
**Toxicology of Smokeless Tobacco Products:
Neutral Red Cytotoxicity**

***Labstat International ULC
Test Report***



***Prepared for
R.J. Reynolds Tobacco Corporation***

Project Code: M100

**Original Date: January 9, 2009
Revision 1 Date: November 3, 2009
Revision 2 Date: December 17, 2009
Revision 4 Date: July 29, 2010**

1	USE OF LABSTAT'S ANALYTICAL REPORTS.....	4
2	ADMINISTRATIVE INFORMATION.....	5
2.1	Quotation Reference	5
2.2	Client Identification	5
2.3	Date of Sample Receipt	5
2.4	Sample Characteristics	5
2.5	Test Article Identification	5
2.6	Special Instructions	5
2.7	Date of Test Report.....	5
2.8	Revision History	6
2.8.1	Revision 1.....	6
2.8.2	Revision 2.....	6
2.8.3	Revision 4.....	6
3	ACCREDITATION.....	6
3.1	Scope (refer to appendix A).....	6
3.2	International Recognition of Tests	6
4	METHODS.....	7
4.1	General References	7
4.2	Preparation of Solutions and Media	7
4.3	Preparation of CHO-WBL Cell Culture Suspension.....	7
4.4	Collection of Particulate Phase of Mainstream Smoke.....	7
4.4.1	Preparation of Test Samples	8
4.4.2	Particulate Phase (PP)	8
4.4.3	Test Method Deviations.....	8
4.5	Smokeless Tobacco Sample Preparation	8
4.6	Cytotoxicity Testing	8
4.7	Calculation of Relative Absorbance.....	8
4.8	Nicotine Contents of Smoked and Smokeless Tobacco Products.....	9
4.9	Method Deviations.....	9

5 RESULTS	9
5.1 Data Files	9
5.1.1 Moisture-Corrected Smokeless Tobacco and Nicotine Dose Basis.....	9
5.2 Quality Control.....	10
5.2.1 Evaluation of Negative Controls	10
5.2.2 Evaluation of Positive Controls.....	10
5.2.3 Kentucky Reference Cigarette (3R4F) Response	11
6 CYTOTOXICITY COMPARISONS	12
6.1 Data Files	12
6.2 Methodology.....	13
6.2.1 Revision 2 Additional Analysis.....	13
6.3 IC ₅₀ Determinations	13
6.4 Comparisons among Smokeless Tobacco Products	14
6.4.1 Individual Replicate LOG[IC ₅₀] and IC ₅₀ Statistics	14
6.4.2 Data Plots.....	15
6.4.3 One-Way ANOVA Results.....	16
6.4.4 Contrasts of Interest	17
6.5 Comparisons between Smoked and Smokeless Tobacco Products	20
6.5.1 Individual Replicate LOG[IC ₅₀] and IC ₅₀ Statistics	20
6.5.2 Data Plots.....	20
6.5.3 One-Way ANOVA Results.....	21
6.5.4 Contrasts of Interest	21
7 SUMMARY	21
8 ATTRIBUTION	22
8.1 Original.....	22
8.1.1 Technical Director (Toxicology)	22
8.1.2 Senior Statistician.....	22
8.2 Revision 1.....	23
8.3 Revision 2.....	23
8.3.1 Technical Director (Toxicology)	23
8.3.2 Senior Statistician.....	23
8.4 Revision 4.....	24
8.4.1 Technical Director (Toxicology)	24
8.4.2 Senior Statistician.....	24

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.

¹ Labstat International ULC,
262 Manitou Drive, Kitchener, ON Canada N2C 1L3
Phone: (519) 748-5409; Fax: (519) 748-1654; Email: labstat@labstat.com

² *This document may not be reproduced, in whole or in part in any form, without the written consent of the author(s) on behalf of Labstat International ULC.*

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

2 Administrative Information⁴

2.1 Quotation Reference

Quotation Number: T2671 & T2672

Date of Quotation: October 6, 2008

Recipient's Name: Dr. Suzana Theophilus

2.2 Client Identification

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

2.3 Date of Sample Receipt

The samples to be tested for M100 were received on September 16, 2008 and October 21, 2008 via UPS.

2.4 Sample Characteristics

The shipment received on September 16, 2008 consisted of one Ziploc bag of one product, one plastic container for each of 2 products, 91 boxes of one product and 20 tins of one product. Additional product of one brand was received on October 21, 2008 and consisted of 90 tins. There was no physical damage to the containers, bag or tins. Individual pouches, sticks and strips were normal in appearance.

2.5 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.

Sample ID	Sample Description
084394	Camel SNUS Frost
084395	2S3 Research Moist smokeless tobacco
084396	Kentucky Reference 2R4F
084454	Fresh Strips

Sample ID	Sample Description
084455	Mellow Sticks
084456	Copenhagen Long Cut
084457	Ariva Wintergreen
084458	Fresh Orbs

2.6 Special Instructions

Some of the products required for testing were removed from inventory remaining from Projects M97, M78L and M78M. Labstat International ULC supplied the "Kentucky Reference 2R4F" (Sample ID 084396).

2.7 Date of Test Report

Original: January 9, 2009

Revision 1: November 3, 2009

Revision 2: December 17, 2009

Revision 4: July 29, 2010

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

2.8 Revision History

2.8.1 Revision 1

This revision was required due to client request for re-analysis and additional information following the submission of the original report and subsequent conference calls with the client regarding specific data analysis methodologies to be used (client CRO # 2009-005).

2.8.2 Revision 2

This revision was required due to an inquiry from the client (client inquiry number CRO 2009-009-M100-NRU).

2.8.3 Revision 4⁵

This revision was required due to an inquiry from the client (client inquiry number CRO 2010-009-NRU).

3 Accreditation

3.1 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 4.



3.2 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 Revision 3 was applied to the micronucleus (MN) report that is also part of the M100 project.

4 Methods

4.1 General References

The test method for the neutral red uptake assay of mainstream tobacco smoke is referenced in the table below and was practiced as written unless otherwise indicated (see "[Method Deviations](#)").

OFFICIAL METHOD FOR ASSAYS OF MAINSTREAM TOBACCO SMOKE⁶

Item	Assay	Official Method
1.	Neutral Red Uptake Assay (NRU)	Health Canada Official Method T-502, <i>Neutral Red Uptake Assay for Mainstream Tobacco Smoke</i>

4.2 Preparation of Solutions and Media

(b) (4)

4.3 Preparation of CHO-WBL Cell Culture Suspension

(b) (4)

4.4 Collection of Particulate Phase of Mainstream Smoke

(b) (4)

⁶ Canadian Regulations Amending the Tobacco Reporting Regulations: 2005-06-29 *Canada Gazette Part II*, Vol. 139, No. 13, Part 3.1: Toxicity of Cigarette Emissions. Test method number refers to Health Canada methodologies, which may be obtained by contacting Health Canada.

⁷ Health Canada 100% Vent Blocking Method

6(b)(iii) all ventilation holes must be blocked by placing over them a strip of Mylar adhesive tape, Scotch Brand product no. 600 Transparent Tape, and the tape must be cut so that it covers the circumference and is tightly secured from the end of the filter to the tipping overwrap seam, or by another method of equivalent efficiency.

