085291	261	11	233	288	409	37	317	502	70.8	2.7	64.1	77.4

Matrix Code	Sample ID	Arsenic (ng/pouch)				Selenium (ng/pouch)				Mercury (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085274	48.5	4.5	37.4	59.6	35.4	5.3	22.1	48.6	BDL	BDL	N/A	N/A
WT	085275	42.0	6.2	26.5	57.5	32.6	0.8	30.6	34.6	BDL	BDL	N/A	N/A
WT	085276	46.2	7.6	27.3	65.1	37.7	7.0	20.3	55.1	BDL	BDL	N/A	N/A
WT	085277	53.6	4.1	43.4	63.8	45.5	6.2	30.2	60.8	BDL	BDL	N/A	N/A
WT	085278	56.2	3.0	48.6	63.7	41.8	5.6	27.9	55.7	BDL	BDL	N/A	N/A
WT	085279	51.6	9.0	29.3	73.9	33.6	4.5	22.3	44.9	BDL	BDL	N/A	N/A
WT	085280	49.9	2.4	43.9	55.9	37.5	4.1	27.3	47.6	BDL	BDL	N/A	N/A
WT	085281	47.2	5.7	33.1	61.4	38.1	2.6	31.7	44.5	BDL	BDL	N/A	N/A
WT	085282	49.5	5.8	35.0	64.1	56.6	6.3	40.9	72.3	BDL	BDL	N/A	N/A
WT	085283	45.0	2.3	39.3	50.7	28.7	3.1	21.2	36.3	BDL	BDL	N/A	N/A
WT	085284	45.6	6.1	30.5	60.7	40.0	6.9	22.8	57.1	BDL	BDL	N/A	N/A
WT	085285	47.9	1.8	43.5	52.4	45.3	4.7	33.8	56.9	BDL	BDL	N/A	N/A
WT	085286	54.1	4.8	42.2	66.1	39.8	4.4	29.0	50.7	BDL	BDL	N/A	N/A
WT	085287	46.0	7.1	28.3	63.7	38.0	8.6	16.7	59.3	BDL	BDL	N/A	N/A
WT	085288	45.3	0.2	44.8	45.8	32.8	0.8	30.8	34.9	BDL	BDL	N/A	N/A
WT	085289	47.9	2.2	42.5	53.3	35.2	3.7	26.1	44.3	BDL	BDL	N/A	N/A
WT	085290	38.0	6.1	22.8	53.2	41.0	5.3	28.0	54.1	BDL	BDL	N/A	N/A
WT	085291	57.5	2.8	50.6	64.3	45.7	4.1	35.6	55.8	BDL	BDL	N/A	N/A

Matrix Code	Sample ID	Benzo[a]pyrene (ng/pouch)				NNN (ng/pouch)				NAT (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085274	0.521	0.025	0.458	0.585	415	22	360	469	196	10	171	221
WT	085275	0.801	0.030	0.727	0.875	399	22	343	454	226	21	173	278
WT	085276	0.562	0.054	0.427	0.696	484	9	461	506	251	13	219	283
WT	085277	0.527	0.047	0.411	0.643	379	23	322	436	216	11	189	244
WT	085278	0.751	0.071	0.574	0.928	349	27	282	416	193	16	154	232
WT	085279	0.591	0.091	0.364	0.818	419	9	396	442	230	7	211	248
WT	085280	0.506	0.025	0.443	0.569	450	39	352	548	204	11	176	232
WT	085281	0.833	0.094	0.599	1.068	424	13	393	456	239	10	214	264
WT	085282	0.618	0.070	0.444	0.791	377	19	329	426	177	12	146	208
WT	085283	0.522	0.021	0.470	0.574	490	53	359	621	226	21	174	279
WT	085284	0.990	0.049	0.868	1.113	369	24	310	428	201	19	155	247
WT	085285	0.579	0.086	0.365	0.792	368	27	302	434	179	15	142	216
WT	085286	0.444	0.019	0.397	0.491	413	24	353	473	238	19	190	285
WT	085287	0.778	0.099	0.533	1.024	428	22	374	481	235	7	217	252
WT	085288	0.612	0.089	0.392	0.832	449	23	392	507	253	15	216	290
WT	085289	0.656	0.062	0.501	0.811	406	12	376	437	228	8	209	247
WT	085290	0.949	0.102	0.696	1.202	384	20	334	435	205	13	174	236
WT	085291	0.552	0.109	0.282	0.823	467	37	375	559	233	17	192	275

Matrix Code	Sample ID	NAB (ng/pouch)				NNK (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085274	27.3	2.7	20.5	34.0	135	8	116	155
WT	085275	32.8	5.2	19.8	45.8	73.1	6.0	58.3	88.0
WT	085276	30.0	2.7	23.3	36.7	148	4	139	158
WT	085277	28.1	2.2	22.5	33.6	131	6	116	146
WT	085278	25.7	3.0	18.4	33.0	81.0	9.0	58.7	103.4
WT	085279	32.3	3.1	24.6	40.0	150	4	141	159
WT	085280	31.1	2.4	25.2	37.1	141	10	117	164
WT	085281	29.6	1.7	25.5	33.8	79.5	3.1	71.7	87.3
WT	085282	25.2	1.2	22.1	28.2	129	5	117	141
WT	085283	28.3	1.5	24.6	31.9	149	16	109	190
WT	085284	25.3	2.8	18.3	32.3	71.1	4.2	60.6	81.5
WT	085285	24.8	2.8	17.9	31.8	120	7	104	137
WT	085286	29.1	3.6	20.2	38.0	131	7	114	147
WT	085287	31.7	1.0	29.3	34.1	92.1	10.7	65.5	118.7
WT	085288	31.3	3.4	23.0	39.7	148	8	129	167
WT	085289	30.2	1.4	26.7	33.7	140	3	132	147
WT	085290	23.2	3.4	14.7	31.7	75.1	7.0	57.8	92.4
WT	085291	32.3	3.2	24.3	40.2	160	14	126	195

Glossary of Abbreviations

BDL: Below the Limit of Detection

NQ: Below the Limit of Quantification

N/A: Not Applicable

L. Limit (95%) - lower limit of the 95% confidence interval

U. Limit (95%) - upper limit of the 95% confidence interval



Limits of Detection (LOD) and Limits of Quantification (LOQ) Determined for Selected

Health Canada	Analyte	Units	Processed Tobacco	
Method			LOD	LOQ
Tobacco alkaloids				
	Tobacco alkaloids			
T-301	Nicotine	µg/g (dry wt)	75.0	250
T-301	Nornicotine	µg/g (dry wt)	15.0	50.0
T-301	Anabasine	µg/g (dry wt)	15.0	50.0
T-301	Myosmine	µg/g (dry wt)	15.0	50.0
T-301	Anatabine	µg/g (dry wt)	15.0	50.0
Method Modifications for M98 Part 1				
1. per pouch analysis - each pouch approximately 0.6 g				
2. 1 pouch used per analysis				
3. final volume = 24 ml				
Standard method uses 0.025 g to a 1 mL final volume				
For Pouch Analysis - reported on a "µg/pouch basis"				
	Nicotine	µg/pouch	45.0	150
	Nornicotine	µg/pouch	9.00	30.0
	Anabasine	µg/pouch	9.00	30.0
	Myosmine	µg/pouch	9.00	30.0
	Anatabine	µg/pouch	9.00	30.0

Abbreviations: BDL, below detection limit; NQ, below quantitation limit; N/A, not applicable
Date of last review: June 7, 2007

NOTE: The above limits referred to samples processed as required by the referenced Health Canada Method (ie. either "as received" or "dried"). Corrections for the moisture content, determined independently, must be applied where applicable in order to convert the "as received" limits to limits expressed on a "dry weight" basis.

*NOTE: The LOD and LOQ are based on the lowest standard used for calibration of the instruments as referenced in the Health Canada Method.

LOD Definition: The limit of detection (LOD) for a particular analyte is a statistically defined decision point that, with a specified probability, measured results falling at or above this point are interpreted to indicate an analyte concentration greater than zero within the sample.

LOQ Definition: The limit of quantification for a particular analyte is another statistically defined decision point that results falling at or above this point can be assigned a statistically significant numerical value with an associated level of precision. Values falling between the LOD and LOQ are interpreted as a positive but not quantifiable result for the analyte in question.



Limits of Detection (LOD) and Limits of Quantification (LOQ) Determined for Selected

Health Canada		Analyte	Units	Processed Tobacco	
Method				LOD	LOQ
Toxic Trace Metals					
T-306	mercury		ng/g (dry wt)	25.0	30.0
T-306	nickel		ng/g (dry wt)	39.3	131
T-306	lead		ng/g (dry wt)	37.9	126
T-306	cadmium		ng/g (dry wt)	43.3	144
T-306	chromium		ng/g (dry wt)	11.9	39.7
T-306	arsenic		ng/g (dry wt)	25.0	60.0
T-306	selenium		ng/g (dry wt)	25.0	60.0

Method Modifications for M98 Part 1

1. per pouch analysis - each pouch approximately 0.6 g
 2. 4 pouches used per analysis
 3. final volume = 100 ml (pouch analysis)
- Standard method uses 1 g to a 100 mL final volume

For Pouch Analysis - reported on a "ng/pouch basis"

mercury	ng/pouch	6.25	7.50
nickel	ng/pouch	9.83	32.8
lead	ng/pouch	9.48	31.5
cadmium	ng/pouch	10.8	36.0
chromium	ng/pouch	2.98	9.93
arsenic	ng/pouch	6.25	15.0
selenium	ng/pouch	6.25	15.0

Abbreviations: BDL, below detection limit; NQ, below quantitation limit; N/A, not applicable
Date of last review: June 7, 2007

NOTE: The above limits referred to samples processed as required by the referenced Health Canada Method (ie. either "as received" or "dried"). Corrections for the moisture content, determined independently, must be applied where applicable in order to convert the "as received" limits to be expressed on a "dry weight" basis.

*NOTE: The LOD and LOQ are based on the lowest standard used for calibration of the instruments as referenced in the Health Canada Method.

LOD Definition: The limit of detection (LOD) for a particular analyte is a statistically defined decision point that, with a specified probability, results falling at or above this point are interpreted to indicate an analyte concentration greater than zero within the sample.

LOQ Definition: The limit of quantification for a particular analyte is another statistically defined decision point that results falling at or above this point be assigned a statistically significant numerical value with an associated level of precision. Values falling between the LOD and LOQ are interpreted positive but not quantifiable result for the analyte in question.



Limits of Detection (LOD) and Limits of Quantification (LOQ) Determined for Selected Constituents in Processed Tobacco

Health Canada Method	Analyte	Units	Processed Tobacco	
			LOD	LOQ
T-307	Benzo[a]pyrene Benzo[a]pyrene	ng/g (as rec'd)	0.042	0.141
Method Modifications for M98 Part 1 <ol style="list-style-type: none"> 1. per pouch analysis - each pouch approximately 0.6 g 2. 4 pouches used per analysis 3. final volume = 2 ml Standard method uses 2 g to a 2 mL final volume				
For Pouch Analysis - reported on a "ng/pouch basis"				
	Benzo[a]pyrene	ng/pouch (as rec'd)	0.021	0.071

Abbreviations: BDL, below detection limit; NQ, below quantitation limit; N/A, not applicable
Date of last review: June 7, 2007

NOTE: The above limits referred to samples processed as required by the referenced Health Canada Method (ie. either "as received" or "dried"). Corrections for the moisture content, determined independently, must be applied where applicable in order to convert the "as received" limits to limits expressed on a "dry weight" basis.

*NOTE: The LOD and LOQ are based on the lowest standard used for calibration of the instruments as referenced in the Health Canada Method.

LOD Definition: The limit of detection (LOD) for a particular analyte is a statistically defined decision point that, with a specified probability, measured results falling at or above this point are interpreted to indicate an analyte concentration greater than zero within the sample.

LOQ Definition: The limit of quantification for a particular analyte is another statistically defined decision point that results falling at or above this point can be assigned a statistically significant numerical value with an associated level of precision. Values falling between the LOD and LOQ are interpreted as a positive but not quantifiable result for the analyte in question.



Limits of Detection (LOD) and Limits of Quantification (LOQ) Determined for Selected Constituents in Processed Tobacco

Health Canada	Analyte	Units	Processed Tobacco	
Method			LOD	LOQ
Tobacco Specific Nitrosamines (GC/TEA)				
T-309	nitrosornicotine (NNN)	ng/g (as rec'd)	54.0	180
T-309	nitrosoanatabine (NAT)	ng/g (as rec'd)	63.9	213
T-309	nitrosoanabasine (NAB)	ng/g (as rec'd)	31.0	103
T-309	4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)	ng/g (as rec'd)	81.5	272
Method Modifications for M98 Part 1				
1. per pouch analysis - each pouch approximately 0.6 g				
2. 4 pouches used per analysis				
3. final volume = 2 ml				
Standard method uses 1 g to a 5 mL final volume				
For Pouch Analysis - reported on a "ng/pouch basis"				
	nitrosornicotine (NNN)	ng/pouch	5.4	18.0
	nitrosoanatabine (NAT)	ng/pouch	6.4	21.3
	nitrosoanabasine (NAB)	ng/pouch	3.1	10.3
	4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)	ng/pouch	8.2	27.2

Abbreviations: BDL, below detection limit; NQ, below quantitation limit; N/A, not applicable
Date of last review: June 7, 2007

NOTE: The above limits referred to samples processed as required by the referenced Health Canada Method (ie. either "as received" or "dried"). Corrections for the moisture content, determined independently, must be applied where applicable in order to convert the "as received" limits to limits expressed on a "dry weight" basis.

*NOTE: The LOD and LOQ are based on the lowest standard used for calibration of the instruments as referenced in the Health Canada Method.

LOD Definition: The limit of detection (LOD) for a particular analyte is a statistically defined decision point that, with a specified probability, measured results falling at or above this point are interpreted to indicate an analyte concentration greater than zero within the sample.

LOQ Definition: The limit of quantification for a particular analyte is another statistically defined decision point that results falling at or above this point can be assigned a statistically significant numerical value with an associated level of precision. Values falling between the LOD and LOQ are interpreted as a positive but not quantifiable result for the analyte in question.

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085274	6267	73.7	< 30.0 but > 9.00	< 30.0 but > 9.00	41.7
085274	7111	77.7	< 30.0 but > 9.00	< 30.0 but > 9.00	47.5
085274	6899	71.6	< 30.0 but > 9.00	< 30.0 but > 9.00	45.2
Average	6759	74.3	NQ	NQ	44.8
Std. Dev.	439	3.1	NQ	NQ	2.9
L. Limit (95%)	5669	66.5	N/A	N/A	37.5
U. Limit (95%)	7850	82.1	N/A	N/A	52.1
085275	6298	63.2	< 30.0 but > 9.00	< 30.0 but > 9.00	34.2
085275	6514	69.1	< 30.0 but > 9.00	< 30.0 but > 9.00	35.8
085275	6182	59.0	< 30.0 but > 9.00	< 30.0 but > 9.00	33.6
Average	6331	63.8	NQ	NQ	34.6
Std. Dev.	168	5.0	NQ	NQ	1.2
L. Limit (95%)	5913	51.2	N/A	N/A	31.7
U. Limit (95%)	6750	76.3	N/A	N/A	37.4
085276	6567	84.3	< 30.0 but > 9.00	< 30.0 but > 9.00	33.6
085276	6253	64.0	< 30.0 but > 9.00	< 30.0 but > 9.00	31.3
085276	6331	69.1	< 30.0 but > 9.00	< 30.0 but > 9.00	31.4
Average	6383	72.5	NQ	NQ	32.1
Std. Dev.	163	10.6	NQ	NQ	1.3
L. Limit (95%)	5978	46.2	N/A	N/A	28.8
U. Limit (95%)	6789	98.7	N/A	N/A	35.4
085277	6204	102	< 30.0 but > 9.00	< 30.0 but > 9.00	40.3
085277	6092	71.7	< 30.0 but > 9.00	< 30.0 but > 9.00	37.5
085277	6523	71.3	< 30.0 but > 9.00	< 30.0 but > 9.00	39.4
Average	6273	81.6	NQ	NQ	39.1
Std. Dev.	224	17.6	NQ	NQ	1.4
L. Limit (95%)	5717	37.9	N/A	N/A	35.6
U. Limit (95%)	6828	125.4	N/A	N/A	42.5
085278	6317	73.8	< 30.0 but > 9.00	< 30.0 but > 9.00	34.4
085278	6678	70.3	< 30.0 but > 9.00	< 30.0 but > 9.00	35.0
085278	6759	61.1	30.2	< 30.0 but > 9.00	35.2
Average	6584	68.4	NQ	NQ	34.9
Std. Dev.	235	6.6	NQ	NQ	0.4
L. Limit (95%)	6000	52.1	N/A	N/A	33.8
U. Limit (95%)	7169	84.7	N/A	N/A	35.9

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085279	6976	78.3	< 30.0 but > 9.00	< 30.0 but > 9.00	44.3
085279	7136	78.2	< 30.0 but > 9.00	< 30.0 but > 9.00	46.5
085279	7458	83.3	33.2	< 30.0 but > 9.00	48.6
Average	7190	79.9	NQ	NQ	46.5
Std. Dev.	245	2.9	NQ	NQ	2.2
L. Limit (95%)	6580	72.7	N/A	N/A	41.0
U. Limit (95%)	7800	87.2	N/A	N/A	51.9
085280	7126	85.2	30.6	< 30.0 but > 9.00	46.3
085280	7649	85.9	32.9	< 30.0 but > 9.00	51.9
085280	7329	86.1	31.8	< 30.0 but > 9.00	47.9
Average	7368	85.8	31.8	NQ	48.7
Std. Dev.	264	0.5	1.2	NQ	2.9
L. Limit (95%)	6712	84.6	28.8	N/A	41.6
U. Limit (95%)	8024	86.9	34.7	N/A	55.8
085281	6039	63.7	< 30.0 but > 9.00	< 30.0 but > 9.00	31.5
085281	5789	55.9	< 30.0 but > 9.00	< 9.00	31.1
085281	6096	60.1	< 30.0 but > 9.00	< 30.0 but > 9.00	33.7
Average	5975	59.9	NQ	NQ	32.1
Std. Dev.	163	3.9	NQ	NQ	1.4
L. Limit (95%)	5570	50.2	N/A	N/A	28.6
U. Limit (95%)	6379	69.6	N/A	N/A	35.6
085282	7514	98.9	34.4	< 30.0 but > 9.00	53.6
085282	8333	86.7	37.6	< 30.0 but > 9.00	57.3
085282	7907	91.4	34.7	< 30.0 but > 9.00	56.5
Average	7918	92.3	35.6	NQ	55.8
Std. Dev.	410	6.2	1.7	NQ	1.9
L. Limit (95%)	6900	77.0	31.2	N/A	51.1
U. Limit (95%)	8937	107.6	39.9	N/A	60.6
085283	8760	92.1	38.6	< 30.0 but > 9.00	62.2
085283	7652	79.7	34.0	< 30.0 but > 9.00	57.6
085283	7904	83.9	34.3	< 30.0 but > 9.00	58.7
Average	8105	85.2	35.6	NQ	59.5
Std. Dev.	580	6.3	2.6	NQ	2.4
L. Limit (95%)	6663	69.5	29.3	N/A	53.6
U. Limit (95%)	9547	100.9	42.0	N/A	65.4

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085284	6375	68.2	< 30.0 but > 9.00	< 30.0 but > 9.00	52.2
085284	7098	76.4	32.8	< 30.0 but > 9.00	57.4
085284	6694	67.7	30.0	< 9.00	55.1
Average	6722	70.7	NQ	NQ	54.9
Std. Dev.	362	4.9	NQ	NQ	2.6
L. Limit (95%)	5822	58.6	N/A	N/A	48.4
U. Limit (95%)	7623	82.9	N/A	N/A	61.4
085285	8468	104	38.7	< 30.0 but > 9.00	62.6
085285	7843	88.1	35.0	< 30.0 but > 9.00	57.3
085285	7729	75.0	34.9	< 30.0 but > 9.00	55.9
Average	8013	89.0	36.2	NQ	58.6
Std. Dev.	398	14.6	2.1	NQ	3.5
L. Limit (95%)	7024	52.8	30.8	N/A	49.9
U. Limit (95%)	9002	125.3	41.5	N/A	67.3
085286	6717	81.6	30.2	< 30.0 but > 9.00	42.9
085286	6357	75.5	< 30.0 but > 9.00	< 30.0 but > 9.00	42.5
085286	6629	78.9	< 30.0 but > 9.00	< 30.0 but > 9.00	43.9
Average	6568	78.7	NQ	NQ	43.1
Std. Dev.	188	3.1	NQ	NQ	0.7
L. Limit (95%)	6102	71.0	N/A	N/A	41.4
U. Limit (95%)	7034	86.3	N/A	N/A	44.8
085287	6990	76.8	31.9	< 30.0 but > 9.00	37.0
085287	6525	55.2	< 30.0 but > 9.00	< 30.0 but > 9.00	35.9
085287	6820	61.4	30.4	< 30.0 but > 9.00	35.1
Average	6778	64.5	NQ	NQ	36.0
Std. Dev.	236	11.1	NQ	NQ	1.0
L. Limit (95%)	6193	36.8	N/A	N/A	33.6
U. Limit (95%)	7364	92.2	N/A	N/A	38.4
085288	6568	91.8	30.9	< 30.0 but > 9.00	40.0
085288	6692	68.1	30.3	< 30.0 but > 9.00	41.5
085288	6250	64.2	< 30.0 but > 9.00	< 30.0 but > 9.00	39.0
Average	6503	74.7	NQ	NQ	40.2
Std. Dev.	228	15.0	NQ	NQ	1.2
L. Limit (95%)	5937	37.5	N/A	N/A	37.1
U. Limit (95%)	7070	111.9	N/A	N/A	43.3

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085289	6589	66.5	< 30.0 but > 9.00	< 30.0 but > 9.00	31.4
085289	6349	68.3	< 30.0 but > 9.00	< 30.0 but > 9.00	30.8
085289	6434	72.1	< 30.0 but > 9.00	< 30.0 but > 9.00	32.6
Average	6458	69.0	NQ	NQ	31.6
Std. Dev.	122	2.8	NQ	NQ	0.9
L. Limit (95%)	6155	61.9	N/A	N/A	29.3
U. Limit (95%)	6760	76.0	N/A	N/A	33.9
085290	6511	70.2	< 30.0 but > 9.00	< 30.0 but > 9.00	52.6
085290	6813	71.4	32.3	< 30.0 but > 9.00	53.4
085290	6801	69.0	32.6	< 30.0 but > 9.00	55.0
Average	6708	70.2	NQ	NQ	53.7
Std. Dev.	171	1.2	NQ	NQ	1.2
L. Limit (95%)	6284	67.2	N/A	N/A	50.6
U. Limit (95%)	7133	73.2	N/A	N/A	56.7
085291	7467	91.3	32.6	< 30.0 but > 9.00	53.4
085291	8019	97.0	36.1	< 30.0 but > 9.00	56.9
085291	7599	78.8	32.6	< 30.0 but > 9.00	54.8
Average	7695	89.0	33.8	NQ	55.0
Std. Dev.	289	9.3	2.0	NQ	1.8
L. Limit (95%)	6978	65.9	28.8	N/A	50.7
U. Limit (95%)	8412	112.2	38.8	N/A	59.4

Glossary of Abbreviations

BDL: Below Limit of Detection

NQ: Below Limit of Quantification

N/A: Not Applicable

Table 4: Toxic Trace Metals Content of Processed Tobacco
(‘pouch’ Basis)

Sample ID	Cd (ng/pouch)	Cr (ng/pouch)	Ni (ng/pouch)	Pb (ng/pouch)	As (ng/pouch)	Se (ng/pouch)	Hg (ng/pouch)
085274	186	234	348	70.2	50.3	41.5	< 6.25
085274	185	229	336	71.3	51.7	33.0	< 6.25
085274	193	243	362	68.6	43.4	31.6	< 6.25
Average	188	235	348	70.0	48.5	35.4	BDL
Std. Dev.	5	7	13	1.3	4.5	5.3	BDL
L. Limit (95%)	176	217	316	66.7	37.4	22.1	N/A
U. Limit (95%)	200	254	381	73.3	59.6	48.6	N/A
085275	170	231	314	58.4	42.8	33.1	< 6.25
085275	182	231	312	61.5	47.8	33.0	< 6.25
085275	188	243	337	66.4	35.4	31.7	< 6.25
Average	180	235	321	62.1	42.0	32.6	BDL
Std. Dev.	9	7	14	4.0	6.2	0.8	BDL
L. Limit (95%)	158	217	287	52.1	26.5	30.6	N/A
U. Limit (95%)	202	252	355	72.1	57.5	34.6	N/A
085276	195	276	346	66.5	44.8	40.3	< 6.25
085276	200	264	342	78.3	39.3	29.8	< 6.25
085276	193	254	345	77.4	54.4	43.1	< 6.25
Average	196	265	344	74.1	46.2	37.7	BDL
Std. Dev.	3	11	2	6.6	7.6	7.0	BDL
L. Limit (95%)	187	237	339	57.7	27.3	20.3	N/A
U. Limit (95%)	204	292	350	90.4	65.1	55.1	N/A
085277	195	284	367	67.0	54.7	38.6	< 6.25
085277	198	277	375	62.4	49.1	47.8	< 6.25
085277	195	278	367	64.2	57.1	50.2	< 6.25
Average	196	280	370	64.5	53.6	45.5	BDL
Std. Dev.	2	4	5	2.3	4.1	6.2	BDL
L. Limit (95%)	191	270	359	58.8	43.4	30.2	N/A
U. Limit (95%)	201	289	381	70.3	63.8	60.8	N/A
085278	204	281	393	72.7	54.4	41.8	< 6.25
085278	200	266	379	68.7	59.7	36.2	< 6.25
085278	195	287	369	67.9	54.5	47.4	< 6.25
Average	200	278	380	69.8	56.2	41.8	BDL
Std. Dev.	4	11	12	2.5	3.0	5.6	BDL
L. Limit (95%)	189	252	350	63.4	48.6	27.9	N/A
U. Limit (95%)	210	304	410	76.1	63.7	55.7	N/A

Table 4: Toxic Trace Metals Content of Processed Tobacco
(‘pouch’ Basis)

Sample ID	Cd (ng/pouch)	Cr (ng/pouch)	Ni (ng/pouch)	Pb (ng/pouch)	As (ng/pouch)	Se (ng/pouch)	Hg (ng/pouch)
085279	182	255	352	68.3	57.5	37.9	< 6.25
085279	207	278	390	74.7	56.1	34.0	< 6.25
085279	208	279	391	69.9	41.3	28.8	< 6.25
Average	199	271	378	71.0	51.6	33.6	BDL
Std. Dev.	15	13	22	3.3	9.0	4.5	BDL
L. Limit (95%)	162	238	322	62.7	29.3	22.3	N/A
U. Limit (95%)	236	304	433	79.2	73.9	44.9	N/A
085280	188	261	355	68.5	47.5	41.9	< 6.25
085280	202	243	367	67.9	49.8	36.8	< 6.25
085280	209	250	382	75.8	52.3	33.8	< 6.25
Average	200	251	368	70.8	49.9	37.5	BDL
Std. Dev.	11	9	13	4.4	2.4	4.1	BDL
L. Limit (95%)	173	229	335	59.9	43.9	27.3	N/A
U. Limit (95%)	227	274	401	81.7	55.9	47.6	N/A
085281	189	252	330	61.4	50.9	41.0	< 6.25
085281	190	239	330	64.9	50.1	36.4	< 6.25
085281	212	274	372	77.0	40.7	36.9	< 6.25
Average	197	255	344	67.7	47.2	38.1	BDL
Std. Dev.	13	18	24	8.2	5.7	2.6	BDL
L. Limit (95%)	164	211	284	47.4	33.1	31.7	N/A
U. Limit (95%)	230	299	404	88.1	61.4	44.5	N/A
085282	186	245	423	75.8	56.3	51.5	< 6.25
085282	184	256	405	71.3	46.5	63.7	< 6.25
085282	187	256	411	74.7	45.8	54.6	< 6.25
Average	186	252	413	73.9	49.5	56.6	BDL
Std. Dev.	1	6	9	2.3	5.8	6.3	BDL
L. Limit (95%)	182	237	390	68.1	35.0	40.9	N/A
U. Limit (95%)	189	268	435	79.7	64.1	72.3	N/A
085283	192	231	347	71.0	47.6	25.9	< 6.25
085283	195	240	364	72.1	43.2	32.0	< 6.25
085283	202	270	480	77.6	44.3	28.4	< 6.25
Average	196	247	397	73.6	45.0	28.7	BDL
Std. Dev.	5	20	72	3.6	2.3	3.1	BDL
L. Limit (95%)	184	196	217	64.7	39.3	21.2	N/A
U. Limit (95%)	209	297	577	82.4	50.7	36.3	N/A

Table 4: Toxic Trace Metals Content of Processed Tobacco
(‘pouch’ Basis)

Sample ID	Cd (ng/pouch)	Cr (ng/pouch)	Ni (ng/pouch)	Pb (ng/pouch)	As (ng/pouch)	Se (ng/pouch)	Hg (ng/pouch)
085284	210	237	354	74.6	40.6	38.8	< 6.25
085284	188	207	316	63.1	52.4	47.4	< 6.25
085284	202	221	324	61.3	43.9	33.8	< 6.25
Average	200	222	331	66.3	45.6	40.0	BDL
Std. Dev.	11	15	20	7.2	6.1	6.9	BDL
L. Limit (95%)	173	185	282	48.5	30.5	22.8	N/A
U. Limit (95%)	228	258	381	84.2	60.7	57.1	N/A
085285	177	244	398	68.2	46.5	49.1	< 6.25
085285	191	264	420	77.9	47.4	40.1	< 6.25
085285	171	230	402	79.5	50.0	46.8	< 7.50 but > 6.25
Average	180	246	407	75.2	47.9	45.3	BDL
Std. Dev.	10	17	12	6.1	1.8	4.7	BDL
L. Limit (95%)	155	203	378	60.1	43.5	33.8	N/A
U. Limit (95%)	205	288	436	90.4	52.4	56.9	N/A
085286	185	238	309	70.6	53.6	36.9	< 6.25
085286	216	270	344	79.9	49.6	37.7	< 6.25
085286	195	258	333	77.1	59.2	44.9	< 6.25
Average	199	255	329	75.9	54.1	39.8	BDL
Std. Dev.	16	16	18	4.8	4.8	4.4	BDL
L. Limit (95%)	160	215	284	64.0	42.2	29.0	N/A
U. Limit (95%)	238	295	373	87.8	66.1	50.7	N/A
085287	192	278	326	74.2	54.2	47.5	< 6.25
085287	204	267	346	72.5	42.2	35.5	< 6.25
085287	190	365	352	64.0	41.5	30.9	< 6.25
Average	195	304	341	70.2	46.0	38.0	BDL
Std. Dev.	8	54	13	5.5	7.1	8.6	BDL
L. Limit (95%)	176	171	308	56.7	28.3	16.7	N/A
U. Limit (95%)	215	437	375	83.8	63.7	59.3	N/A
085288	187	236	343	64.9	45.3	32.4	< 6.25
085288	207	279	388	76.4	45.1	33.8	< 6.25
085288	192	313	363	65.7	45.5	32.3	< 6.25
Average	195	276	365	69.0	45.3	32.8	BDL
Std. Dev.	10	39	23	6.4	0.2	0.8	BDL
L. Limit (95%)	169	181	308	53.1	44.8	30.8	N/A
U. Limit (95%)	221	372	421	84.9	45.8	34.9	N/A

Table 4: Toxic Trace Metals Content of Processed Tobacco
('pouch' Basis)

Sample ID	Cd (ng/pouch)	Cr (ng/pouch)	Ni (ng/pouch)	Pb (ng/pouch)	As (ng/pouch)	Se (ng/pouch)	Hg (ng/pouch)
085289	192	264	378	71.2	48.4	37.9	< 6.25
085289	201	281	403	77.3	49.8	31.0	< 6.25
085289	206	291	394	71.5	45.5	36.6	< 6.25
Average	200	279	392	73.3	47.9	35.2	BDL
Std. Dev.	7	13	13	3.4	2.2	3.7	BDL
L. Limit (95%)	181	246	360	64.8	42.5	26.1	N/A
U. Limit (95%)	218	312	423	81.9	53.3	44.3	N/A
085290	187	218	333	63.1	41.6	43.7	< 6.25
085290	206	216	338	68.7	41.4	44.4	< 6.25
085290	209	222	347	70.7	30.9	35.0	< 6.25
Average	201	219	340	67.5	38.0	41.0	BDL
Std. Dev.	12	3	7	4.0	6.1	5.3	BDL
L. Limit (95%)	171	212	322	57.6	22.8	28.0	N/A
U. Limit (95%)	230	226	357	77.3	53.2	54.1	N/A
085291	208	248	382	71.0	54.7	49.8	< 6.25
085291	237	267	394	68.0	60.2	41.6	< 6.25
085291	231	268	452	73.3	57.4	45.7	< 6.25
Average	225	261	409	70.8	57.5	45.7	BDL
Std. Dev.	15	11	37	2.7	2.8	4.1	BDL
L. Limit (95%)	187	233	317	64.1	50.6	35.6	N/A
U. Limit (95%)	264	288	502	77.4	64.3	55.8	N/A

Glossary of Abbreviations

BDL: Below Limit of Detection

NQ: Below Limit of Quantification

N/A: Not Applicable

Table 5: Benzo[a]pyrene Content of Processed Tobacco ('pouch' Basis)