4.4.1 Preparation of Test Samples(b) (4)
**4.4.2 Particulate Phase (PP)**(b) (4)
**4.4.3 Test Method Deviations**(b) (4)
**4.5 Smokeless Tobacco Sample Preparation**(b) (4)
**4.6 Cytotoxicity Testing**(b) (4)
**4.7 Calculation of Relative Absorbance**

The raw absorbance readings for each 96-well plate were blank-corrected and expressed relative to the negative control absorbance reading as described in section 13 of T-502.

⁸ DMSO is the most useful solvent for cell toxicity assays because it dissolves a wide range of chemicals, is relatively non-toxic to the cells.

4.8 Nicotine Contents of Smoked and Smokeless Tobacco Products

Test methods for the analysis of processed tobacco are referenced in the table below and were practiced as written.

OFFICIAL METHODS FOR THE COLLECTION OF EMISSION DATA ON MAINSTREAM SMOKE⁹

Item	Emission	Official Method
1.	Nicotine	Official Method T-115, <i>Determination of "Tar", Nicotine and Carbon Monoxide in Mainstream Tobacco Smoke</i>

OFFICIAL METHODS FOR THE COLLECTION OF DATA ON CONSTITUENTS

Item	Constituent	Official Method
1.	Nicotine	Official Method T-301, <i>Determination of Alkaloids in Whole Tobacco</i>

4.9 Method Deviations

(b) (4)

5 Results

5.1 Data Files

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 *M100_nru_tpm_dataCF.xls* (neutral red uptake assay results for TPM of tobacco brand 084396), *M100_nru_wt_dataCF.xls* (neutral red uptake assay results for smokeless tobacco products), *M100_chem_dataCF.xls* (nicotine analysis results for smoked and smokeless tobacco products).

5.1.1 Moisture-Corrected Smokeless Tobacco and Nicotine Dose Basis

(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

5.2 Quality Control

5.2.1 Evaluation of Negative Controls

5.2.1.1 Acceptance Criteria for Negative Controls

(b) (4)

5.2.1.2 Conclusion

The mean uncorrected negative control absorbances that are part of this report were found to be acceptable in regards to the above requirement. See the [“Solvent Control Acceptance”](#) sheet in the *M100_nru_Labstat Internal Controls.xls* data file for evaluation results.

5.2.2 Evaluation of Positive Controls

As per section 14.3.4 of T-502, SLS positive controls were run in two columns of each 96-well microtitre plate at concentrations of 110 µg/mL and 200 µg/mL.

5.2.2.1 Acceptance Criteria for Cytotoxic Controls

(b) (4)

5.2.2.2 Conclusion (Cytotoxic Controls)

All cytotoxic positive control assay results that are part of this report were found to be acceptable in regards to the above acceptance criteria. See the [“SLS Acceptance”](#) sheet in the *M100_nru_Labstat Internal Controls.xls* data file for evaluation results.

(b) (4)

(b) (4)

5.2.2.4 Conclusion (Inhibitory Controls)

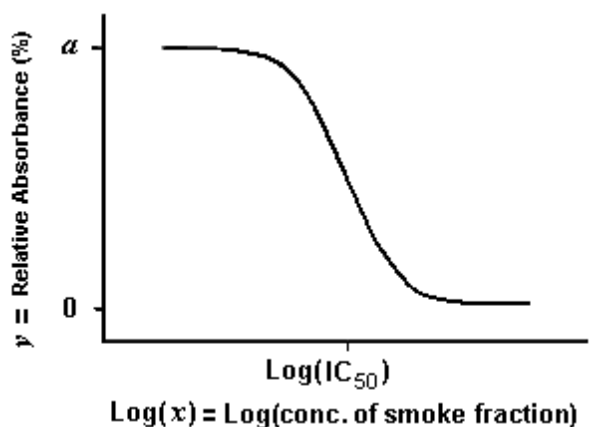
All inhibitory positive control assay results that are part of this report were found to be acceptable in regards to the above acceptance criteria. See the [“SLS Acceptance”](#) sheet in the *M100_nru_Labstat Internal Controls.xls* data file for evaluation results.

5.2.3 Kentucky Reference Cigarette (3R4F) Response

5.2.3.1 Determination of IC₅₀

Each NRU assay plate exhibits some form of concentration-response relationship between the concentration of the smoke fraction sample and the relative absorbance response. This relationship was characterized as the IC₅₀ estimate, or the inhibitory concentration (mg cigarette smoke sample per mL) that reduced the assay plate relative absorbance to 50% of the solvent control. The IC₅₀ estimates were calculated by fitting NRU assay data to the following non-linear regression model, which is appropriate for modeling the sigmoidal concentration-response curves:

$$y = \frac{a}{1 + 10^{[\log(IC_{50}) - \log(x)] \times b}}$$



5.2.3.2 Acceptance Criteria for Cytotoxicity¹¹

(b) (4)

5.2.3.3 Conclusions (Cytotoxicity)

Assay Date	Replicate Number	Plate Number	Target IC ₅₀		Observed IC ₅₀	Z Score	P Value
			Average	Std Dev			
02-Dec-08	1	1	73.9	11.4	67.0	0.61	0.545
02-Dec-08	1	2	73.9	11.4	58.2	1.37	0.170
04-Dec-08	2	1	73.9	11.4	57.3	1.45	0.146
04-Dec-08	2	2	73.9	11.4	56.6	1.51	0.131
09-Dec-08	3	1	73.9	11.4	54.8	1.68	0.094
09-Dec-08	3	2	73.9	11.4	55.8	1.58	0.114

The results of the Kentucky Reference 3R4F assays necessitated by section 14.3.1 of T-502 were acceptable in regards to the criteria defined in section 5.2.3.2 of this report. Thus, it is reasonable to assume that the results reported for the test samples are reflective of the characteristics of the products as received and tested as described in section 4 of this report. See the “Control Assay Acceptance” sheet in the *M100_nru_Labstat Internal Controls.xls* data file for evaluation results.

6 Cytotoxicity Comparisons

6.1 Data Files

Data files containing calculated IC₅₀ estimates (treatment dose at which the relative absorbance (%) is estimated to be 50% based on fitting the dose-response data to a non-linear regression model) may be found on the compact disk (CD) that accompanies this report. The data files have been labeled *M100_nru_tpm_stats.xls* (dose-response curve analysis results for TPM of tobacco brand 084396), *M100_nru_wt_stats_ST_R2.xls* (dose-response curve analysis results for smokeless tobacco products on a ‘µg extracted smokeless tobacco in DMSO’/mL dose basis), *M100_nru_wt_stats_ST-H2O_R2.xls* (dose-response curve analysis results for smokeless tobacco products on a ‘µg extracted moisture-corrected smokeless tobacco in DMSO’/mL dose basis), *M100_nru_wt_stats_Nicotine_R2.xls* (dose-response curve analysis results for smokeless tobacco products on a ‘µg extracted nicotine in DMSO’/mL dose basis) and *M100_nru_tpm+wt_stats_Nicotine.xls* (dose-response curve analysis results for smoked and smokeless tobacco products on a µg ‘Nicotine in CSC’/mL and µg ‘extracted nicotine in DMSO’/mL dose basis, respectively).

¹¹ Acceptance criteria have not been specifically defined in the Official Health Canada Test Method T-502

¹² A minimum of 30 results is normally required for the purpose of this comparison.

6.2 Methodology

1. (b) (4)

2.

3.

4.

5.

6.

6.2.1 Revision 2 Additional Analysis

The following request for additional data analysis was received as part of the client inquiry CRO 2009-009-M100-NRU.

- compare the seven smokeless tobacco products to 2R4F on a nicotine dose basis

6.3 IC₅₀ Determinations

IC₅₀ estimates were determined as per section 5.2.3.1 of this report by fitting the non-linear regression model to the treatment dose X (e.g. μg 'Extracted Smokeless Tobacco in DMSO'/mL) and relative absorbance (%) assay response Y for each individual replicate assay. In applying the non-linear model, however, the model term " a " was set to a constant value of $a = 100\%$ as per the client-defined methodology for data analysis.

Tables of results were obtained for the individual replicate IC₅₀ estimates and the summary statistics over the three replicate IC₅₀'s for each test sample. The tables for each smoked and smokeless tobacco dose basis can be found on the 'Statistical Analysis' data sheet in the corresponding dose basis files *M100_nru_wt_stats_ST_R2.xls* (extracted smokeless tobacco), *M100_nru_wt_stats_ST-H2O_R2.xls* (extracted moisture-corrected smokeless tobacco), *M100_nru_wt_stats_Nicotine_R2.xls* (extracted nicotine in smokeless tobacco) and *M100_nru_tpm+wt_stats_Nicotine.xls* (nicotine in CSC of smoked tobacco and extracted nicotine in smokeless tobacco).

6.4 Comparisons among Smokeless Tobacco Products

6.4.1 Individual Replicate LOG[IC₅₀] and IC₅₀ Statistics

LOG[IC₅₀] estimates for individual replicates of smokeless tobacco test samples were calculated as per section 6.3 of this report. Summary statistics were calculated over the three replicate IC₅₀'s for each smokeless tobacco test sample.

6.4.1.1 µg 'Extracted Smokeless Tobacco in DMSO'/mL

Sample ID	Sample Description	Log[IC ₅₀] Estimates			Replicate IC ₅₀ Statistics		
		Replicate 1	Replicate 2	Replicate 3	Mean	Standard Error	95% C.I.
084394	Camel SNUS Frost	3.39	3.37	3.39	2408	33	2269 to 2548
084395	2S3	3.36	3.43	3.44	2583	145	1958 to 3208
084454	Fresh Strips		3.44	3.37	2523	206	-91.6 to 5138
084455	Mellow Sticks			3.49	3112	n/a	n/a
084456	Copenhagen Long Cut		3.47	3.54	3222	278	-304 to 6748
084457	Ariva Wintergreen	3.43	3.33	3.36	2363	154	1702 to 3024
084458	Fresh Orbs	3.57	3.54	3.58	3678	98	3257 to 4100

6.4.1.1 µg 'Extracted Moisture-Corrected Smokeless Tobacco in DMSO'/mL

Sample ID	Sample Description	Log[IC ₅₀] Estimates			Replicate IC ₅₀ Statistics		
		Replicate 1	Replicate 2	Replicate 3	Mean	Standard Error	95% C.I.
084394	Camel SNUS Frost	3.22	3.21	3.22	1646	22	1552 to 1740
084395	2S3	3.02	3.09	3.11	1188	68	897 to 1479
084454	Fresh Strips		3.39	3.31	2244	183	-81.5 to 4569
084455	Mellow Sticks			3.47	2924	n/a	n/a
084456	Copenhagen Long Cut		3.12	3.19	1437	122	-115 to 2990
084457	Ariva Wintergreen	3.41	3.32	3.34	2277	148	1640 to 2915
084458	Fresh Orbs	3.55	3.52	3.56	3489	93	3089 to 3888

6.4.1.1 µg 'Extracted Nicotine in DMSO'/mL

Sample ID	Sample Description	Log[IC ₅₀] Estimates			Replicate IC ₅₀ Statistics		
		Replicate 1	Replicate 2	Replicate 3	Mean	Standard Error	95% C.I.
084394	Camel SNUS Frost	1.49	1.48	1.51	31.1	0.6	28.5 to 33.6
084395	2S3	1.49	1.55	1.59	35.2	2.4	25 to 45.4
084454	Fresh Strips		0.992	0.903	8.91	0.91	-2.7 to 20.5
084455	Mellow Sticks			1.05	11.3	n/a	n/a
084456	Copenhagen Long Cut		1.56	1.63	39.5	3.2	-1.44 to 80.5
084457	Ariva Wintergreen	1.18	1.08	1.11	13.3	0.9	9.53 to 17.1
084458	Fresh Orbs	0.887	0.915	0.931	8.16	0.24	7.12 to 9.19

n/a not applicable

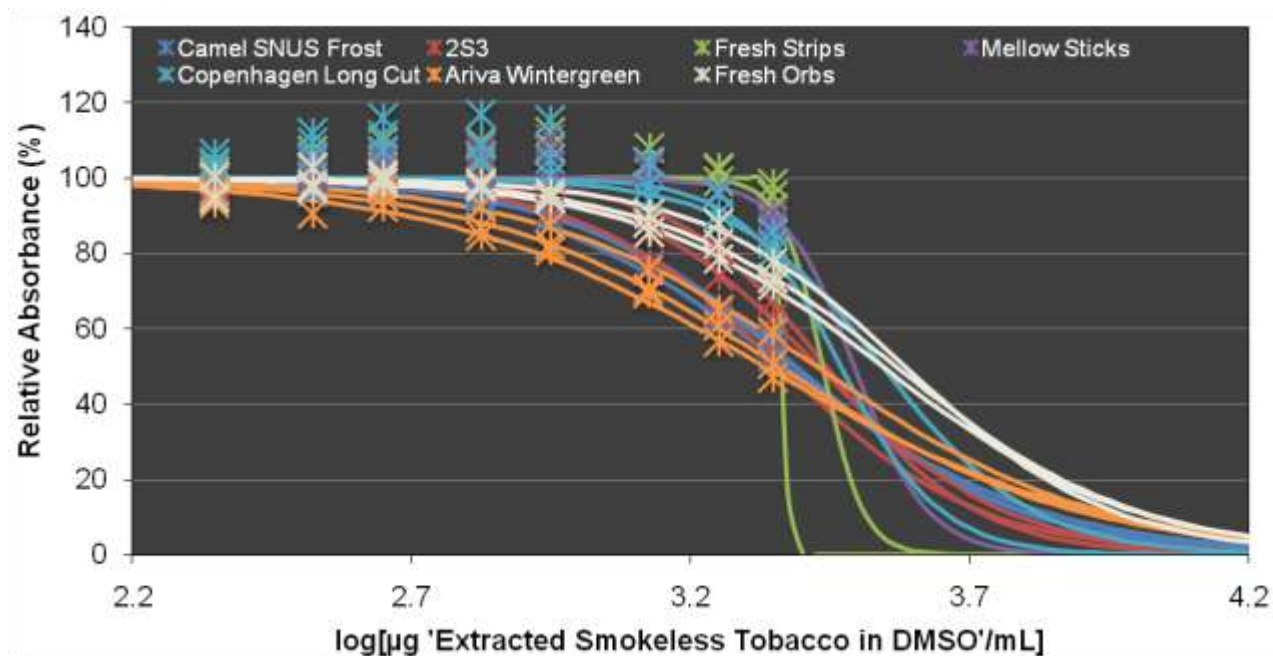
minimum relative absorbance was greater than 50% for all 4 assay plates. This situation results in increased uncertainty of the IC₅₀ estimate.

no IC₅₀ estimate could be calculated due to insufficient sigmoid shape of the dose-response curve.