Sample ID	B[a]P (ng/pouch)
085274	0.494
085274	0.545
085274	0.525
Average	0.521
Std. Dev.	0.025
L. Limit (95%)	0.458
U. Limit (95%)	0.585
085275	0.782
085275	0.835
085275	0.785
Average	0.801
Std. Dev.	0.030
L. Limit (95%)	0.727
U. Limit (95%)	0.875
085276	0.503
085276	0.571
085276	0.611
Average	0.562
Std. Dev.	0.054
L. Limit (95%)	0.427
U. Limit (95%)	0.696
085277	0.581
085277	0.496
085277	0.504
Average	0.527
Std. Dev.	0.047
L. Limit (95%)	0.411
U. Limit (95%)	0.643
085278	0.757
085278	0.819
085278	0.677
Average	0.751
Std. Dev.	0.071
L. Limit (95%)	0.574
U. Limit (95%)	0.928

Table 5: Benzo[a]pyrene Content of Processed Tobacco ('pouch' Basis)

Sample ID	B[a]P (ng/pouch)
085279	0.688
085279	0.506
085279	0.578
Average	0.591
Std. Dev.	0.091
L. Limit (95%)	0.364
U. Limit (95%)	0.818
085280	0.477
085280	0.526
085280	0.515
Average	0.506
Std. Dev.	0.025
L. Limit (95%)	0.443
U. Limit (95%)	0.569
085281	0.930
085281	0.742
085281	0.828
Average	0.833
Std. Dev.	0.094
L. Limit (95%)	0.599
U. Limit (95%)	1.068
085282	0.666
085282	0.650
085282	0.538
Average	0.618
Std. Dev.	0.070
L. Limit (95%)	0.444
U. Limit (95%)	0.791
085283	0.536
085283	0.498
085283	0.532
Average	0.522
Std. Dev.	0.021
L. Limit (95%)	0.470
U. Limit (95%)	0.574

Table 5: Benzo[a]pyrene Content of Processed Tobacco ('pouch' Basis)

Sample ID	B[a]P (ng/pouch)
085284	1.046
085284	0.975
085284	0.951
Average	0.990
Std. Dev.	0.049
L. Limit (95%)	0.868
U. Limit (95%)	1.113
085285	0.677
085285	0.545
085285	0.515
Average	0.579
Std. Dev.	0.086
L. Limit (95%)	0.365
U. Limit (95%)	0.792
085286	0.442
085286	0.426
085286	0.464
Average	0.444
Std. Dev.	0.019
L. Limit (95%)	0.397
U. Limit (95%)	0.491
085287	0.880
085287	0.683
085287	0.771
Average	0.778
Std. Dev.	0.099
L. Limit (95%)	0.533
U. Limit (95%)	1.024
085288	0.625
085288	0.517
085288	0.693
Average	0.612
Std. Dev.	0.089
L. Limit (95%)	0.392
U. Limit (95%)	0.832

**Table 5: Benzo[a]pyrene Content of Processed Tobacco
(‘pouch’ Basis)**

Sample ID	B[a]P (ng/pouch)
085289	0.727
085289	0.624
085289	0.615
Average	0.656
Std. Dev.	0.062
L. Limit (95%)	0.501
U. Limit (95%)	0.811
085290	0.996
085290	1.020
085290	0.832
Average	0.949
Std. Dev.	0.102
L. Limit (95%)	0.696
U. Limit (95%)	1.202
085291	0.641
085291	0.585
085291	0.431
Average	0.552
Std. Dev.	0.109
L. Limit (95%)	0.282
U. Limit (95%)	0.823

**Table : TSNA Content of Processed Tobacco - GC-TEA Method
('pouch' Basis)**

Sample ID	NNN (ng/pouch)	NAT (ng/pouch)	NAB (ng/pouch)	NNK (ng/pouch)
085274	422	201	24.2	140
085274	390	184	28.0	126
085274	432	203	29.5	140
Average	415	196	27.3	135
Std. Dev.	22	10	2.7	8
L. Limit (95%)	360	171	20.5	116
U. Limit (95%)	469	221	34.0	155
085275	419	246	37.8	79.8
085275	402	228	33.2	71.3
085275	375	203	27.3	68.3
Average	399	226	32.8	73.1
Std. Dev.	22	21	5.2	6.0
L. Limit (95%)	343	173	19.8	58.3
U. Limit (95%)	454	278	45.8	88.0
085276	479	240	27.0	144
085276	478	247	32.2	150
085276	494	265	30.7	151
Average	484	251	30.0	148
Std. Dev.	9	13	2.7	4
L. Limit (95%)	461	219	23.3	139
U. Limit (95%)	506	283	36.7	158
085277	405	228	26.9	138
085277	371	214	30.6	127
085277	361	206	26.7	128
Average	379	216	28.1	131
Std. Dev.	23	11	2.2	6
L. Limit (95%)	322	189	22.5	116
U. Limit (95%)	436	244	33.6	146
085278	380	209	29.1	91.0
085278	335	192	23.8	78.7
085278	333	178	24.2	73.4
Average	349	193	25.7	81.0
Std. Dev.	27	16	3.0	9.0
L. Limit (95%)	282	154	18.4	58.7
U. Limit (95%)	416	232	33.0	103.4

Table : TSNA Content of Processed Tobacco - GC-TEA Method ('pouch' Basis)

Sample ID	NNN (ng/pouch)	NAT (ng/pouch)	NAB (ng/pouch)	NNK (ng/pouch)
085279	430	238	33.7	154
085279	415	227	34.5	149
085279	412	224	28.8	147
Average	419	230	32.3	150
Std. Dev.	9	7	3.1	4
L. Limit (95%)	396	211	24.6	141
U. Limit (95%)	442	248	40.0	159
085280	495	215	33.9	152
085280	429	203	29.7	136
085280	425	193	29.8	134
Average	450	204	31.1	141
Std. Dev.	39	11	2.4	10
L. Limit (95%)	352	176	25.2	117
U. Limit (95%)	548	232	37.1	164
085281	410	229	27.7	78.0
085281	429	238	30.7	77.5
085281	435	249	30.5	83.1
Average	424	239	29.6	79.5
Std. Dev.	13	10	1.7	3.1
L. Limit (95%)	393	214	25.5	71.7
U. Limit (95%)	456	264	33.8	87.3
085282	388	189	26.6	132
085282	389	178	24.4	131
085282	355	164	24.5	123
Average	377	177	25.2	129
Std. Dev.	19	12	1.2	5
L. Limit (95%)	329	146	22.1	117
U. Limit (95%)	426	208	28.2	141
085283	516	238	30.0	149
085283	526	239	27.3	166
085283	430	202	27.6	133
Average	490	226	28.3	149
Std. Dev.	53	21	1.5	16
L. Limit (95%)	359	174	24.6	109
U. Limit (95%)	621	279	31.9	190

Table : **TSNA Content of Processed Tobacco - GC-TEA Method**
('pouch' Basis)

Sample ID	NNN (ng/pouch)	NAT (ng/pouch)	NAB (ng/pouch)	NNK (ng/pouch)
085284	377	208	26.9	75.3
085284	342	180	22.0	66.9
085284	387	214	26.9	70.9
Average	369	201	25.3	71.1
Std. Dev.	24	19	2.8	4.2
L. Limit (95%)	310	155	18.3	60.6
U. Limit (95%)	428	247	32.3	81.5
085285	392	193	21.7	123
085285	339	163	25.7	113
085285	374	180	27.1	125
Average	368	179	24.8	120
Std. Dev.	27	15	2.8	7
L. Limit (95%)	302	142	17.9	104
U. Limit (95%)	434	216	31.8	137
085286	409	232	30.9	134
085286	438	259	31.5	135
085286	391	222	25.0	123
Average	413	238	29.1	131
Std. Dev.	24	19	3.6	7
L. Limit (95%)	353	190	20.2	114
U. Limit (95%)	473	285	38.0	147
085287	451	240	32.8	103
085287	409	226	31.4	82.2
085287	423	238	30.9	90.6
Average	428	235	31.7	92.1
Std. Dev.	22	7	1.0	10.7
L. Limit (95%)	374	217	29.3	65.5
U. Limit (95%)	481	252	34.1	118.7
085288	459	263	31.8	147
085288	423	236	27.7	141
085288	466	260	34.4	156
Average	449	253	31.3	148
Std. Dev.	23	15	3.4	8
L. Limit (95%)	392	216	23.0	129
U. Limit (95%)	507	290	39.7	167

**Table : TSNA Content of Processed Tobacco - GC-TEA Method
('pouch' Basis)**

Sample ID	NNN (ng/pouch)	NAT (ng/pouch)	NAB (ng/pouch)	NNK (ng/pouch)
085289	396	221	29.5	141
085289	404	226	29.3	142
085289	420	236	31.8	136
Average	406	228	30.2	140
Std. Dev.	12	8	1.4	3
L. Limit (95%)	376	209	26.7	132
U. Limit (95%)	437	247	33.7	147
085290	362	191	19.9	76.2
085290	401	211	26.7	81.5
085290	390	214	23.0	67.7
Average	384	205	23.2	75.1
Std. Dev.	20	13	3.4	7.0
L. Limit (95%)	334	174	14.7	57.8
U. Limit (95%)	435	236	31.7	92.4
085291	509	252	35.8	176
085291	455	229	31.4	158
085291	438	219	29.6	148
Average	467	233	32.3	160
Std. Dev.	37	17	3.2	14
L. Limit (95%)	375	192	24.3	126
U. Limit (95%)	559	275	40.2	195

12 Appendix B3: Part 2 Analytical Data

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Sample ID	Sample Description	Client Specific Description
085292	Camel SNUS frost	CS-0804-1
085293	Camel SNUS original	CS-0804-2
085294	Camel SNUS original	CS-0804-3
085295	Camel SNUS frost	CS-0804-4
085296	Camel SNUS frost	CS-0804-5
085297	Camel SNUS spice	CS-0804-6
085298	Camel SNUS spice	CS-0804-7
085299	Camel SNUS frost	CS-0804-8
085300	Camel SNUS original	CS-0804-9
085301	Camel SNUS spice	CS-0804-10
085302	Camel SNUS frost	CS-0804-21
085303	Camel SNUS spice	CS-0804-22
085304	Camel SNUS original	CS-0804-23
085305	Camel SNUS frost	CS-0804-24
085306	Camel SNUS frost	CS-0804-25
085307	Camel SNUS frost	CS-0804-26
085308	Camel SNUS spice	CS-0804-27
085309	Camel SNUS original	CS-0804-28
085310	Camel SNUS original	CS-0804-29
085311	Camel SNUS spice	CS-0804-30
085312	Camel SNUS spice	CS-0804-11
085313	Camel SNUS frost	CS-0804-12
085314	Camel SNUS spice	CS-0804-13
085315	Camel SNUS frost	CS-0804-14
085316	Camel SNUS original	CS-0804-15
085317	Camel SNUS frost	CS-0804-16
085318	Camel SNUS original	CS-0804-17
085319	Camel SNUS original	CS-0804-18
085320	Camel SNUS spice	CS-0804-19
085321	Camel SNUS Frost	CS-0804-31
085322	Camel SNUS Frost	CS-0804-32
085323	Camel SNUS Frost	CS-0804-33
085324	Camel SNUS Spice	CS-0804-34
085325	Camel SNUS Original	CS-0804-35
085326	Camel SNUS Original	CS-0804-36
085327	Camel SNUS Frost	CS-0804-37
085328	Camel SNUS Frost	CS-0804-38
085329	Camel SNUS Spice	CS-0804-46

Sample ID	Sample Description	Client Specific Description
085330	Camel SNUS Spice	CS-0804-47
085331	Camel SNUS Frost	CS-0804-48
085332	Camel SNUS Frost	CS-0804-49
085333	Camel SNUS Frost	CS-0804-50
085334	Camel SNUS Spice & Camel SNUS Original	CS-0804-54
085335	Camel SNUS Frost	CS-0804-55
085336	Camel SNUS Frost	CS-0804-57
085337	Camel SNUS Frost	CS-0804-59
085338	Camel SNUS Frost	CS-0804-41
085339	Camel SNUS Spice	CS-0804-42
085340	Camel SNUS Frost	CS-0804-43
085341	Camel SNUS Spice	CS-0804-44
085342	Camel SNUS Frost	CS-0804-45
085343	Camel SNUS Spice	CS-0804-51
085344	Camel SNUS Original	CS-0804-52
085345	Camel SNUS Spice	CS-0804-53

NOTE: During the recording of the details for the kits received, it was noted that the tins received for sample CSD-0804-54 (Labstat I.D. 085334) were of two types - Camel Snus Spice (3 tins) and Camel Snus Original (4 tins).

Matrix Code	Sample ID	Nicotine (µg/pouch)				Nornicotine (µg/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085292	3776	467	ND	ND	50.3	4.2	ND	ND
WT	085293	2448	774	1216	3680	34.4	13.5	12.8	55.9
WT	085294	2579	286	1869	3289	37.5	3.7	28.4	46.6
WT	085295	4890	888	3477	6303	68.8	10.5	52.1	85.5
WT	085296	6502	1085	4775	8229	82.4	12.0	63.3	101.5
WT	085297	2922	1574	ND	ND	44.5	17.8	ND	ND
WT	085298	5056	589	4119	5994	62.4	2.1	59.1	65.8
WT	085299	3962	ND	ND	ND	68.4	ND	ND	ND
WT	085300	5170	689	4074	6266	68.7	8.2	55.6	81.8
WT	085301	4169	724	2371	5967	56.6	10.2	31.2	82.1
WT	085302	4863	ND	ND	ND	76.3	ND	ND	ND
WT	085303	5765	342	4916	6614	75.5	5.0	63.0	88.1
WT	085304	5449	215	ND	ND	67.9	0.3	ND	ND
WT	085305	4398	597	3449	5348	59.2	8.4	45.8	72.5
WT	085306	2454	1307	375	4534	34.5	15.8	9.3	59.6
WT	085307	2448	ND	ND	ND	40.8	ND	ND	ND
WT	085308	4635	ND	ND	ND	70.6	ND	ND	ND
WT	085309	2352	306	1592	3113	36.4	4.9	24.3	48.5
WT	085310	3528	368	2942	4114	42.8	2.4	38.9	46.6
WT	085311	3242	2000	0	8211	47.9	23.5	0.0	106.2
WT	085312	6152	1147	3301	9002	72.6	11.9	42.9	102.2
WT	085313	2898	1596	0	6862	42.8	24.8	0.0	104.5
WT	085314	5801	320	ND	ND	59.3	0.0	ND	ND
WT	085315	5826	1339	ND	ND	60.1	0.5	ND	ND
WT	085316	6744	751	4877	8611	82.2	6.8	65.3	99.1
WT	085317	4908	2711	0	11642	62.1	29.3	0.0	134.8
WT	085318	5709	1640	1634	9784	73.0	14.1	38.0	108.0
WT	085319	4828	124	ND	ND	63.6	3.7	ND	ND
WT	085320	7221	911	4958	9483	79.1	12.3	48.5	109.7
WT	085321	5255	966	2855	7654	71.0	17.8	26.7	115.3
WT	085322	4037	424	2983	5091	59.6	2.6	53.2	65.9
WT	085323	5961	69	ND	ND	81.4	2.4	ND	ND
WT	085324	3782	737	2609	4954	57.3	9.3	42.5	72.1
WT	085325	4745	883	3340	6150	70.5	12.4	50.7	90.3

Matrix Code	Sample ID	Nicotine (µg/pouch)				Nornicotine (µg/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085326	4679	49	ND	ND	63.2	0.5	ND	ND
WT	085327	5233	510	ND	ND	69.7	4.9	ND	ND
WT	085328	762	74	579	945	NQ	NQ	N/A	N/A
WT	085329	5805	ND	ND	ND	82.8	ND	ND	ND
WT	085330	4740	516	3919	5562	63.1	3.3	57.9	68.3
WT	085331	2935	ND	ND	ND	50.8	ND	ND	ND
WT	085332	4015	640	2997	5032	64.9	11.6	46.5	83.3
WT	085333	1454	ND	ND	ND	30.2	ND	ND	ND
WT	085334	7379	609	6410	8348	91.5	11.1	73.9	109.1
WT	085335	1169	406	523	1815	NQ	NQ	N/A	N/A
WT	085336	2084	200	ND	ND	NQ	NQ	ND	ND
WT	085337	6657	ND	ND	ND	99.3	ND	ND	ND
WT	085338	5644	1462	2012	9276	80.4	19.6	31.8	129.1
WT	085339	4961	1225	1917	8005	72.5	14.5	36.5	108.6
WT	085340	3661	489	2883	4439	54.7	4.7	47.1	62.3
WT	085341	3849	457	ND	ND	42.0	5.8	ND	ND
WT	085342	1481	ND	ND	ND	< 30.0 but > 9.00	ND	ND	ND
WT	085343	4246	ND	ND	ND	63.4	ND	ND	ND
WT	085344	2287	484	1517	3057	35.8	2.6	31.8	39.9
WT	085345	2965	959	ND	ND	38.8	2.5	ND	ND