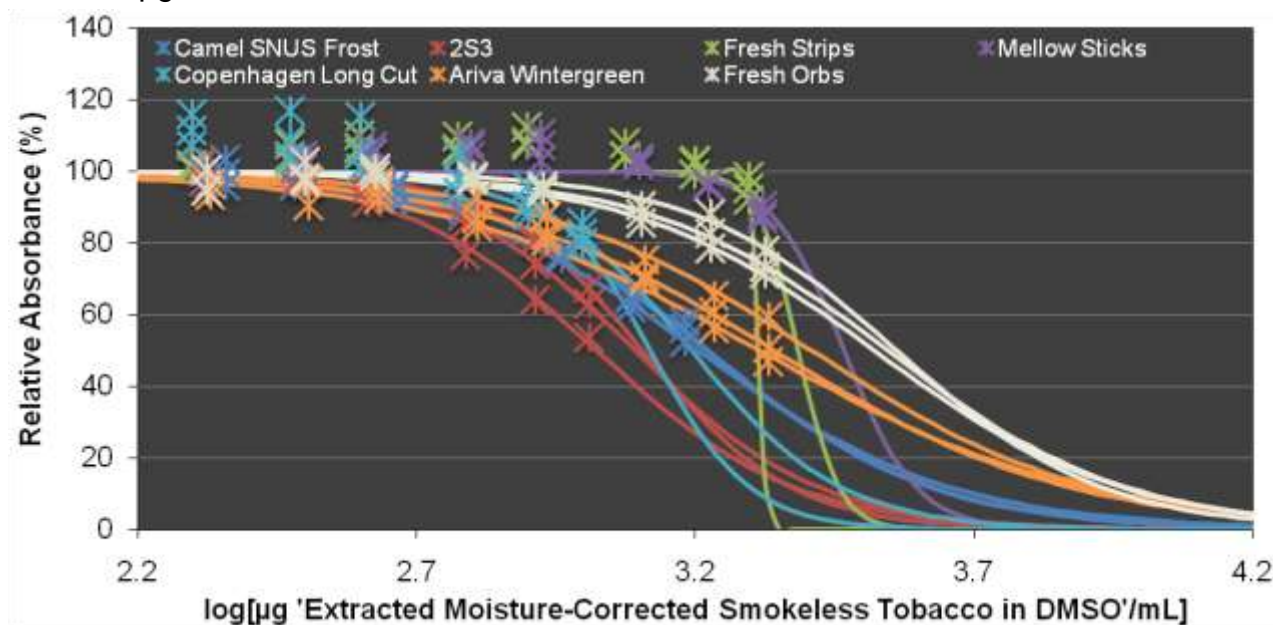
6.4.2 Data Plots

Plots of all replicate smokeless tobacco test samples can be found in the files *M100_nru_wt_stats_ST_R2.xls*, *M100_nru_wt_stats_ST-H2O_R2.xls* and *M100_nru_wt_stats_Nicotine_R2.xls* on the CD that accompanies this report.

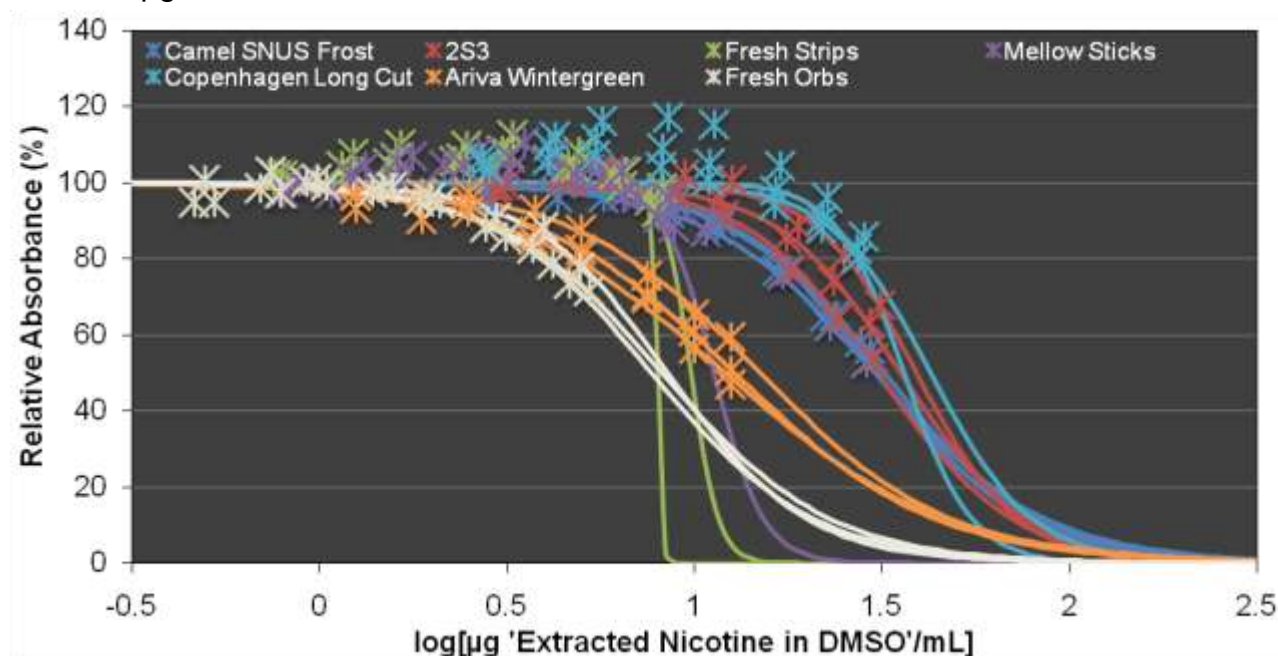
6.4.2.1 μg 'Extracted Smokeless Tobacco in DMSO'/mL



6.4.2.2 μg 'Extracted Moisture-Corrected Smokeless Tobacco in DMSO'/mL



6.4.2.3 μg 'Extracted Nicotine in DMSO'/mL



6.4.3 One-Way ANOVA Results

One-way ANOVA comparisons of mean 'extracted smokeless tobacco', 'extracted moisture-corrected smokeless tobacco' and extracted nicotine' $\log[\text{IC}_{50}]$ estimates among smokeless tobacco test samples yielded the following:

6.4.3.1 $\log[\text{IC}_{50}]$: μg 'Extracted Smokeless Tobacco in DMSO'/mL

Variation Source	Sum of Squares	d.f.	Mean Square	F Ratio	P value
Among Samples	0.089	6	0.015	10.030	0.001
Within Samples	0.015	10	0.001		
Total	0.103	16			

6.4.3.2 $\log[\text{IC}_{50}]$: μg 'Extracted Moisture-Corrected Smokeless Tobacco in DMSO'/mL

Variation Source	Sum of Squares	d.f.	Mean Square	F Ratio	P value
Among Samples	0.434	6	0.072	49.050	< 0.001
Within Samples	0.015	10	0.001		
Total	0.449	16			

6.4.3.3 $\log[\text{IC}_{50}]$: μg 'Extracted Nicotine in DMSO'/mL

Variation Source	Sum of Squares	d.f.	Mean Square	F Ratio	P value
Among Samples	1.290	6	0.215	120.260	< 0.001
Within Samples	0.018	10	0.002		
Total	1.308	16			

One-way ANOVA analysis indicates significant differences, at $\alpha = 0.05$, among smokeless tobacco test samples for mean $\log[\text{IC}_{50}]$ estimates expressed on the basis of all 3 extract doses.

Report prepared by Labstat International ULC

6.4.4 Contrasts of Interest

(b) (4)

6.4.4.1 $\log[IC_{50}]$: μg 'Extracted Smokeless Tobacco in DMSO'/mL

ANOVA-Based Comparison	t-statistic	p-value	significance at $\alpha = 0.05$	Sample ID	Sample Description	Mean IC_{50}	Homogenous Groups
084394 vs. 084395	0.9251	0.3767	not significant	084457	Ariva Wintergreen	2363	X
084394 vs. 084454	0.5373	0.6028	not significant	084394	Camel SNUS Frost	2408	X
084394 vs. 084455	2.5112	0.0308	not significant	084454	Fresh Strips	2523	X
084394 vs. 084456	3.5616	0.0052	not significant	084395	2S3	2583	X
084394 vs. 084457	0.3190	0.7563	not significant	084455	Mellow Sticks	3112	X X
084394 vs. 084458	5.8587	0.0002	significant	084456	Copenhagen Long Cut	3222	X X
084395 vs. 084454	0.2901	0.7777	not significant	084458	Fresh Orbs	3678	X
084395 vs. 084455	1.8571	0.0930	not significant				
084395 vs. 084456	2.7342	0.0210	not significant				
084395 vs. 084457	1.2440	0.2419	not significant				
084395 vs. 084458	4.9337	0.0006	significant				
084454 vs. 084455	1.9671	0.0775	not significant				
084454 vs. 084456	2.7608	0.0201	not significant				
084454 vs. 084457	0.8226	0.4299	not significant				
084454 vs. 084458	4.7029	0.0008	significant				
084455 vs. 084456	0.2871	0.7799	not significant				
084455 vs. 084457	2.7368	0.0209	not significant				
084455 vs. 084458	1.6315	0.1338	not significant				
084456 vs. 084457	3.8469	0.0032	not significant				
084456 vs. 084458	1.6786	0.1242	not significant				
084457 vs. 084458	6.1777	0.0001	significant				

ANOVA-based comparison p-values less than the Bonferroni-adjusted $\alpha = 0.05$ indicate that significant differences in mean $\log[IC_{50}]$, for smokeless tobacco extracts expressed on a μg 'extracted smokeless tobacco in DMSO' basis, were detected between Fresh Orbs (084458) and each of {Ariva Wintergreen (084457), Camel SNUS Frost (084394), Fresh Strips (084454) and 2S3 Research Moist Snuff (084395)}.

NOTE: Fresh Strips (084454) and Mellow Sticks (084455) both have relatively poor model fit (low r^2 values), which should be considered in drawing conclusions from the comparison results involving these brands.

6.4.4.2 $\log[IC_{50}]$: μg 'Extracted Moisture-Corrected Smokeless Tobacco in DMSO'/mL

ANOVA-Based Comparison	t-statistic	p-value	significance at $\alpha = 0.05$	Sample ID	Sample Description	Mean IC_{50}	Homogenous Groups
084394 vs. 084395	4.5588	0.0010	significant	084395	2S3	1188	X
084394 vs. 084454	3.7971	0.0035	not significant	084456	Copenhagen Long Cut	1437	X X
084394 vs. 084455	5.6281	0.0002	significant	084394	Camel SNUS Frost	1646	X X
084394 vs. 084456	1.7203	0.1161	not significant	084454	Fresh Strips	2244	X X
084394 vs. 084457	4.4419	0.0013	significant	084457	Ariva Wintergreen	2277	X
084394 vs. 084458	10.3928	0.0000	significant	084455	Mellow Sticks	2924	X X
084395 vs. 084454	7.8746	0.0000	significant	084458	Fresh Orbs	3489	X
084395 vs. 084455	8.8516	0.0000	significant				
084395 vs. 084456	2.3572	0.0401	not significant				
084395 vs. 084457	9.0007	0.0000	significant				
084395 vs. 084458	14.9516	0.0000	significant				
084454 vs. 084455	2.4760	0.0328	not significant				
084454 vs. 084456	5.0367	0.0005	significant				
084454 vs. 084457	0.1758	0.8639	not significant				
084454 vs. 084458	5.4985	0.0003	significant				
084455 vs. 084456	6.5885	0.0001	significant				
084455 vs. 084457	2.4872	0.0321	not significant				
084455 vs. 084458	1.7207	0.1160	not significant				
084456 vs. 084457	5.6933	0.0002	significant				
084456 vs. 084458	11.0159	0.0000	significant				
084457 vs. 084458	5.9509	0.0001	significant				

ANOVA-based comparison p-values less than the Bonferroni-adjusted $\alpha = 0.05$ indicate that significant differences in mean $\log[IC_{50}]$, for smokeless tobacco extracts expressed on a μg 'extracted moisture-corrected smokeless tobacco in DMSO' basis, were detected for a number of brand pairs, resulting in the following sets of smokeless tobacco brands for which no significant difference in $\log[IC_{50}]$ could be detected.

- {2S3 Research Moist Snuff (084395), Copenhagen Long Cut (084456)}
- {Copenhagen Long Cut (084456), Camel SNUS Frost (084394)}
- {Camel SNUS Frost (084394), Fresh Strips (084454)}
- {Fresh Strips (084454), Ariva Wintergreen (084457), Mellow Sticks (084455)}
- {Mellow Sticks (084455), Fresh Orbs (084458)}

NOTE: Fresh Strips (084454) and Mellow Sticks (084455) both have relatively poor model fit (low r^2 values), which should be considered in drawing conclusions from the comparison results involving these brands.