Matrix Code	Sample ID	Anabasine (µg/pouch)				Myosmine (µg/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085292	NQ	NQ	ND	ND	NQ	NQ	ND	ND
WT	085293	NQ	NQ	N/A	N/A	BDL	BDL	N/A	N/A
WT	085294	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085295	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085296	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085297	NQ	NQ	ND	ND	BDL	BDL	ND	ND
WT	085298	NQ	NQ	N/A	N/A	BDL	BDL	N/A	N/A
WT	085299	< 30.0 but > 9.00	ND	ND	ND	< 30.0 but > 9.00	ND	ND	ND
WT	085300	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085301	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085302	< 30.0 but > 9.00	ND	ND	ND	< 30.0 but > 9.00	ND	ND	ND
WT	085303	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085304	NQ	NQ	ND	ND	NQ	NQ	ND	ND
WT	085305	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085306	NQ	NQ	N/A	N/A	BDL	BDL	N/A	N/A
WT	085307	< 30.0 but > 9.00	ND	ND	ND	< 9.00	ND	ND	ND
WT	085308	< 30.0 but > 9.00	ND	ND	ND	< 9.00	ND	ND	ND
WT	085309	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085310	NQ	NQ	N/A	N/A	BDL	BDL	N/A	N/A
WT	085311	NQ	NQ	N/A	N/A	BDL	BDL	N/A	N/A
WT	085312	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085313	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085314	NQ	NQ	ND	ND	NQ	NQ	ND	ND
WT	085315	NQ	NQ	ND	ND	NQ	NQ	ND	ND
WT	085316	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085317	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085318	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085319	NQ	NQ	ND	ND	NQ	NQ	ND	ND
WT	085320	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085321	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085322	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085323	NQ	NQ	ND	ND	NQ	NQ	ND	ND
WT	085324	NQ	NQ	N/A	N/A	BDL	BDL	N/A	N/A
WT	085325	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A

Matrix Code	Sample ID	Anabasine (µg/pouch)				Myosmine (µg/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085326	NQ	NQ	ND	ND	NQ	NQ	ND	ND
WT	085327	NQ	NQ	ND	ND	NQ	NQ	ND	ND
WT	085328	BDL	BDL	N/A	N/A	BDL	BDL	N/A	N/A
WT	085329	< 30.0 but > 9.00	ND	ND	ND	< 9.00	ND	ND	ND
WT	085330	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085331	< 30.0 but > 9.00	ND	ND	ND	< 30.0 but > 9.00	ND	ND	ND
WT	085332	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085333	< 30.0 but > 9.00	ND	ND	ND	< 9.00	ND	ND	ND
WT	085334	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085335	NQ	NQ	N/A	N/A	BDL	BDL	N/A	N/A
WT	085336	NQ	NQ	ND	ND	NQ	NQ	ND	ND
WT	085337	30.2	ND	ND	ND	< 30.0 but > 9.00	ND	ND	ND
WT	085338	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085339	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085340	NQ	NQ	N/A	N/A	NQ	NQ	N/A	N/A
WT	085341	NQ	NQ	ND	ND	BDL	BDL	ND	ND
WT	085342	< 30.0 but > 9.00	ND	ND	ND	< 9.00	ND	ND	ND
WT	085343	< 30.0 but > 9.00	ND	ND	ND	< 9.00	ND	ND	ND
WT	085344	NQ	NQ	N/A	N/A	BDL	BDL	N/A	N/A
WT	085345	NQ	NQ	ND	ND	BDL	BDL	ND	ND

Matrix Code	Sample ID	Anatabine (µg/pouch)				Cadmium (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085292	NQ	NQ	ND	ND	195	3	ND	ND
WT	085293	NQ	NQ	N/A	N/A	155	ND	ND	ND
WT	085294	NQ	NQ	N/A	N/A	157	ND	ND	ND
WT	085295	NQ	NQ	N/A	N/A	188	11	160	216
WT	085296	48.8	7.3	37.3	60.4	208	10	ND	ND
WT	085297	NQ	NQ	ND	ND	149	ND	ND	ND
WT	085298	NQ	NQ	N/A	N/A	173	ND	ND	ND
WT	085299	< 30.0 but > 9.00	ND	ND	ND	195	ND	ND	ND
WT	085300	NQ	NQ	N/A	N/A				
WT	085301	NQ	NQ	N/A	N/A	156	ND	ND	ND
WT	085302	37.2	ND	ND	ND	204	4	194	214
WT	085303	NQ	NQ	N/A	N/A	202	3	ND	ND
WT	085304	38.3	0.5	ND	ND	237	50	ND	ND
WT	085305	NQ	NQ	N/A	N/A	169	ND	ND	ND
WT	085306	NQ	NQ	N/A	N/A	163	ND	ND	ND
WT	085307	< 30.0 but > 9.00	ND	ND	ND	190	13	ND	ND
WT	085308	< 30.0 but > 9.00	ND	ND	ND	209	ND	ND	ND
WT	085309	NQ	NQ	N/A	N/A	175	2	ND	ND
WT	085310	NQ	NQ	N/A	N/A	148	ND	ND	ND
WT	085311	NQ	NQ	N/A	N/A	150	ND	ND	ND
WT	085312	32.1	11.0	4.8	59.5	166	ND	ND	ND
WT	085313	NQ	NQ	N/A	N/A	152	ND	ND	ND
WT	085314	36.4	4.6	ND	ND	105	ND	ND	ND
WT	085315	41.5	8.1	ND	ND	185	ND	ND	ND
WT	085316	40.3	2.1	35.1	45.4	177	ND	ND	ND
WT	085317	34.8	14.7	0.0	71.4	147	ND	ND	ND
WT	085318	40.1	11.6	11.3	68.9	205	23	ND	ND
WT	085319	36.4	1.5	ND	ND	170	ND	ND	ND
WT	085320	39.2	3.9	29.4	49.0	172	ND	ND	ND
WT	085321	48.7	3.1	41.0	56.4	179	23	123	235
WT	085322	37.0	2.4	30.9	43.1	209	2	ND	ND
WT	085323	50.8	0.5	ND	ND	193	ND	ND	ND
WT	085324	NQ	NQ	N/A	N/A	194	12	164	223
WT	085325	41.3	8.0	28.6	54.0	184	14	148	220

Matrix Code	Sample ID	Anatabine (µg/pouch)				Cadmium (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085326	35.9	1.2	ND	ND	175	ND	ND	ND
WT	085327	39.2	4.2	ND	ND	218	17	ND	ND
WT	085328	BDL	BDL	N/A	N/A	140	22	ND	ND
WT	085329	37.2	ND	ND	ND	223	ND	ND	ND
WT	085330	NQ	NQ	N/A	N/A	198	5	187	209
WT	085331	< 30.0 but > 9.00	ND	ND	ND	134	44	ND	ND
WT	085332	31.3	9.1	16.9	45.7				
WT	085333	< 30.0 but > 9.00	ND	ND	ND	172	10	ND	ND
WT	085334	50.6	3.3	45.4	55.8	177	29	106	248
WT	085335	NQ	NQ	N/A	N/A	142	ND	ND	ND
WT	085336	NQ	NQ	ND	ND	161	ND	ND	ND
WT	085337	56.4	ND	ND	ND	166	ND	ND	ND
WT	085338	43.3	11.6	14.4	72.1	208	16	ND	ND
WT	085339	33.8	15.1	0.0	71.2	168	ND	ND	ND
WT	085340	NQ	NQ	N/A	N/A	203	2	ND	ND
WT	085341	NQ	NQ	ND	ND	201	15	164	238
WT	085342	< 30.0 but > 9.00	ND	ND	ND	200	8	ND	ND
WT	085343	< 30.0 but > 9.00	ND	ND	ND	122	ND	ND	ND
WT	085344	NQ	NQ	N/A	N/A	116	ND	ND	ND
WT	085345	NQ	NQ	ND	ND	120	ND	ND	ND

Matrix Code	Sample ID	Chromium (ng/pouch)				Nickel (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085292	332	5	ND	ND	377	5	ND	ND
WT	085293	252	ND	ND	ND	288	ND	ND	ND
WT	085294	273	ND	ND	ND	262	ND	ND	ND
WT	085295	266	18	220	311	326	23	268	384
WT	085296	275	13	ND	ND	405	14	ND	ND
WT	085297	290	ND	ND	ND	284	ND	ND	ND
WT	085298	257	ND	ND	ND	316	ND	ND	ND
WT	085299	259	ND	ND	ND	334	ND	ND	ND
WT	085300								
WT	085301	249	ND	ND	ND	309	ND	ND	ND
WT	085302	285	19	237	333	373	13	341	404
WT	085303	304	6	ND	ND	385	4	ND	ND
WT	085304	278	44	ND	ND	401	22	ND	ND
WT	085305	269	ND	ND	ND	311	ND	ND	ND
WT	085306	304	ND	ND	ND	385	ND	ND	ND
WT	085307	331	21	ND	ND	359	25	ND	ND
WT	085308	329	ND	ND	ND	415	ND	ND	ND
WT	085309	311	4	ND	ND	320	15	ND	ND
WT	085310	282	ND	ND	ND	282	ND	ND	ND
WT	085311	297	ND	ND	ND	263	ND	ND	ND
WT	085312	221	ND	ND	ND	317	ND	ND	ND
WT	085313	246	ND	ND	ND	294	ND	ND	ND
WT	085314	154	ND	ND	ND	243	ND	ND	ND
WT	085315	262	ND	ND	ND	366	ND	ND	ND
WT	085316	290	ND	ND	ND	354	ND	ND	ND
WT	085317	197	ND	ND	ND	299	ND	ND	ND
WT	085318	316	4	ND	ND	408	16	ND	ND
WT	085319	244	ND	ND	ND	320	ND	ND	ND
WT	085320	226	ND	ND	ND	349	ND	ND	ND
WT	085321	305	32	225	384	325	49	204	446
WT	085322	348	48	ND	ND	433	43	ND	ND
WT	085323	277	ND	ND	ND	399	ND	ND	ND
WT	085324	265	16	227	304	344	27	277	411
WT	085325	244	8	224	265	347	26	282	413

Matrix Code	Sample ID	Chromium (ng/pouch)				Nickel (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085326	237	ND	ND	ND	344	ND	ND	ND
WT	085327	353	29	ND	ND	411	24	ND	ND
WT	085328	292	39	ND	ND	224	12	ND	ND
WT	085329	382	ND	ND	ND	622	ND	ND	ND
WT	085330	311	10	286	336	404	7	387	420
WT	085331	239	74	ND	ND	277	71	ND	ND
WT	085332								
WT	085333	293	18	ND	ND	294	26	ND	ND
WT	085334	341	93	110	573	711	556	0	2091
WT	085335	261	ND	ND	ND	221	ND	ND	ND
WT	085336	234	ND	ND	ND	283	ND	ND	ND
WT	085337	222	ND	ND	ND	331	ND	ND	ND
WT	085338	318	9	ND	ND	410	3	ND	ND
WT	085339	231	ND	ND	ND	340	ND	ND	ND
WT	085340	283	14	ND	ND	373	11	ND	ND
WT	085341	316	35	230	402	383	28	312	454
WT	085342	324	30	ND	ND	367	7	ND	ND
WT	085343	193	ND	ND	ND	228	ND	ND	ND
WT	085344	213	ND	ND	ND	240	ND	ND	ND
WT	085345	218	ND	ND	ND	209	ND	ND	ND

Matrix Code	Sample ID	Lead (ng/pouch)				Arsenic (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085292	88.7	2.0	ND	ND	58.7	8.9	ND	ND
WT	085293	77.7	ND	ND	ND	63.5	ND	ND	ND
WT	085294	89.9	ND	ND	ND	53.6	ND	ND	ND
WT	085295	72.2	4.0	62.2	82.2	47.7	4.5	36.5	58.9
WT	085296	84.4	2.4	ND	ND	44.0	0.0	ND	ND
WT	085297	79.0	ND	ND	ND	59.6	ND	ND	ND
WT	085298	68.7	ND	ND	ND	73.8	ND	ND	ND
WT	085299	67.6	ND	ND	ND	63.2	ND	ND	ND
WT	085300								
WT	085301	68.5	ND	ND	ND	52.8	ND	ND	ND
WT	085302	79.0	2.2	73.5	84.6	63.8	2.6	57.4	70.2
WT	085303	87.3	3.5	ND	ND	62.6	4.8	ND	ND
WT	085304	99.2	24.0	ND	ND	67.1	21.6	ND	ND
WT	085305	86.8	ND	ND	ND	74.4	ND	ND	ND
WT	085306	104	ND	ND	ND	43.3	ND	ND	ND
WT	085307	92.6	5.3	ND	ND	49.0	0.3	ND	ND
WT	085308	91.8	ND	ND	ND	49.0	ND	ND	ND
WT	085309	88.0	0.3	ND	ND	48.2	4.9	ND	ND
WT	085310	66.0	ND	ND	ND	69.1	ND	ND	ND
WT	085311	79.2	ND	ND	ND	57.6	ND	ND	ND
WT	085312	60.9	ND	ND	ND	69.4	ND	ND	ND
WT	085313	71.4	ND	ND	ND	65.0	ND	ND	ND
WT	085314	45.7	ND	ND	ND	44.2	ND	ND	ND
WT	085315	65.4	ND	ND	ND	73.3	ND	ND	ND
WT	085316	138	ND	ND	ND	111	ND	ND	ND
WT	085317	61.2	ND	ND	ND	57.3	ND	ND	ND
WT	085318	92.6	8.1	ND	ND	57.2	5.0	ND	ND
WT	085319	106	ND	ND	ND	60.3	ND	ND	ND
WT	085320	64.7	ND	ND	ND	84.4	ND	ND	ND
WT	085321	70.1	8.4	49.3	91.0	43.8	8.1	23.6	64.0
WT	085322	94.9	4.1	ND	ND	54.6	4.1	ND	ND
WT	085323	74.9	ND	ND	ND	64.7	ND	ND	ND
WT	085324	73.0	6.8	56.1	89.8	56.9	7.2	38.9	74.9
WT	085325	80.5	5.7	66.4	94.6	58.8	8.1	38.6	79.0

Matrix Code	Sample ID	Lead (ng/pouch)				Arsenic (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085326	79.1	ND	ND	ND	66.9	ND	ND	ND
WT	085327	93.5	7.6	ND	ND	53.3	2.7	ND	ND
WT	085328	75.7	3.0	ND	ND	48.8	6.6	ND	ND
WT	085329	97.5	ND	ND	ND	49.3	ND	ND	ND
WT	085330	83.8	3.7	74.5	93.1	69.7	7.5	51.0	88.4
WT	085331	67.9	14.0	ND	ND	42.2	13.1	ND	ND
WT	085332								
WT	085333	93.6	0.9	ND	ND	52.7	6.1	ND	ND
WT	085334	101	23	44	159	47.9	9.2	25.0	70.9
WT	085335	72.0	ND	ND	ND	42.5	ND	ND	ND
WT	085336	100	ND	ND	ND	67.6	ND	ND	ND
WT	085337	61.7	ND	ND	ND	70.7	ND	ND	ND
WT	085338	93.8	4.6	ND	ND	58.0	6.3	ND	ND
WT	085339	65.1	ND	ND	ND	71.1	ND	ND	ND
WT	085340	84.9	0.9	ND	ND	39.4	1.3	ND	ND
WT	085341	90.7	18.6	44.4	137.0	64.6	9.0	42.1	87.0
WT	085342	163	12	ND	ND	45.5	3.9	ND	ND
WT	085343	55.1	ND	ND	ND	56.9	ND	ND	ND
WT	085344	62.2	ND	ND	ND	55.4	ND	ND	ND
WT	085345	66.9	ND	ND	ND	30.2	ND	ND	ND