6.4.4.3 $\log[IC_{50}]$: μg 'Extracted Nicotine in DMSO'/mL

ANOVA-Based Comparison	t-statistic	p-value	significance at $\alpha = 0.05$	Sample ID	Sample Description	Mean IC_{50}	Homogenous Groups
084394 vs. 084395	1.5350	0.1558	not significant	084458	Fresh Orbs	8.16	X
084394 vs. 084454	14.1023	0.0000	significant	084454	Fresh Strips	8.91	X
084394 vs. 084455	8.9904	0.0000	significant	084455	Mellow Sticks	11.3	X X
084394 vs. 084456	2.6811	0.0230	not significant	084457	Ariva Wintergreen	13.3	X
084394 vs. 084457	10.7159	0.0000	significant	084394	Camel SNUS Frost	31.1	X
084394 vs. 084458	16.8250	0.0000	significant	084395	2S3	35.2	X
084395 vs. 084454	15.4753	0.0000	significant	084456	Copenhagen Long Cut	39.5	X
084395 vs. 084455	10.0758	0.0000	significant				
084395 vs. 084456	1.3082	0.2201	not significant				
084395 vs. 084457	12.2509	0.0000	significant				
084395 vs. 084458	18.3599	0.0000	significant				
084454 vs. 084455	2.0351	0.0692	not significant				
084454 vs. 084456	15.3211	0.0000	significant				
084454 vs. 084457	4.5177	0.0011	significant				
084454 vs. 084458	0.9464	0.3663	not significant				
084455 vs. 084456	10.4746	0.0000	significant				
084455 vs. 084457	1.4131	0.1880	not significant				
084455 vs. 084458	2.9067	0.0157	not significant				
084456 vs. 084457	12.2657	0.0000	significant				
084456 vs. 084458	17.7298	0.0000	significant				
084457 vs. 084458	6.1090	0.0001	significant				

ANOVA-based comparison p-values less than the Bonferroni-adjusted $\alpha = 0.05$ indicate that significant differences in mean $\log[IC_{50}]$, for smokeless tobacco extracts expressed on a μg 'extracted nicotine in DMSO' basis, were detected for a number of brand pairs, resulting in the following sets of smokeless tobacco brands for which no significant difference in $\log[IC_{50}]$ could be detected.

- {Fresh Orbs (084458), Fresh Strips (084454), Mellow Sticks (084455)}
- {Mellow Sticks (084455), Ariva Wintergreen (084457)}
- {Camel SNUS Frost (084394), 2S3 Research Moist Snuff (084395), Copenhagen Long Cut (084456)}

NOTE: Fresh Strips (084454) and Mellow Sticks (084455) both have relatively poor model fit (low r^2 values), which should be considered in drawing conclusions from the comparison results involving these brands.

6.5 Comparisons between Smoked and Smokeless Tobacco Products

6.5.1 Individual Replicate LOG[IC₅₀] and IC₅₀ Statistics

LOG[IC₅₀] estimates for individual replicates were calculated as per section 6.3 of this report. Summary statistics were calculated over the three replicate IC₅₀'s for each smoked (KR 2R4F) and smokeless tobacco test sample on a (µg 'Nicotine in CSC'/mL) and (µg 'extracted nicotine in DMSO'/mL) dose basis, respectively.

Sample ID	Sample Description	Log[IC ₅₀] Estimates ('Nicotine' dose)			Replicate IC ₅₀ Statistics		
		Replicate 1	Replicate 2	Replicate 3	Mean	Standard Error	95% C.I.
084394	Camel SNUS Frost	1.49	1.48	1.51	31.1	0.6	28.5 to 33.6
084395	2S3	1.49	1.55	1.59	35.2	2.4	25 to 45.4
084396	KR 2R4F	0.692	0.467	0.579	3.88	0.58	1.4 to 6.36
084454	Fresh Strips		0.992	0.903	8.91	0.91	-2.7 to 20.5
084455	Mellow Sticks			1.05	11.3	n/a	n/a
084456	Copenhagen Long Cut		1.56	1.63	39.5	3.2	-1.44 to 80.5
084457	Ariva Wintergreen	1.18	1.08	1.11	13.3	0.9	9.53 to 17.1
084458	Fresh Orbs	0.887	0.915	0.931	8.16	0.24	7.12 to 9.19

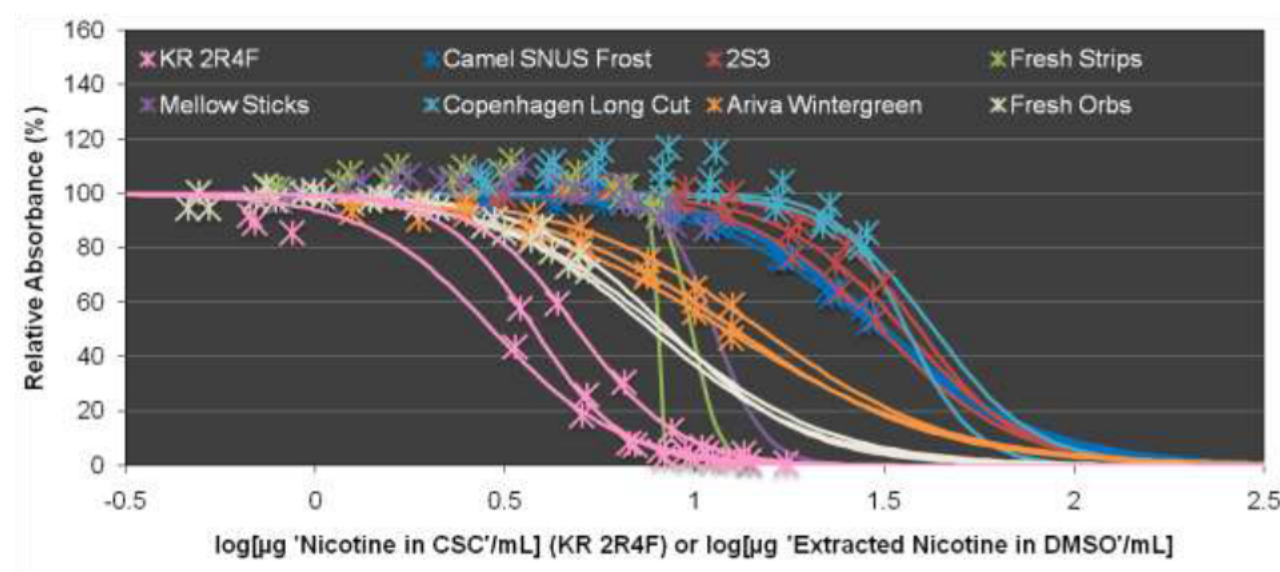
n/a not applicable

minimum relative absorbance was greater than 50% for all 4 assay plates. This situation results in increased uncertainty of the IC₅₀ estimate.

no IC₅₀ estimate could be calculated due to insufficient sigmoid shape of the dose-response curve.

6.5.2 Data Plots

Plots of all replicate smoked and smokeless tobacco test samples expressed on a 'Nicotine' dose basis can be found in the file *M100_nru_tpm+wt_stats_Nicotine.xls* on the CD that accompanies this report.