Matrix Code	Sample ID	Selenium (ng/pouch)				Mercury (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085292	36.5	3.7	ND	ND	BDL	BDL	ND	ND
WT	085293	27.2	ND	ND	ND	8.00	ND	ND	ND
WT	085294	25.5	ND	ND	ND	< 6.25	ND	ND	ND
WT	085295	40.2	2.8	33.1	47.2	BDL	BDL	N/A	N/A
WT	085296	39.7	0.0	ND	ND	BDL	BDL	ND	ND
WT	085297	25.4	ND	ND	ND	< 6.25	ND	ND	ND
WT	085298	29.6	ND	ND	ND	< 7.50 but > 6.25	ND	ND	ND
WT	085299	32.7	ND	ND	ND	< 6.25	ND	ND	ND
WT	085300								
WT	085301	26.7	ND	ND	ND	< 6.25	ND	ND	ND
WT	085302	46.7	5.7	32.7	60.8	BDL	BDL	N/A	N/A
WT	085303	41.1	1.8	ND	ND	8.91	1.43	ND	ND
WT	085304	35.7	1.2	ND	ND	BDL	BDL	ND	ND
WT	085305	36.1	ND	ND	ND	< 6.25	ND	ND	ND
WT	085306	29.8	ND	ND	ND	< 6.25	ND	ND	ND
WT	085307	32.6	1.5	ND	ND	BDL	BDL	ND	ND
WT	085308	36.9	ND	ND	ND	< 6.25	ND	ND	ND
WT	085309	32.5	3.2	ND	ND	9.31	1.36	ND	ND
WT	085310	20.2	ND	ND	ND	< 6.25	ND	ND	ND
WT	085311	19.3	ND	ND	ND	< 6.25	ND	ND	ND
WT	085312	38.0	ND	ND	ND	< 6.25	ND	ND	ND
WT	085313	36.0	ND	ND	ND	< 6.25	ND	ND	ND
WT	085314	32.1	ND	ND	ND	< 6.25	ND	ND	ND
WT	085315	29.4	ND	ND	ND	< 6.25	ND	ND	ND
WT	085316	48.6	ND	ND	ND	< 6.25	ND	ND	ND
WT	085317	36.1	ND	ND	ND	< 6.25	ND	ND	ND
WT	085318	39.2	8.5	ND	ND	BDL	BDL	ND	ND
WT	085319	37.3	ND	ND	ND	< 7.50 but > 6.25	ND	ND	ND
WT	085320	31.1	ND	ND	ND	< 6.25	ND	ND	ND
WT	085321	39.9	5.0	27.4	52.4	BDL	BDL	N/A	N/A
WT	085322	38.3	5.1	ND	ND	BDL	BDL	ND	ND
WT	085323	49.4	ND	ND	ND	< 6.25	ND	ND	ND
WT	085324	37.4	4.5	26.1	48.7	BDL	BDL	N/A	N/A
WT	085325	41.1	1.7	36.9	45.3	BDL	BDL	N/A	N/A

Matrix Code	Sample ID	Selenium (ng/pouch)				Mercury (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085326	50.0	ND	ND	ND	< 6.25	ND	ND	ND
WT	085327	36.6	3.0	ND	ND	BDL	BDL	ND	ND
WT	085328	25.0	0.9	ND	ND	BDL	BDL	ND	ND
WT	085329	41.6	ND	ND	ND	< 7.50 but > 6.25	ND	ND	ND
WT	085330	46.6	4.5	35.5	57.7	14.7	2.8	7.8	21.6
WT	085331	23.6	3.3	ND	ND	BDL	BDL	ND	ND
WT	085332								
WT	085333	28.0	1.4	ND	ND	BDL	BDL	ND	ND
WT	085334	44.0	5.7	29.9	58.1	9.02	2.16	3.64	14.39
WT	085335	30.0	ND	ND	ND	< 6.25	ND	ND	ND
WT	085336	37.2	ND	ND	ND	< 6.25	ND	ND	ND
WT	085337	37.0	ND	ND	ND	< 6.25	ND	ND	ND
WT	085338	38.6	5.0	ND	ND	NQ	NQ	ND	ND
WT	085339	37.5	ND	ND	ND	< 6.25	ND	ND	ND
WT	085340	48.1	0.0	ND	ND	BDL	BDL	ND	ND
WT	085341	39.6	3.7	30.5	48.8	BDL	BDL	N/A	N/A
WT	085342	29.6	2.8	ND	ND	BDL	BDL	ND	ND
WT	085343	24.9	ND	ND	ND	< 6.25	ND	ND	ND
WT	085344	31.3	ND	ND	ND	< 6.25	ND	ND	ND
WT	085345	20.0	ND	ND	ND	< 6.25	ND	ND	ND

Matrix Code	Sample ID	Benzo[a]pyrene (ng/pouch)				NNN (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085292	0.425	0.024	ND	ND	256	16	216	296
WT	085293	0.294	ND	ND	ND	386	96	ND	ND
WT	085294	0.374	ND	ND	ND	258	ND	ND	ND
WT	085295	0.375	0.221	0.000	0.924	405	33	323	487
WT	085296	0.472	0.082	ND	ND	417	23	359	476
WT	085297	0.462	ND	ND	ND	115	ND	ND	ND
WT	085298	0.450	ND	ND	ND	301	ND	ND	ND
WT	085299	0.494	ND	ND	ND	333	ND	ND	ND
WT	085300					418	ND	ND	ND
WT	085301					344	ND	ND	ND
WT	085302	0.467	0.045	ND	ND	350	21	299	402
WT	085303	0.343	ND	ND	ND	386	25	324	448
WT	085304	0.485	ND	ND	ND	388	4	ND	ND
WT	085305					262	ND	ND	ND
WT	085306					262	ND	ND	ND
WT	085307	0.452	0.039	ND	ND	277	7	260	295
WT	085308					316	ND	ND	ND
WT	085309	0.434	ND	ND	ND	181	13	150	213
WT	085310	0.400	ND	ND	ND	285	ND	ND	ND
WT	085311	0.518	ND	ND	ND	131	ND	ND	ND
WT	085312	0.645	ND	ND	ND	378	ND	ND	ND
WT	085313	0.332	ND	ND	ND	250	ND	ND	ND
WT	085314	0.519	ND	ND	ND	424	2	ND	ND
WT	085315	0.301	ND	ND	ND	355	ND	ND	ND
WT	085316	0.346	ND	ND	ND	443	ND	ND	ND
WT	085317	0.347	ND	ND	ND	407	35	ND	ND
WT	085318	0.512	ND	ND	ND	426	16	ND	ND
WT	085319	0.283	ND	ND	ND	393	ND	ND	ND
WT	085320	0.371	ND	ND	ND	381	ND	ND	ND
WT	085321	0.485	0.047	0.368	0.602	372	40	272	471
WT	085322	0.376	ND	ND	ND	358	19	311	405
WT	085323	0.428	ND	ND	ND	373	ND	ND	ND
WT	085324	0.584	0.072	0.404	0.764	361	24	301	422
WT	085325	0.476	0.031	0.399	0.553	333	2	327	339

Matrix Code	Sample ID	Benzo[a]pyrene (ng/pouch)				NNN (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085326	0.398	ND	ND	ND	377	ND	ND	ND
WT	085327	0.476	0.003	ND	ND	391	20	342	440
WT	085328	0.386	ND	ND	ND	32.4	2.8	25.3	39.5
WT	085329	0.661	ND	ND	ND	367	ND	ND	ND
WT	085330	0.599	0.040	0.499	0.699	360	12	330	391
WT	085331	0.454	ND	ND	ND	253	3	ND	ND
WT	085332					280	ND	ND	ND
WT	085333	0.539	0.016	ND	ND	384	16	344	425
WT	085334	0.567	0.069	0.396	0.738	375	19	327	423
WT	085335	0.490	ND	ND	ND	115	ND	ND	ND
WT	085336	0.509	ND	ND	ND	224	20	ND	ND
WT	085337					396	ND	ND	ND
WT	085338	0.464	ND	ND	ND	343	14	309	377
WT	085339	0.621	ND	ND	ND	315	15	ND	ND
WT	085340	0.539	0.151	ND	ND	310	14	276	344
WT	085341	0.640	0.049	ND	ND	387	21	333	440
WT	085342	0.427	ND	ND	ND	188	18	ND	ND
WT	085343	0.384	ND	ND	ND	322	ND	ND	ND
WT	085344					217	ND	ND	ND
WT	085345	0.525	ND	ND	ND	333	ND	ND	ND

Matrix Code	Sample ID	NAT (ng/pouch)				NAB (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085292	162	8	141	183	22.6	0.8	20.5	24.7
WT	085293	395	119	ND	ND	71.6	20.7	ND	ND
WT	085294	168	ND	ND	ND	23.6	ND	ND	ND
WT	085295	245	23	189	302	32.6	1.9	27.9	37.3
WT	085296	213	3	206	221	26.4	0.8	24.4	28.3
WT	085297	89.1	ND	ND	ND	16.5	ND	ND	ND
WT	085298	163	ND	ND	ND	21.8	ND	ND	ND
WT	085299	186	ND	ND	ND	21.8	ND	ND	ND
WT	085300	230	ND	ND	ND	26.6	ND	ND	ND
WT	085301	177	ND	ND	ND	27.9	ND	ND	ND
WT	085302	190	8	171	209	25.5	0.9	23.3	27.7
WT	085303	208	10	182	234	29.4	2.5	23.3	35.5
WT	085304	228	9	ND	ND	29.4	3.6	ND	ND
WT	085305	141	ND	ND	ND	21.7	ND	ND	ND
WT	085306	134	ND	ND	ND	21.6	ND	ND	ND
WT	085307	169	5	156	183	21.5	0.4	20.6	22.5
WT	085308	171	ND	ND	ND	23.4	ND	ND	ND
WT	085309	120	7	101	138	14.0	0.8	12.1	15.9
WT	085310	158	ND	ND	ND	23.3	ND	ND	ND
WT	085311	115	ND	ND	ND	17.5	ND	ND	ND
WT	085312	191	ND	ND	ND	24.4	ND	ND	ND
WT	085313	149	ND	ND	ND	17.8	ND	ND	ND
WT	085314	215	1	ND	ND	31.0	1.6	ND	ND
WT	085315	191	ND	ND	ND	27.7	ND	ND	ND
WT	085316	219	ND	ND	ND	29.4	ND	ND	ND
WT	085317	208	22	ND	ND	28.1	0.5	ND	ND
WT	085318	200	20	ND	ND	30.1	3.8	ND	ND
WT	085319	177	ND	ND	ND	28.1	ND	ND	ND
WT	085320	208	ND	ND	ND	21.8	ND	ND	ND
WT	085321	207	12	178	236	24.5	0.8	22.6	26.5
WT	085322	193	3	185	201	24.6	1.0	22.0	27.1
WT	085323	176	ND	ND	ND	28.7	ND	ND	ND
WT	085324	212	18	168	255	31.0	1.6	26.9	35.1
WT	085325	181	9	157	204	20.7	1.5	16.9	24.4

Matrix Code	Sample ID	NAT (ng/pouch)				NAB (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)	Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085326	167	ND	ND	ND	29.6	ND	ND	ND
WT	085327	224	11	196	252	28.1	1.1	25.4	30.9
WT	085328	34.8	4.0	24.9	44.7	NQ	NQ	N/A	N/A
WT	085329	180	ND	ND	ND	22.7	ND	ND	ND
WT	085330	197	7	181	213	27.9	2.0	22.9	32.8
WT	085331	162	4	ND	ND	27.4	3.8	ND	ND
WT	085332	146	ND	ND	ND	20.8	ND	ND	ND
WT	085333	378	54	245	511	76.5	14.3	41.1	111.9
WT	085334	201	13	168	234	26.3	0.8	24.3	28.4
WT	085335	90.6	ND	ND	ND	13.3	ND	ND	ND
WT	085336	132	10	ND	ND	17.7	0.1	ND	ND
WT	085337	194	ND	ND	ND	25.3	ND	ND	ND
WT	085338	210	15	172	247	26.1	1.8	21.7	30.6
WT	085339	166	0	ND	ND	25.6	1.3	ND	ND
WT	085340	174	17	132	217	22.9	2.4	16.9	28.9
WT	085341	209	2	204	213	24.1	1.4	20.5	27.7
WT	085342	127	7	ND	ND	19.6	0.5	ND	ND
WT	085343	191	ND	ND	ND	24.3	ND	ND	ND
WT	085344	159	ND	ND	ND	< 10.3 but > 3.10	ND	ND	ND
WT	085345	251	ND	ND	ND	51.7	ND	ND	ND

Matrix Code	Sample ID	NNK (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085292	90.0	2.7	83.2	96.8
WT	085293	90.0	16.1	ND	ND
WT	085294	81.9	ND	ND	ND
WT	085295	109	11	82	137
WT	085296	140	6	126	155
WT	085297	< 27.2 but > 8.15	ND	ND	ND
WT	085298	49.6	ND	ND	ND
WT	085299	106	ND	ND	ND
WT	085300	137	ND	ND	ND
WT	085301	64.3	ND	ND	ND
WT	085302	115	8	95	136
WT	085303	70.6	6.9	53.4	87.8
WT	085304	126	3	ND	ND
WT	085305	79.6	ND	ND	ND
WT	085306	86.5	ND	ND	ND
WT	085307	83.7	5.8	69.3	98.1
WT	085308	67.0	ND	ND	ND
WT	085309	60.6	3.0	53.2	67.9
WT	085310	79.0	ND	ND	ND
WT	085311	30.4	ND	ND	ND
WT	085312	63.0	ND	ND	ND
WT	085313	81.4	ND	ND	ND
WT	085314	86.0	4.1	ND	ND
WT	085315	116	ND	ND	ND
WT	085316	141	ND	ND	ND
WT	085317	125	7	ND	ND
WT	085318	128	12	ND	ND
WT	085319	124	ND	ND	ND
WT	085320	68.1	ND	ND	ND
WT	085321	119	7	101	137
WT	085322	106	6	90	121
WT	085323	104	ND	ND	ND
WT	085324	60.7	6.7	44.2	77.3
WT	085325	82.8	6.6	66.3	99.3

Matrix Code	Sample ID	NNK (ng/pouch)			
		Average	St Dev	L. Limit (95%)	U. Limit (95%)
WT	085326	109	ND	ND	ND
WT	085327	120	3	112	128
WT	085328	NQ	NQ	N/A	N/A
WT	085329	55.6	ND	ND	ND
WT	085330	73.9	6.0	59.0	88.7
WT	085331	73.5	2.6	ND	ND
WT	085332	88.9	ND	ND	ND
WT	085333	74.1	8.7	52.6	95.6
WT	085334	90.1	12.1	60.0	120.3
WT	085335	38.9	ND	ND	ND
WT	085336	69.5	1.1	ND	ND
WT	085337	121	ND	ND	ND
WT	085338	103	7	87	120
WT	085339	58.2	5.6	ND	ND
WT	085340	94.2	3.9	84.6	103.8
WT	085341	71.7	7.3	53.6	89.8
WT	085342	54.2	0.9	ND	ND
WT	085343	59.9	ND	ND	ND
WT	085344	66.3	ND	ND	ND
WT	085345	49.4	ND	ND	ND

Glossary of Abbreviations**BDL:** Below the Limit of Detection**NQ:** Below the Limit of Quantification**N/A:** Not Applicable**ND:** Not Defined**L. Limit (95%)** - lower limit of the 95% confidence interval**U. Limit (95%)** - upper limit of the 95% confidence interval



Limits of Detection (LOD) and Limits of Quantification (LOQ) Determined for Selected

Health Canada Method	Analyte	Units	Processed Tobacco	
			LOD	LOQ
	Tobacco alkaloids			
	Tobacco alkaloids			
T-301	Nicotine	µg/g (dry wt)	75.0	250
T-301	Nornicotine	µg/g (dry wt)	15.0	50.0
T-301	Anabasine	µg/g (dry wt)	15.0	50.0
T-301	Myosmine	µg/g (dry wt)	15.0	50.0
T-301	Anatabine	µg/g (dry wt)	15.0	50.0
	Method Modifications for M98 Part 1			
	1. per pouch analysis - each pouch approximately 0.6 g			
	2. 1 pouch used per analysis			
	3. final volume = 24 ml			
	Standard method uses 0.025 g to a 1 mL final volume			
	For Pouch Analysis - reported on a "µg/pouch basis"			
	Nicotine	µg/pouch	45.0	150
	Nornicotine	µg/pouch	9.00	30.0
	Anabasine	µg/pouch	9.00	30.0
	Myosmine	µg/pouch	9.00	30.0
	Anatabine	µg/pouch	9.00	30.0

Abbreviations: BDL, below detection limit; NQ, below quantitation limit; N/A, not applicable
Date of last review: June 7, 2007

NOTE: The above limits referred to samples processed as required by the referenced Health Canada Method (ie. either "as received" or "dried"). Corrections for the moisture content, determined independently, must be applied where applicable in order to convert the "as received" limits to limits expressed on a "dry weight" basis.

*NOTE: The LOD and LOQ are based on the lowest standard used for calibration of the instruments as referenced in the Health Canada Method.

LOD Definition: The limit of detection (LOD) for a particular analyte is a statistically defined decision point that, with a specified probability, measured results falling at or above this point are interpreted to indicate an analyte concentration greater than zero within the sample.

LOQ Definition: The limit of quantification for a particular analyte is another statistically defined decision point that results falling at or above this point can be assigned a statistically significant numerical value with an associated level of precision. Values falling between the LOD and LOQ are interpreted as a positive but not quantifiable result for the analyte in question.