6.5.3 One-Way ANOVA Results

The one-way ANOVA comparison among mean smoked tobacco 'nicotine in CSC' $\log[IC_{50}]$ and smokeless tobacco 'extracted nicotine in DMSO' $\log[IC_{50}]$ estimates yielded the following:

Variation Source	Sum of Squares	d.f.	Mean Square	F Ratio	P value
Among Samples	2.457	7	0.351	97.420	< 0.001
Within Samples	0.043	12	0.004		
Total	2.500	19			

One-way ANOVA analysis indicates significant differences, at $\alpha = 0.05$, among mean 'Nicotine' $\log[IC_{50}]$ estimates for smoked and smokeless tobacco samples.

6.5.4 Contrasts of Interest

(b) (4)

6.5.4.1 $\log[IC_{50}]$: μg 'Extracted Nicotine in DMSO'/mL

Sample Comparison	t-statistic	p-value	significance at $\alpha = 0.05$
084394 vs. 084396	18.6196	3.2E-10	significant
084395 vs. 084396	19.7009	1.7E-10	significant
084454 vs. 084396	6.7192	2.1E-05	significant
084455 vs. 084396	6.8326	1.8E-05	significant
084456 vs. 084396	18.5426	3.4E-10	significant
084457 vs. 084396	11.0705	1.2E-07	significant
084458 vs. 084396	6.7669	2.0E-05	significant

ANOVA-based comparison p-values less than the Bonferroni-adjusted $\alpha = 0.05$ indicate that significant differences in mean $\log[IC_{50}]$ were detected between the cigarette smoke condensate of KR 2R4F (084396) and the extract of each of the 7 smokeless tobacco test brands on a 'Nicotine' dose basis.

NOTE: Fresh Strips (084454) and Mellow Sticks (084455) both have relatively poor model fit (low r^2 values), which should be considered in drawing conclusions from the comparison results involving these brands.

7 Summary

Based on the results obtained in this study and the corresponding analysis of the toxicological data, the following summarizes the findings in regards to cytotoxicity as measured with the *in vitro* Neutral Red Uptake assay.

- The μg 'extracted moisture-corrected smokeless tobacco in DMSO'/mL ('ST-H₂O') and μg 'extracted nicotine in DMSO'/mL ('nicotine') dose bases appeared to be able to differentiate smokeless tobacco brands by IC_{50} better than the μg 'extracted smokeless tobacco in DMSO'/mL ('ST') dose base.

- Excluding the results from the Fresh Strips and Mellow Sticks brands due to poor model fit, both the 'ST-H₂O' and 'nicotine' dose bases were capable of dividing the remaining 5 smokeless tobacco brands into three sets of brands with significantly different IC₅₀'s:
 - i. {Camel SNUS Frost (084394), 2S3 Research Moist Snuff (084395), Copenhagen Long Cut (084456)}
 - ii. {Ariva Wintergreen (084457)}
 - iii. {Fresh Orbs (084458)}
- The above 3 sets of smokeless tobacco brands (i, ii, iii) are in order of decreasing cytotoxicity (iii<ii<i) on a µg 'extracted moisture-corrected smokeless tobacco in DMSO'/mL basis but they are also in order of increasing cytotoxicity (iii>ii>i) on a µg 'extracted nicotine in DMSO;/mL dose basis.
- On a nicotine dose basis, the cigarette smoke condensate of the KR 2R4F test brand appears to be significantly more cytotoxic than the extract of any of the 7 smokeless tobacco products tested.

8 Attribution

8.1 Original

8.1.1 Technical Director (Toxicology)

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: January 9, 2009



Amit Trivedi, Ph.D.,
Technical Director (Toxicology)
Labstat International ULC

8.1.2 Senior Statistician

This report has been prepared by me and is certified, to the best of my knowledge, to be a true and accurate description of the statistical methods used to arrive at the findings that accompany this report.

Dated: January 9, 2009



Wendy Wagstaff
Senior Statistician
Labstat International ULC

8.2 Revision 1

This report has been prepared by me and is certified, to the best of my knowledge, to be a true and accurate description of the statistical methods used to arrive at the findings that accompany this report.

Dated: November 3, 2009



Wendy Wagstaff
Senior Statistician
Labstat International ULC

8.3 Revision 2**8.3.1 Technical Director (Toxicology)**

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: December 17, 2009




Amit Trivedi, Ph.D.,
Technical Director (Toxicology)
Labstat International ULC

8.3.2 Senior Statistician

This report has been prepared by me and is certified, to the best of my knowledge, to be a true and accurate description of the statistical methods used to arrive at the findings that accompany this report.

Dated: December 17, 2009



Wendy Wagstaff
Senior Statistician
Labstat International ULC

8.4 Revision 4

8.4.1 Technical Director (Toxicology)

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: July 29, 2010



Amit Trivedi, Ph.D.,
Technical Director (Toxicology)
Labstat International ULC

8.4.2 Senior Statistician

This report has been prepared by me and is certified, to the best of my knowledge, to be a true and accurate description of the statistical methods used to arrive at the findings that accompany this report.

Dated: July 29, 2010



Wendy Wagstaff
Senior Statistician
Labstat International ULC

Appendix A

Scope of Accreditation



Standards Council of Canada
Conseil canadien des normes

200-270, rue Albert St.
Ottawa, ON (Canada)
K1P 8N7

Canada

Tel.: +1 613 238 3222

Fax.: +1 613 569 7888

E-mail/Coûmes: info@scs.ca

Internet: <http://www.scs.ca>

SCOPE OF ACCREDITATION

LABSTAT INTERNATIONAL ULC
262 Manitou Drive, Unit 5
Kitchener, ON
N2C 1L3

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

CONTACT: Mr. Lucian Hirtie
TEL: (519) 748-5409
FAX: (519) 748-1654
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:

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

Page 1 of 8

Standards Council of Canada, Accredited Laboratory No. 368

	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	

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

Page 2 of 6

Standards Council of Canada Accredited Laboratory No. 366

	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

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

Page 5 of 6

Standards Council of Canada Accredited Laboratory No. 365

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

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

Page 4 of 6

Standards Council of Canada Accredited Laboratory No. 388

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://portal.scc.ca/SpecsSearch/SLSearch?com.do>

Page 5 of 6

Standards Council of Canada Accredited Laboratory No. 985

Partner File #0

Partner: None

Appendix B

“Raw” Data and Analysis Results (See Enclosed CD)

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.

¹. Labstat International ULC,
262 Manitou Drive, Kitchener, ON Canada N2C 1L3
Phone: (519) 748-5409; Fax: (519) 748-1654; Email: labstat@labstat.com

². This document may not be reproduced, in whole or in part in any form, without the written consent of the author(s) on behalf of Labstat International ULC

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

Attribution Policy

Labstat International ULC ("Labstat") is a private independent analytical laboratory whose services are generally limited to the analysis of tobacco and tobacco related products ("product") provided by clients. Neither Labstat, as a company, nor its personnel, as individuals, participate in product development, product preparation or the design of experiments related to product characteristics. It is for this reason that the company does not allow the use of its name (Labstat International ULC), any part of its name, its address (262 Manitou Drive, Kitchener, Ontario Canada), or any part of its address, its logo (as shown below) or the name of any of its employees to be used in either indirect or direct product marketing or advertising including but not limited to press releases, advertisements in the print media, or public statements regarding product attributes based on test results.