Limits of Detection (LOD) and Limits of Quantification (LOQ) Determined for Selected

Health Canada		Analyte	Units	Processed Tobacco	
Method				LOD	LOQ
	Toxic Trace Metals				
T-306	mercury		ng/g (dry wt)	25.0	30.0
T-306	nickel		ng/g (dry wt)	39.3	131
T-306	lead		ng/g (dry wt)	37.9	126
T-306	cadmium		ng/g (dry wt)	43.3	144
T-306	chromium		ng/g (dry wt)	11.9	39.7
T-306	arsenic		ng/g (dry wt)	25.0	60.0
T-306	selenium		ng/g (dry wt)	25.0	60.0

Method Modifications for M98 Part 1

1. per pouch analysis - each pouch approximately 0.6 g
 2. 4 pouches used per analysis
 3. final volume = 100 ml (pouch analysis)
- Standard method uses 1 g to a 100 mL final volume

For Pouch Analysis - reported on a "ng/pouch basis"

mercury	ng/pouch	6.25	7.50
nickel	ng/pouch	9.83	32.8
lead	ng/pouch	9.48	31.5
cadmium	ng/pouch	10.8	36.0
chromium	ng/pouch	2.98	9.93
arsenic	ng/pouch	6.25	15.0
selenium	ng/pouch	6.25	15.0

Abbreviations: BDL, below detection limit; NQ, below quantitation limit; N/A, not applicable
Date of last review: June 7, 2007

NOTE: The above limits referred to samples processed as required by the referenced Health Canada Method (ie. either "as received" or "dried"). Corrections for the moisture content, determined independently, must be applied where applicable in order to convert the "as received" limits to be expressed on a "dry weight" basis.

*NOTE: The LOD and LOQ are based on the lowest standard used for calibration of the instruments as referenced in the Health Canada Method.

LOD Definition: The limit of detection (LOD) for a particular analyte is a statistically defined decision point that, with a specified probability, results falling at or above this point are interpreted to indicate an analyte concentration greater than zero within the sample.

LOQ Definition: The limit of quantification for a particular analyte is another statistically defined decision point that results falling at or above this point be assigned a statistically significant numerical value with an associated level of precision. Values falling between the LOD and LOQ are interpreted positive but not quantifiable result for the analyte in question.



Limits of Detection (LOD) and Limits of Quantification (LOQ) Determined for Selected Constituents in Processed Tobacco

Health Canada Method	Analyte	Units	Processed Tobacco	
			LOD	LOQ
T-307	Benzo[a]pyrene Benzo[a]pyrene	ng/g (as rec'd)	0.042	0.141
Method Modifications for M98 Part 1 <ol style="list-style-type: none"> 1. per pouch analysis - each pouch approximately 0.6 g 2. 4 pouches used per analysis 3. final volume = 2 ml Standard method uses 2 g to a 2 mL final volume				
For Pouch Analysis - reported on a "ng/pouch basis"				
	Benzo[a]pyrene	ng/pouch (as rec'd)	0.021	0.071

Abbreviations: BDL, below detection limit; NQ, below quantitation limit; N/A, not applicable
Date of last review: June 7, 2007

NOTE: The above limits referred to samples processed as required by the referenced Health Canada Method (ie. either "as received" or "dried"). Corrections for the moisture content, determined independently, must be applied where applicable in order to convert the "as received" limits to limits expressed on a "dry weight" basis.

*NOTE: The LOD and LOQ are based on the lowest standard used for calibration of the instruments as referenced in the Health Canada Method.

LOD Definition: The limit of detection (LOD) for a particular analyte is a statistically defined decision point that, with a specified probability, measured results falling at or above this point are interpreted to indicate an analyte concentration greater than zero within the sample.

LOQ Definition: The limit of quantification for a particular analyte is another statistically defined decision point that results falling at or above this point can be assigned a statistically significant numerical value with an associated level of precision. Values falling between the LOD and LOQ are interpreted as a positive but not quantifiable result for the analyte in question.



Limits of Detection (LOD) and Limits of Quantification (LOQ) Determined for Selected Constituents in Processed Tobacco

Health Canada Method	Analyte	Units	Processed Tobacco	
			LOD	LOQ
Tobacco Specific Nitrosamines (GC/TEA)				
T-309	nitrosornicotine (NNN)	ng/g (as rec'd)	54.0	180
T-309	nitrosoanatabine (NAT)	ng/g (as rec'd)	63.9	213
T-309	nitrosoanabasine (NAB)	ng/g (as rec'd)	31.0	103
T-309	4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)	ng/g (as rec'd)	81.5	272
Method Modifications for M98 Part 1				
1. per pouch analysis - each pouch approximately 0.6 g				
2. 4 pouches used per analysis				
3. final volume = 2 ml				
Standard method uses 1 g to a 5 mL final volume				
For Pouch Analysis - reported on a "ng/pouch basis"				
	nitrosornicotine (NNN)	ng/pouch	5.4	18.0
	nitrosoanatabine (NAT)	ng/pouch	6.4	21.3
	nitrosoanabasine (NAB)	ng/pouch	3.1	10.3
	4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)	ng/pouch	8.2	27.2

Abbreviations: BDL, below detection limit; NQ, below quantitation limit; N/A, not applicable
Date of last review: June 7, 2007

NOTE: The above limits referred to samples processed as required by the referenced Health Canada Method (ie. either "as received" or "dried"). Corrections for the moisture content, determined independently, must be applied where applicable in order to convert the "as received" limits to limits expressed on a "dry weight" basis.

*NOTE: The LOD and LOQ are based on the lowest standard used for calibration of the instruments as referenced in the Health Canada Method.

LOD Definition: The limit of detection (LOD) for a particular analyte is a statistically defined decision point that, with a specified probability, measured results falling at or above this point are interpreted to indicate an analyte concentration greater than zero within the sample.

LOQ Definition: The limit of quantification for a particular analyte is another statistically defined decision point that results falling at or above this point can be assigned a statistically significant numerical value with an associated level of precision. Values falling between the LOD and LOQ are interpreted as a positive but not quantifiable result for the analyte in question.

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085299	3962	68.4	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085302	4863	76.3	< 30.0 but > 9.00	< 30.0 but > 9.00	37.2
085307	2448	40.8	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085308	4635	70.6	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085329	5805	82.8	< 30.0 but > 9.00	< 9.00	37.2
085331	2935	50.8	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085333	1454	30.2	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085337	6657	99.3	30.2	< 30.0 but > 9.00	56.4
085342	1481	< 30.0 but > 9.00	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085343	4246	63.4	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085292	4106	53.3	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085292	3446	47.3	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
Average	3776	50.3	NQ	NQ	NQ
Std. Dev.	467	4.2	NQ	NQ	NQ
L. Limit (95%)	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND
085297	1809	31.9	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085297	4034	57.1	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
Average	2922	44.5	NQ	BDL	NQ
Std. Dev.	1574	17.8	NQ	BDL	NQ
L. Limit (95%)	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND
085304	5297	67.7	< 30.0 but > 9.00	< 30.0 but > 9.00	38.6
085304	5601	68.2	< 30.0 but > 9.00	< 30.0 but > 9.00	37.9
Average	5449	67.9	NQ	NQ	38.3
Std. Dev.	215	0.3	NQ	NQ	0.5
L. Limit (95%)	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND
085314	6027	59.3	< 30.0 but > 9.00	< 9.00	33.1
085314	5575	59.3	< 30.0 but > 9.00	< 30.0 but > 9.00	39.6
Average	5801	59.3	NQ	NQ	36.4
Std. Dev.	320	0.0	NQ	NQ	4.6
L. Limit (95%)	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND
085315	4879	59.8	< 30.0 but > 9.00	< 30.0 but > 9.00	35.8
085315	6773	60.5	30.5	< 30.0 but > 9.00	47.3
Average	5826	60.1	NQ	NQ	41.5
Std. Dev.	1339	0.5	NQ	NQ	8.1
L. Limit (95%)	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085319	4740	61.0	< 30.0 but > 9.00	< 30.0 but > 9.00	35.3
085319	4915	66.2	< 30.0 but > 9.00	< 30.0 but > 9.00	37.4
Average	4828	63.6	NQ	NQ	36.4
Std. Dev.	124	3.7	NQ	NQ	1.5
L. Limit (95%)	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND
085323	6009	83.0	31.4	< 30.0 but > 9.00	51.1
085323	5912	79.7	< 30.0 but > 9.00	< 30.0 but > 9.00	50.4
Average	5961	81.4	NQ	NQ	50.8
Std. Dev.	69	2.4	NQ	NQ	0.5
L. Limit (95%)	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND
085326	4714	62.9	< 30.0 but > 9.00	< 30.0 but > 9.00	36.7
085326	4644	63.6	< 30.0 but > 9.00	< 30.0 but > 9.00	35.0
Average	4679	63.2	NQ	NQ	35.9
Std. Dev.	49	0.5	NQ	NQ	1.2
L. Limit (95%)	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND
085327	5593	73.2	< 30.0 but > 9.00	< 30.0 but > 9.00	42.2
085327	4872	66.2	< 30.0 but > 9.00	< 30.0 but > 9.00	36.2
Average	5233	69.7	NQ	NQ	39.2
Std. Dev.	510	4.9	NQ	NQ	4.2
L. Limit (95%)	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND
085336	1942	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085336	2226	34.1	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
Average	2084	NQ	NQ	NQ	NQ
Std. Dev.	200	NQ	NQ	NQ	NQ
L. Limit (95%)	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085341	4172	46.1	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085341	3526	37.9	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
Average	3849	42.0	NQ	BDL	NQ
Std. Dev.	457	5.8	NQ	BDL	NQ
L. Limit (95%)	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND
085345	3643	40.6	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085345	2287	37.0	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
Average	2965	38.8	NQ	BDL	NQ
Std. Dev.	959	2.5	NQ	BDL	NQ
L. Limit (95%)	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND

Glossary of Abbreviations

BDL: Below Limit of Detection

NQ: Below Limit of Quantification

N/A: Not Applicable

ND: Not Defined

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085294	2500	37.6	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085294	2341	33.8	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085294	2896	41.1	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
Average	2579	37.5	NQ	NQ	NQ
Std. Dev.	286	3.7	NQ	NQ	NQ
L. Limit (95%)	1869	28.4	N/A	N/A	N/A
U. Limit (95%)	3289	46.6	N/A	N/A	N/A
085301	4425	63.6	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085301	4730	61.4	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085301	3352	44.9	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
Average	4169	56.6	NQ	NQ	NQ
Std. Dev.	724	10.2	NQ	NQ	NQ
L. Limit (95%)	2371	31.2	N/A	N/A	N/A
U. Limit (95%)	5967	82.1	N/A	N/A	N/A
085303	6158	81.3	< 30.0 but > 9.00	< 30.0 but > 9.00	34.4
085303	5599	73.3	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085303	5538	71.9	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
Average	5765	75.5	NQ	NQ	NQ
Std. Dev.	342	5.0	NQ	NQ	NQ
L. Limit (95%)	4916	63.0	N/A	N/A	N/A
U. Limit (95%)	6614	88.1	N/A	N/A	N/A
085309	2676	41.1	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085309	2067	31.3	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085309	2314	36.8	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
Average	2352	36.4	NQ	NQ	NQ
Std. Dev.	306	4.9	NQ	NQ	NQ
L. Limit (95%)	1592	24.3	N/A	N/A	N/A
U. Limit (95%)	3113	48.5	N/A	N/A	N/A
085311	2223	35.4	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085311	1956	33.3	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085311	5547	75.0	< 30.0 but > 9.00	< 30.0 but > 9.00	40.4
Average	3242	47.9	NQ	BDL	NQ
Std. Dev.	2000	23.5	NQ	BDL	NQ
L. Limit (95%)	0	0.0	N/A	N/A	N/A
U. Limit (95%)	8211	106.2	N/A	N/A	N/A

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085312	6365	77.1	< 30.0 but > 9.00	< 30.0 but > 9.00	37.4
085312	7178	81.6	< 30.0 but > 9.00	< 30.0 but > 9.00	39.5
085312	4913	59.0	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
Average	6152	72.6	NQ	NQ	32.1
Std. Dev.	1147	11.9	NQ	NQ	11.0
L. Limit (95%)	3301	42.9	N/A	N/A	4.8
U. Limit (95%)	9002	102.2	N/A	N/A	59.5
085313	3316	40.0	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085313	4244	68.9	< 30.0 but > 9.00	< 30.0 but > 9.00	32.0
085313	1135	< 30.0 but > 9.00	< 9.00	< 9.00	< 30.0 but > 9.00
Average	2898	42.8	NQ	NQ	NQ
Std. Dev.	1596	24.8	NQ	NQ	NQ
L. Limit (95%)	0	0.0	N/A	N/A	N/A
U. Limit (95%)	6862	104.5	N/A	N/A	N/A
085316	6275	81.2	< 30.0 but > 9.00	< 30.0 but > 9.00	40.6
085316	6346	76.0	< 30.0 but > 9.00	< 30.0 but > 9.00	38.0
085316	7611	89.5	30.8	< 30.0 but > 9.00	42.2
Average	6744	82.2	NQ	NQ	40.3
Std. Dev.	751	6.8	NQ	NQ	2.1
L. Limit (95%)	4877	65.3	N/A	N/A	35.1
U. Limit (95%)	8611	99.1	N/A	N/A	45.4
085317	1837	31.6	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085317	5921	64.7	< 30.0 but > 9.00	< 30.0 but > 9.00	36.0
085317	6967	89.9	30.2	< 30.0 but > 9.00	48.9
Average	4908	62.1	NQ	NQ	34.8
Std. Dev.	2711	29.3	NQ	NQ	14.7
L. Limit (95%)	0	0.0	N/A	N/A	0.0
U. Limit (95%)	11642	134.8	N/A	N/A	71.4
085318	5309	69.5	< 30.0 but > 9.00	< 30.0 but > 9.00	36.3
085318	4306	61.0	< 30.0 but > 9.00	< 30.0 but > 9.00	30.9
085318	7513	88.5	32.4	< 30.0 but > 9.00	53.1
Average	5709	73.0	NQ	NQ	40.1
Std. Dev.	1640	14.1	NQ	NQ	11.6
L. Limit (95%)	1634	38.0	N/A	N/A	11.3
U. Limit (95%)	9784	108.0	N/A	N/A	68.9

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085320	7373	75.5	< 30.0 but > 9.00	< 9.00	38.7
085320	8045	92.9	34.6	< 30.0 but > 9.00	43.4
085320	6243	69.0	< 30.0 but > 9.00	< 30.0 but > 9.00	35.6
Average	7221	79.1	NQ	NQ	39.2
Std. Dev.	911	12.3	NQ	NQ	3.9
L. Limit (95%)	4958	48.5	N/A	N/A	29.4
U. Limit (95%)	9483	109.7	N/A	N/A	49.0
085321	6337	91.6	< 30.0 but > 9.00	< 30.0 but > 9.00	49.8
085321	4947	61.5	< 30.0 but > 9.00	< 30.0 but > 9.00	51.1
085321	4480	60.0	< 30.0 but > 9.00	< 30.0 but > 9.00	45.2
Average	5255	71.0	NQ	NQ	48.7
Std. Dev.	966	17.8	NQ	NQ	3.1
L. Limit (95%)	2855	26.7	N/A	N/A	41.0
U. Limit (95%)	7654	115.3	N/A	N/A	56.4
085322	4121	61.5	< 30.0 but > 9.00	< 30.0 but > 9.00	38.9
085322	4412	60.6	< 30.0 but > 9.00	< 30.0 but > 9.00	37.9
085322	3577	56.7	< 30.0 but > 9.00	< 30.0 but > 9.00	34.2
Average	4037	59.6	NQ	NQ	37.0
Std. Dev.	424	2.6	NQ	NQ	2.4
L. Limit (95%)	2983	53.2	N/A	N/A	30.9
U. Limit (95%)	5091	65.9	N/A	N/A	43.1
085328	845	< 30.0 but > 9.00	< 9.00	< 9.00	< 9.00
085328	736	< 30.0 but > 9.00	< 9.00	< 9.00	< 9.00
085328	705	< 30.0 but > 9.00	< 9.00	< 9.00	< 9.00
Average	762	NQ	BDL	BDL	BDL
Std. Dev.	74	NQ	BDL	BDL	BDL
L. Limit (95%)	579	N/A	N/A	N/A	N/A
U. Limit (95%)	945	N/A	N/A	N/A	N/A
085338	3976	58.3	< 30.0 but > 9.00	< 30.0 but > 9.00	30.0
085338	6703	95.4	< 30.0 but > 9.00	< 30.0 but > 9.00	51.7
085338	6253	87.6	< 30.0 but > 9.00	< 30.0 but > 9.00	48.1
Average	5644	80.4	NQ	NQ	43.3
Std. Dev.	1462	19.6	NQ	NQ	11.6
L. Limit (95%)	2012	31.8	N/A	N/A	14.4
U. Limit (95%)	9276	129.1	N/A	N/A	72.1

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085339	5884	81.6	< 30.0 but > 9.00	< 30.0 but > 9.00	49.5
085339	5427	80.2	< 30.0 but > 9.00	< 30.0 but > 9.00	32.4
085339	3571	55.8	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
Average	4961	72.5	NQ	NQ	33.8
Std. Dev.	1225	14.5	NQ	NQ	15.1
L. Limit (95%)	1917	36.5	N/A	N/A	0.0
U. Limit (95%)	8005	108.6	N/A	N/A	71.2

Glossary of Abbreviations

BDL: Below Limit of Detection

NQ: Below Limit of Quantification

N/A: Not Applicable

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085293	2344	32.0	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085293	1900	33.7	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085293	1975	< 30.0 but > 9.00	< 9.00	< 9.00	< 30.0 but > 9.00
085293	3573	52.3	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
Average	2448	34.4	NQ	BDL	NQ
Std. Dev.	774	13.5	NQ	BDL	NQ
L. Limit (95%)	1216	12.8	N/A	N/A	N/A
U. Limit (95%)	3680	55.9	N/A	N/A	N/A
085295	3558	55.3	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085295	5356	74.8	< 30.0 but > 9.00	< 30.0 but > 9.00	30.7
085295	5313	79.0	< 30.0 but > 9.00	< 30.0 but > 9.00	31.7
085295	5333	66.1	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
Average	4890	68.8	NQ	NQ	NQ
Std. Dev.	888	10.5	NQ	NQ	NQ
L. Limit (95%)	3477	52.1	N/A	N/A	N/A
U. Limit (95%)	6303	85.5	N/A	N/A	N/A
085296	6382	83.0	< 30.0 but > 9.00	< 30.0 but > 9.00	47.9
085296	7176	89.1	< 30.0 but > 9.00	< 30.0 but > 9.00	49.3
085296	7431	92.2	31.7	< 30.0 but > 9.00	57.9
085296	5018	65.3	< 30.0 but > 9.00	< 30.0 but > 9.00	40.2
Average	6502	82.4	NQ	NQ	48.8
Std. Dev.	1085	12.0	NQ	NQ	7.3
L. Limit (95%)	4775	63.3	N/A	N/A	37.3
U. Limit (95%)	8229	101.5	N/A	N/A	60.4
085298	5707	59.9	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085298	4660	63.3	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085298	5392	64.9	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085298	4466	61.7	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
Average	5056	62.4	NQ	BDL	NQ
Std. Dev.	589	2.1	NQ	BDL	NQ
L. Limit (95%)	4119	59.1	N/A	N/A	N/A
U. Limit (95%)	5994	65.8	N/A	N/A	N/A
085300	5418	64.7	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085300	4995	68.8	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085300	4318	61.2	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085300	5949	80.1	< 30.0 but > 9.00	< 30.0 but > 9.00	34.5
Average	5170	68.7	NQ	NQ	NQ
Std. Dev.	689	8.2	NQ	NQ	NQ
L. Limit (95%)	4074	55.6	N/A	N/A	N/A
U. Limit (95%)	6266	81.8	N/A	N/A	N/A

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085305	4935	65.9	< 30.0 but > 9.00	< 30.0 but > 9.00	33.3
085305	3842	48.2	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085305	3923	57.0	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085305	4893	65.6	< 30.0 but > 9.00	< 30.0 but > 9.00	36.5
Average	4398	59.2	NQ	NQ	NQ
Std. Dev.	597	8.4	NQ	NQ	NQ
L. Limit (95%)	3449	45.8	N/A	N/A	N/A
U. Limit (95%)	5348	72.5	N/A	N/A	N/A
085306	2051	30.4	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085306	1318	< 30.0 but > 9.00	< 9.00	< 9.00	< 9.00
085306	2111	31.2	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085306	4338	56.8	< 30.0 but > 9.00	< 30.0 but > 9.00	36.9
Average	2454	34.5	NQ	BDL	NQ
Std. Dev.	1307	15.8	NQ	BDL	NQ
L. Limit (95%)	375	9.3	N/A	N/A	N/A
U. Limit (95%)	4534	59.6	N/A	N/A	N/A
085310	3284	41.5	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085310	3523	45.9	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085310	4050	43.3	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085310	3254	40.3	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
Average	3528	42.8	NQ	BDL	NQ
Std. Dev.	368	2.4	NQ	BDL	NQ
L. Limit (95%)	2942	38.9	N/A	N/A	N/A
U. Limit (95%)	4114	46.6	N/A	N/A	N/A
085324	3249	52.4	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085324	4164	59.1	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085324	3086	48.2	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085324	4628	69.5	< 30.0 but > 9.00	< 9.00	30.9
Average	3782	57.3	NQ	BDL	NQ
Std. Dev.	737	9.3	NQ	BDL	NQ
L. Limit (95%)	2609	42.5	N/A	N/A	N/A
U. Limit (95%)	4954	72.1	N/A	N/A	N/A
085325	4494	67.3	< 30.0 but > 9.00	< 30.0 but > 9.00	34.2
085325	3800	57.6	< 30.0 but > 9.00	< 9.00	37.5
085325	4765	69.8	< 30.0 but > 9.00	< 30.0 but > 9.00	40.9
085325	5920	87.5	30.2	< 30.0 but > 9.00	52.6
Average	4745	70.5	NQ	NQ	41.3
Std. Dev.	883	12.4	NQ	NQ	8.0
L. Limit (95%)	3340	50.7	N/A	N/A	28.6
U. Limit (95%)	6150	90.3	N/A	N/A	54.0

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085330	4085	61.0	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085330	4696	67.5	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085330	4843	60.2	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085330	5338	63.7	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
Average	4740	63.1	NQ	NQ	NQ
Std. Dev.	516	3.3	NQ	NQ	NQ
L. Limit (95%)	3919	57.9	N/A	N/A	N/A
U. Limit (95%)	5562	68.3	N/A	N/A	N/A
085332	3267	52.8	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085332	4802	80.2	< 30.0 but > 9.00	< 30.0 but > 9.00	41.2
085332	4147	66.0	< 30.0 but > 9.00	< 30.0 but > 9.00	34.2
085332	3842	60.4	< 30.0 but > 9.00	< 30.0 but > 9.00	30.2
Average	4015	64.9	NQ	NQ	31.3
Std. Dev.	640	11.6	NQ	NQ	9.1
L. Limit (95%)	2997	46.5	N/A	N/A	16.9
U. Limit (95%)	5032	83.3	N/A	N/A	45.7
085334	7611	94.9	< 30.0 but > 9.00	< 30.0 but > 9.00	51.5
085334	8127	101	34.1	< 30.0 but > 9.00	54.8
085334	6787	94.2	30.5	< 30.0 but > 9.00	48.5
085334	6993	75.5	< 30.0 but > 9.00	< 30.0 but > 9.00	47.5
Average	7379	91.5	NQ	NQ	50.6
Std. Dev.	609	11.1	NQ	NQ	3.3
L. Limit (95%)	6410	73.9	N/A	N/A	45.4
U. Limit (95%)	8348	109.1	N/A	N/A	55.8
085335	1354	< 30.0 but > 9.00	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085335	1050	< 30.0 but > 9.00	< 9.00	< 9.00	< 9.00
085335	1607	< 30.0 but > 9.00	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085335	665	< 30.0 but > 9.00	< 9.00	< 9.00	< 9.00
Average	1169	NQ	NQ	BDL	NQ
Std. Dev.	406	NQ	NQ	BDL	NQ
L. Limit (95%)	523	N/A	N/A	N/A	N/A
U. Limit (95%)	1815	N/A	N/A	N/A	N/A
085340	3835	59.7	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
085340	4114	54.4	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085340	3726	56.4	< 30.0 but > 9.00	< 30.0 but > 9.00	33.1
085340	2970	48.4	< 30.0 but > 9.00	< 30.0 but > 9.00	< 30.0 but > 9.00
Average	3661	54.7	NQ	NQ	NQ
Std. Dev.	489	4.7	NQ	NQ	NQ
L. Limit (95%)	2883	47.1	N/A	N/A	N/A
U. Limit (95%)	4439	62.3	N/A	N/A	N/A

Table 1: Nicotine and Nicotine Related Contents of Processed Tobacco ('pouch' Basis)

Sample ID	Nicotine (µg/pouch)	Nornicotine (µg/pouch)	Anabasine (µg/pouch)	Myosmine (µg/pouch)	Anatabine (µg/pouch)
085344	2011	33.6	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085344	1970	33.7	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085344	2166	37.2	< 30.0 but > 9.00	< 9.00	< 30.0 but > 9.00
085344	3002	38.7	< 30.0 but > 9.00	< 9.00	32.6
Average	2287	35.8	NQ	BDL	NQ
Std. Dev.	484	2.6	NQ	BDL	NQ
L. Limit (95%)	1517	31.8	N/A	N/A	N/A
U. Limit (95%)	3057	39.9	N/A	N/A	N/A

Glossary of Abbreviations

BDL: Below Limit of Detection

NQ: Below Limit of Quantification

N/A: Not Applicable

Table 4: Toxic Trace Metals Content of Processed Tobacco
(‘pouch’ Basis)

Sample ID	Cd (ng/pouch)	Cr (ng/pouch)	Ni (ng/pouch)	Pb (ng/pouch)	As (ng/pouch)	Se (ng/pouch)	Hg (ng/pouch)
085293	155	252	288	77.7	63.5	27.2	8.00
085294	157	273	262	89.9	53.6	25.5	< 6.25
085297	149	290	284	79.0	59.6	25.4	< 6.25
085298	173	257	316	68.7	73.8	29.6	< 7.50 but > 6.25
085299	195	259	334	67.6	63.2	32.7	< 6.25
085301	156	249	309	68.5	52.8	26.7	< 6.25
085305	169	269	311	86.8	74.4	36.1	< 6.25
085306	163	304	385	104	43.3	29.8	< 6.25
085308	209	329	415	91.8	49.0	36.9	< 6.25
085310	148	282	282	66.0	69.1	20.2	< 6.25
085311	150	297	263	79.2	57.6	19.3	< 6.25
085312	166	221	317	60.9	69.4	38.0	< 6.25
085313	152	246	294	71.4	65.0	36.0	< 6.25
085314	105	154	243	45.7	44.2	32.1	< 6.25
085315	185	262	366	65.4	73.3	29.4	< 6.25
085316	177	290	354	138	111	48.6	< 6.25
085317	147	197	299	61.2	57.3	36.1	< 6.25
085319	170	244	320	106	60.3	37.3	< 7.50 but > 6.25
085320	172	226	349	64.7	84.4	31.1	< 6.25
085323	193	277	399	74.9	64.7	49.4	< 6.25
085326	175	237	344	79.1	66.9	50.0	< 6.25
085329	223	382	622	97.5	49.3	41.6	< 7.50 but > 6.25
085335	142	261	221	72.0	42.5	30.0	< 6.25
085336	161	234	283	100	67.6	37.2	< 6.25
085337	166	222	331	61.7	70.7	37.0	< 6.25
085339	168	231	340	65.1	71.1	37.5	< 6.25
085343	122	193	228	55.1	56.9	24.9	< 6.25
085344	116	213	240	62.2	55.4	31.3	< 6.25
085345	120	218	209	66.9	30.2	20.0	< 6.25

Table 4: Toxic Trace Metals Content of Processed Tobacco ('pouch' Basis)

Sample ID	Cd (ng/pouch)	Cr (ng/pouch)	Ni (ng/pouch)	Pb (ng/pouch)	As (ng/pouch)	Se (ng/pouch)	Hg (ng/pouch)
085292	193	328	380	90.2	52.5	39.2	< 6.25
085292	197	336	373	87.3	65.0	33.9	7.63
Average	195	332	377	88.7	58.7	36.5	BDL
Std. Dev.	3	5	5	2.0	8.9	3.7	BDL
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
085296	201	266	394	82.7	44.0	39.7	< 6.25
085296	215	284	415	86.2	44.0	39.7	< 6.25
Average	208	275	405	84.4	44.0	39.7	BDL
Std. Dev.	10	13	14	2.4	0.0	0.0	BDL
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
085303	199	300	382	84.9	59.2	42.4	9.93
085303	204	308	388	89.8	66.0	39.8	7.90
Average	202	304	385	87.3	62.6	41.1	8.91
Std. Dev.	3	6	4	3.5	4.8	1.8	1.43
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
085304	202	309	416	82.2	51.8	36.5	< 6.25
085304	272	247	386	116	82.3	34.8	< 7.50 but > 6.25
Average	237	278	401	99.2	67.1	35.7	BDL
Std. Dev.	50	44	22	24.0	21.6	1.2	BDL
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
085307	199	346	377	96.4	48.8	31.6	< 6.25
085307	181	316	341	88.9	49.3	33.6	< 7.50 but > 6.25
Average	190	331	359	92.6	49.0	32.6	BDL
Std. Dev.	13	21	25	5.3	0.3	1.5	BDL
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
085309	173	308	330	88.2	51.7	34.8	10.3
085309	176	314	309	87.8	44.8	30.3	8.35
Average	175	311	320	88.0	48.2	32.5	9.31
Std. Dev.	2	4	15	0.3	4.9	3.2	1.36
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
085318	222	319	420	86.9	60.7	45.3	< 6.25
085318	189	313	396	98.3	53.7	33.2	< 6.25
Average	205	316	408	92.6	57.2	39.2	BDL
Std. Dev.	23	4	16	8.1	5.0	8.5	BDL
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND

Table 4: Toxic Trace Metals Content of Processed Tobacco ('pouch' Basis)

Sample ID	Cd (ng/pouch)	Cr (ng/pouch)	Ni (ng/pouch)	Pb (ng/pouch)	As (ng/pouch)	Se (ng/pouch)	Hg (ng/pouch)
085322	208	382	403	92.0	57.5	34.7	< 6.25
085322	210	313	463	97.8	51.7	41.9	< 6.25
Average	209	348	433	94.9	54.6	38.3	BDL
Std. Dev.	2	48	43	4.1	4.1	5.1	BDL
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
085327	230	373	427	98.9	55.2	34.5	< 6.25
085327	206	332	394	88.1	51.4	38.7	< 6.25
Average	218	353	411	93.5	53.3	36.6	BDL
Std. Dev.	17	29	24	7.6	2.7	3.0	BDL
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
085328	124	264	216	73.5	53.4	25.6	< 6.25
085328	156	320	232	77.8	44.1	24.4	< 6.25
Average	140	292	224	75.7	48.8	25.0	BDL
Std. Dev.	22	39	12	3.0	6.6	0.9	BDL
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
085331	103	187	227	58.0	32.9	21.3	< 6.25
085331	165	291	327	77.9	51.4	25.9	7.58
Average	134	239	277	67.9	42.2	23.6	BDL
Std. Dev.	44	74	71	14.0	13.1	3.3	BDL
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
085333	166	280	275	92.9	48.4	27.1	< 7.50 but > 6.25
085333	179	305	312	94.2	57.1	29.0	< 6.25
Average	172	293	294	93.6	52.7	28.0	BDL
Std. Dev.	10	18	26	0.9	6.1	1.4	BDL
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
085338	196	312	408	90.5	62.4	35.1	< 7.50 but > 6.25
085338	219	325	412	97.1	53.5	42.1	< 7.50 but > 6.25
Average	208	318	410	93.8	58.0	38.6	NQ
Std. Dev.	16	9	3	4.6	6.3	5.0	NQ
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
085340	205	274	366	84.2	38.4	48.1	< 6.25
085340	202	293	381	85.5	40.3	48.2	< 6.25
Average	203	283	373	84.9	39.4	48.1	BDL
Std. Dev.	2	14	11	0.9	1.3	0.0	BDL
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND

**Table 4: Toxic Trace Metals Content of Processed Tobacco
(‘pouch’ Basis)**

Sample ID	Cd (ng/pouch)	Cr (ng/pouch)	Ni (ng/pouch)	Pb (ng/pouch)	As (ng/pouch)	Se (ng/pouch)	Hg (ng/pouch)
085342	206	345	373	155	48.3	31.5	< 6.25
085342	195	302	362	171	42.7	27.6	< 7.50 but > 6.25
Average	200	324	367	163	45.5	29.6	BDL
Std. Dev.	8	30	7	12	3.9	2.8	BDL
L. Limit (95%)	ND	ND	ND	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND	ND	ND	ND

Glossary of Abbreviations

BDL: Below Limit of Detection

NQ: Below Limit of Quantification

N/A: Not Applicable

ND: Not Defined

Table 4: Toxic Trace Metals Content of Processed Tobacco
('pouch' Basis)

Sample ID	Cd (ng/pouch)	Cr (ng/pouch)	Ni (ng/pouch)	Pb (ng/pouch)	As (ng/pouch)	Se (ng/pouch)	Hg (ng/pouch)
085295	179	256	303	73.9	46.3	43.0	< 6.25
085295	201	287	350	75.1	52.7	37.3	< 6.25
085295	185	255	324	67.6	44.0	40.2	< 7.50 but > 6.25
Average	188	266	326	72.2	47.7	40.2	BDL
Std. Dev.	11	18	23	4.0	4.5	2.8	BDL
L. Limit (95%)	160	220	268	62.2	36.5	33.1	N/A
U. Limit (95%)	216	311	384	82.2	58.9	47.2	N/A
085302	206	266	358	77.8	65.0	52.5	< 6.25
085302	199	284	379	81.6	60.8	46.6	< 6.25
085302	206	305	381	77.7	65.5	41.2	< 7.50 but > 6.25
Average	204	285	373	79.0	63.8	46.7	BDL
Std. Dev.	4	19	13	2.2	2.6	5.7	BDL
L. Limit (95%)	194	237	341	73.5	57.4	32.7	N/A
U. Limit (95%)	214	333	404	84.6	70.2	60.8	N/A
085321	198	331	370	76.3	53.2	39.5	< 6.25
085321	185	269	332	73.5	39.3	45.2	< 6.25
085321	154	314	273	60.6	38.9	35.1	< 6.25
Average	179	305	325	70.1	43.8	39.9	BDL
Std. Dev.	23	32	49	8.4	8.1	5.0	BDL
L. Limit (95%)	123	225	204	49.3	23.6	27.4	N/A
U. Limit (95%)	235	384	446	91.0	64.0	52.4	N/A
085324	188	266	337	74.8	53.9	37.5	< 6.25
085324	186	249	321	65.5	51.6	32.8	< 6.25
085324	207	280	374	78.6	65.1	41.9	< 7.50 but > 6.25
Average	194	265	344	73.0	56.9	37.4	BDL
Std. Dev.	12	16	27	6.8	7.2	4.5	BDL
L. Limit (95%)	164	227	277	56.1	38.9	26.1	N/A
U. Limit (95%)	223	304	411	89.8	74.9	48.7	N/A
085325	168	238	317	74.5	49.9	40.4	< 6.25
085325	196	254	360	81.1	60.7	43.0	< 6.25
085325	188	242	365	85.8	65.8	39.8	7.63
Average	184	244	347	80.5	58.8	41.1	BDL
Std. Dev.	14	8	26	5.7	8.1	1.7	BDL
L. Limit (95%)	148	224	282	66.4	38.6	36.9	N/A
U. Limit (95%)	220	265	413	94.6	79.0	45.3	N/A
085330	203	307	411	81.3	73.5	51.4	12.8
085330	195	303	398	82.0	74.6	42.6	17.9
085330	196	322	402	88.1	61.0	45.8	13.4
Average	198	311	404	83.8	69.7	46.6	14.7
Std. Dev.	5	10	7	3.7	7.5	4.5	2.8
L. Limit (95%)	187	286	387	74.5	51.0	35.5	7.8
U. Limit (95%)	209	336	420	93.1	88.4	57.7	21.6

Table 4: Toxic Trace Metals Content of Processed Tobacco ('pouch' Basis)

Sample ID	Cd (ng/pouch)	Cr (ng/pouch)	Ni (ng/pouch)	Pb (ng/pouch)	As (ng/pouch)	Se (ng/pouch)	Hg (ng/pouch)
085334	203	360	420	84.6	51.2	48.5	11.2
085334	180	240	362	92.1	55.1	45.9	8.98
085334	147	424	1352	128	37.5	37.7	< 7.50 but > 6.25
Average	177	341	711	101	47.9	44.0	9.02
Std. Dev.	29	93	556	23	9.2	5.7	2.16
L. Limit (95%)	106	110	0	44	25.0	29.9	3.64
U. Limit (95%)	248	573	2091	159	70.9	58.1	14.39
085341	207	353	401	87.6	61.2	43.1	< 6.25
085341	212	312	398	111	74.8	40.0	< 6.25
085341	184	283	350	73.8	57.7	35.8	< 7.50 but > 6.25
Average	201	316	383	90.7	64.6	39.6	BDL
Std. Dev.	15	35	28	18.6	9.0	3.7	BDL
L. Limit (95%)	164	230	312	44.4	42.1	30.5	N/A
U. Limit (95%)	238	402	454	137.0	87.0	48.8	N/A

Glossary of Abbreviations

BDL: Below Limit of Detection

NQ: Below Limit of Quantification

N/A: Not Applicable

**Table 5: Benzo[a]pyrene Content of Processed Tobacco
(‘pouch’ Basis)**

Sample ID	B[a]P (ng/pouch)
085293	0.294
085294	0.374
085297	0.462
085298	0.450
085299	0.494
085303	0.343
085304	0.485
085309	0.434
085310	0.400
085311	0.518
085312	0.645
085313	0.332
085314	0.519
085315	0.301
085316	0.346
085317	0.347
085318	0.512
085319	0.283
085320	0.371
085322	0.376
085323	0.428
085326	0.398
085328	0.386
085329	0.661
085331	0.454
085335	0.490
085336	0.509
085338	0.464
085339	0.621
085342	0.427
085343	0.384
085345	0.525

Table 5: Benzo[a]pyrene Content of Processed Tobacco ('pouch' Basis)

Sample ID	B[a]P (ng/pouch)
085292	0.442
085292	0.408
Average	0.425
Std. Dev.	0.024
L. Limit (95%)	ND
U. Limit (95%)	ND
085296	0.415
085296	0.530
Average	0.472
Std. Dev.	0.082
L. Limit (95%)	ND
U. Limit (95%)	ND
085302	0.498
085302	0.435
Average	0.467
Std. Dev.	0.045
L. Limit (95%)	ND
U. Limit (95%)	ND
085307	0.480
085307	0.424
Average	0.452
Std. Dev.	0.039
L. Limit (95%)	ND
U. Limit (95%)	ND
085327	0.474
085327	0.478
Average	0.476
Std. Dev.	0.003
L. Limit (95%)	ND
U. Limit (95%)	ND

Table 5: Benzo[a]pyrene Content of Processed Tobacco ('pouch' Basis)

Sample ID	B[a]P (ng/pouch)
085333	0.550
085333	0.527
Average	0.539
Std. Dev.	0.016
L. Limit (95%)	ND
U. Limit (95%)	ND
085340	0.432
085340	0.646
Average	0.539
Std. Dev.	0.151
L. Limit (95%)	ND
U. Limit (95%)	ND
085341	0.605
085341	0.675
Average	0.640
Std. Dev.	0.049
L. Limit (95%)	ND
U. Limit (95%)	ND

Glossary of Abbreviations

ND: Not Defined

Table 5: Benzo[a]pyrene Content of Processed Tobacco ('pouch' Basis)

Sample ID	B[a]P (ng/pouch)
085295	0.142
085295	0.403
085295	0.581
Average	0.375
Std. Dev.	0.221
L. Limit (95%)	0.000
U. Limit (95%)	0.924
085321	0.437
085321	0.489
085321	0.531
Average	0.485
Std. Dev.	0.047
L. Limit (95%)	0.368
U. Limit (95%)	0.602
085324	0.558
085324	0.529
085324	0.666
Average	0.584
Std. Dev.	0.072
L. Limit (95%)	0.404
U. Limit (95%)	0.764
085325	0.491
085325	0.440
085325	0.497
Average	0.476
Std. Dev.	0.031
L. Limit (95%)	0.399
U. Limit (95%)	0.553
085330	0.561
085330	0.642
085330	0.595
Average	0.599
Std. Dev.	0.040
L. Limit (95%)	0.499
U. Limit (95%)	0.699

**Table 5: Benzo[a]pyrene Content of Processed Tobacco
(‘pouch’ Basis)**

Sample ID	B[a]P (ng/pouch)
085334	0.492
085334	0.582
085334	0.628
Average	0.567
Std. Dev.	0.069
L. Limit (95%)	0.396
U. Limit (95%)	0.738

**TSNA Content of Processed Tobacco - GC-TEA Method
('pouch' Basis)**

Sample ID	NNN (ng/pouch)	NAT (ng/pouch)	NAB (ng/pouch)	NNK (ng/pouch)
085294	258	168	23.6	81.9
085297	115	89.1	16.5	< 27.2 but > 8.15
085298	301	163	21.8	49.6
085299	333	186	21.8	106
085300	418	230	26.6	137
085301	344	177	27.9	64.3
085305	262	141	21.7	79.6
085306	262	134	21.6	86.5
085308	316	171	23.4	67.0
085310	285	158	23.3	79.0
085311	131	115	17.5	30.4
085312	378	191	24.4	63.0
085313	250	149	17.8	81.4
085315	355	191	27.7	116
085316	443	219	29.4	141
085319	393	177	28.1	124
085320	381	208	21.8	68.1
085323	373	176	28.7	104
085326	377	167	29.6	109
085329	367	180	22.7	55.6
085332	280	146	20.8	88.9
085335	115	90.6	13.3	38.9
085337	396	194	25.3	121
085343	322	191	24.3	59.9
085344	217	159	< 10.3 but > 3.10	66.3
085345	333	251	51.7	49.4

**TSNA Content of Processed Tobacco - GC-TEA Method
('pouch' Basis)**

Sample ID	NNN (ng/pouch)	NAT (ng/pouch)	NAB (ng/pouch)	NNK (ng/pouch)
085293	455	479	86.2	101
085293	318	312	56.9	78.6
Average	386	395	71.6	90.0
Std. Dev.	96	119	20.7	16.1
L. Limit (95%)	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND
085304	391	235	26.9	123
085304	385	222	31.9	128
Average	388	228	29.4	126
Std. Dev.	4	9	3.6	3
L. Limit (95%)	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND
085314	426	215	29.8	88.9
085314	423	214	32.1	83.0
Average	424	215	31.0	86.0
Std. Dev.	2	1	1.6	4.1
L. Limit (95%)	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND
085317	432	223	28.4	130
085317	382	193	27.7	121
Average	407	208	28.1	125
Std. Dev.	35	22	0.5	7
L. Limit (95%)	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND
085318	438	213	32.8	136
085318	415	186	27.5	119
Average	426	200	30.1	128
Std. Dev.	16	20	3.8	12
L. Limit (95%)	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND

**TSNA Content of Processed Tobacco - GC-TEA Method
('pouch' Basis)**

Sample ID	NNN (ng/pouch)	NAT (ng/pouch)	NAB (ng/pouch)	NNK (ng/pouch)
085331	250	159	24.7	71.7
085331	255	164	30.0	75.3
Average	253	162	27.4	73.5
Std. Dev.	3	4	3.8	2.6
L. Limit (95%)	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND
085336	238	139	17.7	70.3
085336	209	125	17.6	68.7
Average	224	132	17.7	69.5
Std. Dev.	20	10	0.1	1.1
L. Limit (95%)	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND
085339	305	166	24.7	54.2
085339	326	166	26.5	62.2
Average	315	166	25.6	58.2
Std. Dev.	15	0	1.3	5.6
L. Limit (95%)	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND
085342	201	132	20.0	53.6
085342	175	122	19.2	54.8
Average	188	127	19.6	54.2
Std. Dev.	18	7	0.5	0.9
L. Limit (95%)	ND	ND	ND	ND
U. Limit (95%)	ND	ND	ND	ND

Glossary of Abbreviations

ND: Not Defined

**TSNA Content of Processed Tobacco - GC-TEA Method
('pouch' Basis)**

Sample ID	NNN (ng/pouch)	NAT (ng/pouch)	NAB (ng/pouch)	NNK (ng/pouch)
085292	242	166	23.2	92.0
085292	273	168	22.8	91.1
085292	252	153	21.6	86.9
Average	256	162	22.6	90.0
Std. Dev.	16	8	0.8	2.7
L. Limit (95%)	216	141	20.5	83.2
U. Limit (95%)	296	183	24.7	96.8
085295	396	237	30.5	105
085295	442	271	33.3	122
085295	377	228	34.1	102
Average	405	245	32.6	109
Std. Dev.	33	23	1.9	11
L. Limit (95%)	323	189	27.9	82
U. Limit (95%)	487	302	37.3	137
085296	406	215	27.3	142
085296	444	215	25.8	145
085296	402	210	26.1	134
Average	417	213	26.4	140
Std. Dev.	23	3	0.8	6
L. Limit (95%)	359	206	24.4	126
U. Limit (95%)	476	221	28.3	155
085302	373	194	25.7	122
085302	347	195	24.6	118
085302	332	181	26.3	106
Average	350	190	25.5	115
Std. Dev.	21	8	0.9	8
L. Limit (95%)	299	171	23.3	95
U. Limit (95%)	402	209	27.7	136
085303	396	213	31.7	78.6
085303	358	196	26.8	67.6
085303	405	215	29.7	65.8
Average	386	208	29.4	70.6
Std. Dev.	25	10	2.5	6.9
L. Limit (95%)	324	182	23.3	53.4
U. Limit (95%)	448	234	35.5	87.8

**TSNA Content of Processed Tobacco - GC-TEA Method
('pouch' Basis)**

Sample ID	NNN (ng/pouch)	NAT (ng/pouch)	NAB (ng/pouch)	NNK (ng/pouch)
085307	280	175	21.7	85.0
085307	269	168	21.8	88.7
085307	283	165	21.1	77.4
Average	277	169	21.5	83.7
Std. Dev.	7	5	0.4	5.8
L. Limit (95%)	260	156	20.6	69.3
U. Limit (95%)	295	183	22.5	98.1
085309	167	111	13.6	57.4
085309	192	126	14.9	63.2
085309	185	122	13.5	61.2
Average	181	120	14.0	60.6
Std. Dev.	13	7	0.8	3.0
L. Limit (95%)	150	101	12.1	53.2
U. Limit (95%)	213	138	15.9	67.9
085321	418	213	24.6	125
085321	348	214	23.8	120
085321	349	193	25.3	111
Average	372	207	24.5	119
Std. Dev.	40	12	0.8	7
L. Limit (95%)	272	178	22.6	101
U. Limit (95%)	471	236	26.5	137
085322	378	195	24.9	105
085322	340	190	23.4	99.7
085322	356	195	25.4	112
Average	358	193	24.6	106
Std. Dev.	19	3	1.0	6
L. Limit (95%)	311	185	22.0	90
U. Limit (95%)	405	201	27.1	121
085324	382	226	32.9	60.5
085324	368	217	29.8	67.5
085324	334	192	30.3	54.2
Average	361	212	31.0	60.7
Std. Dev.	24	18	1.6	6.7
L. Limit (95%)	301	168	26.9	44.2
U. Limit (95%)	422	255	35.1	77.3

**TSNA Content of Processed Tobacco - GC-TEA Method
('pouch' Basis)**

Sample ID	NNN (ng/pouch)	NAT (ng/pouch)	NAB (ng/pouch)	NNK (ng/pouch)
085325	333	185	19.0	83.3
085325	331	170	21.0	75.9
085325	335	187	22.0	89.2
Average	333	181	20.7	82.8
Std. Dev.	2	9	1.5	6.6
L. Limit (95%)	327	157	16.9	66.3
U. Limit (95%)	339	204	24.4	99.3
085327	401	225	28.1	120
085327	369	212	27.0	117
085327	404	234	29.3	123
Average	391	224	28.1	120
Std. Dev.	20	11	1.1	3
L. Limit (95%)	342	196	25.4	112
U. Limit (95%)	440	252	30.9	128
085328	29.3	35.5	< 10.3 but > 3.10	< 27.2 but > 8.15
085328	33.2	38.4	< 10.3 but > 3.10	< 27.2 but > 8.15
085328	34.8	30.5	< 10.3 but > 3.10	< 8.15
Average	32.4	34.8	NQ	NQ
Std. Dev.	2.8	4.0	NQ	NQ
L. Limit (95%)	25.3	24.9	N/A	N/A
U. Limit (95%)	39.5	44.7	N/A	N/A
085330	374	204	30.2	80.4
085330	353	191	26.5	68.8
085330	353	196	26.9	72.4
Average	360	197	27.9	73.9
Std. Dev.	12	7	2.0	6.0
L. Limit (95%)	330	181	22.9	59.0
U. Limit (95%)	391	213	32.8	88.7
085333	379	403	80.7	79.7
085333	371	317	60.6	78.5
085333	402	416	88.1	64.1
Average	384	378	76.5	74.1
Std. Dev.	16	54	14.3	8.7
L. Limit (95%)	344	245	41.1	52.6
U. Limit (95%)	425	511	111.9	95.6

**TSNA Content of Processed Tobacco - GC-TEA Method
('pouch' Basis)**

Sample ID	NNN (ng/pouch)	NAT (ng/pouch)	NAB (ng/pouch)	NNK (ng/pouch)
085334	393	211	26.0	100
085334	379	205	27.2	76.7
085334	355	186	25.7	93.4
Average	375	201	26.3	90.1
Std. Dev.	19	13	0.8	12.1
L. Limit (95%)	327	168	24.3	60.0
U. Limit (95%)	423	234	28.4	120.3
085338	354	226	28.1	108
085338	328	197	24.7	95.5
085338	348	206	25.6	107
Average	343	210	26.1	103
Std. Dev.	14	15	1.8	7
L. Limit (95%)	309	172	21.7	87
U. Limit (95%)	377	247	30.6	120
085340	295	161	25.1	90.1
085340	322	194	20.3	94.8
085340	312	168	23.3	97.8
Average	310	174	22.9	94.2
Std. Dev.	14	17	2.4	3.9
L. Limit (95%)	276	132	16.9	84.6
U. Limit (95%)	344	217	28.9	103.8
085341	410	210	25.8	79.8
085341	368	206	23.6	69.7
085341	382	209	23.1	65.6
Average	387	209	24.1	71.7
Std. Dev.	21	2	1.4	7.3
L. Limit (95%)	333	204	20.5	53.6
U. Limit (95%)	440	213	27.7	89.8

Glossary of Abbreviations

BDL: Below Limit of Detection

NQ: Below Limit of Quantification

N/A: Not Applicable