Sample ID	Sample Description
084394	Camel SNUS Frost
084395	2S3 Research Moist smokeless tobacco
084396	Kentucky Reference 2R4F
084454	Fresh Strips
084455	Mellow Sticks
084456	Copenhagen Long Cut
084457	Ariva Wintergreen
084458	Fresh Orbs
control	Kentucky Reference 3R4F

Smoking Data for Analysis:
Neutral Red Cytotoxicity Assay

TPM and Nicotine Dosing Data:
Neutral Red Cytotoxicity Assay

Set- Run	Sample ID	Smoking Condition ¹	Replicate Number	Smoking Date	Cigarettes Smoked	Puff Count (per cig.)	TPM (mg/cig) ²	Nicotine (mg/cig)	Smoking Machine	TPM Dose (µg/mL)								Nicotine (µg/mL)							
										1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1-1	control	ISO	1	02-Dec-08	20	8.5	9.17	0.655	Borgwaldt Rotary	10	50	75	100	120	140	160	200	0.714	3.57	5.36	7.14	8.6	10.0	11.4	14.3
2-1	control	ISO	2	04-Dec-08	20	8.5	9.37	0.763	Borgwaldt Rotary	10	50	75	100	120	140	160	200	0.814	4.07	6.11	8.14	9.77	11.40	13.0	16.3
3-3	control	ISO	3	09-Dec-08	20	8.8	9.33	0.669	Borgwaldt Rotary	10	50	75	100	120	140	160	200	0.717	3.58	5.37	7.17	8.60	10.03	11.5	14.3

1. Smoking Condition
- ISO - puff volume, 35mL; interval, 60 sec; duration, 2 sec; vent blocking, none.
2. Samples extracted in appropriate solvent control to give a final concentration of 10.0 mg/mL

Table 1:

Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)

Run-Port Number	Sample ID	Smoking Condition	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
						Assay Blank	Control * Reading	Dose of Smoke Fraction in Solvent Control (µg TPM/mL)								SLS (µg/mL)	
								10	50	75	100	120	140	160	200	110	200
3-3	control	ISO	3	2	1	0.095	0.436	0.408	0.262	0.214	0.148	0.112	0.103	0.099	0.097	0.136	0.097
3-3	control	ISO	3	2	2	0.094	0.441	0.395	0.282	0.207	0.140	0.107	0.099	0.099	0.097	0.137	0.097
3-3	control	ISO	3	2	3	0.095	0.445	0.405	0.243	0.172	0.121	0.102	0.098	0.097	0.097	0.138	0.097
3-3	control	ISO	3	2	4	0.092	0.432	0.375	0.247	0.169	0.111	0.099	0.095	0.095	0.095	0.133	0.094
3-3	control	ISO	3	2	5	0.093	0.453	0.401	0.244	0.178	0.107	0.097	0.097	0.096	0.095	0.138	0.096
3-3	control	ISO	3	2	6	0.093	0.458	0.402	0.263	0.187	0.114	0.101	0.098	0.096	0.096	0.137	0.096
3-3	control	ISO	3	2	7	0.094	0.433	0.387	0.267	0.209	0.131	0.105	0.102	0.100	0.097	0.135	0.097
3-3	control	ISO	3	2	8	0.093	0.428	0.373	0.278	0.228	0.165	0.120	0.104	0.100	0.097	0.142	0.095
Average						0.094	0.441	0.393	0.261	0.196	0.130	0.105	0.100	0.098	0.096	0.137	0.096
Std. Dev.						0.001	0.011	0.014	0.015	0.022	0.020	0.008	0.003	0.002	0.001	0.003	0.001
Coeff. Var.						1.1	2.4	3.4	5.8	11.2	15.6	7.2	3.2	2.0	1.0	1.9	1.2

Note: The following code is used to indicate the applied smoking condition:
ISO - puff volume, 35mL; interval, 60 sec; duration, 2 sec; vent blocking, none.

Table 2:

Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)

Run-Port Number	Sample ID	Smoking Condition	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
						Control * Reading	Dose of Smoke Fraction in Solvent Control (µg TPM/mL)								SLS (µg/mL)	
							10	50	75	100	120	140	160	200	110	200
1-1	control	ISO	1	1	1	0.209	0.189	0.130	0.094	0.055	0.026	0.024	0.017	0.008	0.013	0.001
1-1	control	ISO	1	1	2	0.235	0.184	0.127	0.086	0.059	0.026	0.017	0.010	0.011	0.015	0.003
1-1	control	ISO	1	1	3	0.232	0.194	0.123	0.089	0.049	0.023	0.012	0.009	0.008	0.012	0.002
1-1	control	ISO	1	1	4	0.226	0.183	0.124	0.064	0.027	0.011	0.009	0.008	0.006	0.010	0.001
1-1	control	ISO	1	1	5	0.234	0.176	0.116	0.073	0.034	0.016	0.008	0.006	0.007	0.014	0.001
1-1	control	ISO	1	1	6	0.220	0.175	0.115	0.074	0.040	0.015	0.009	0.008	0.009	0.012	0.002
1-1	control	ISO	1	1	7	0.206	0.156	0.120	0.079	0.040	0.022	0.014	0.011	0.008	0.015	0.002
1-1	control	ISO	1	1	8	0.222	0.187	0.128	0.081	0.052	0.025	0.019	0.014	0.007	0.011	0.000
	Average					0.223	0.181	0.123	0.080	0.045	0.021	0.014	0.011	0.008	0.013	0.002
	Std. Dev.					0.011	0.012	0.006	0.010	0.011	0.006	0.006	0.004	0.002	0.002	0.001
	Coeff. Var.					4.9	6.5	4.5	12.1	24.7	27.6	39.7	33.7	18.3	14.1	52.9
1-1	control	ISO	1	2	1	0.227	0.193	0.130	0.091	0.057	0.028	0.016	0.014	0.009	0.011	0.002
1-1	control	ISO	1	2	2	0.236	0.207	0.113	0.073	0.038	0.017	0.012	0.011	0.008	0.012	0.001
1-1	control	ISO	1	2	3	0.258	0.201	0.117	0.058	0.022	0.010	0.008	0.008	0.008	0.010	0.001
1-1	control	ISO	1	2	4	0.263	0.219	0.135	0.047	0.022	0.010	0.005	0.006	0.007	0.009	0.001
1-1	control	ISO	1	2	5	0.249	0.211	0.124	0.054	0.018	0.009	0.008	0.008	0.008	0.013	0.001
1-1	control	ISO	1	2	6	0.230	0.215	0.128	0.068	0.030	0.012	0.009	0.008	0.010	0.013	0.002
1-1	control	ISO	1	2	7	0.238	0.208	0.130	0.076	0.041	0.021	0.013	0.011	0.011	0.015	0.002
1-1	control	ISO	1	2	8	0.235	0.206	0.131	0.091	0.052	0.024	0.013	0.010	0.008	0.014	0.003
	Average					0.242	0.207	0.126	0.069	0.035	0.016	0.010	0.009	0.008	0.012	0.001
	Std. Dev.					0.013	0.008	0.008	0.016	0.014	0.007	0.004	0.003	0.001	0.002	0.001
	Coeff. Var.					5.5	3.9	6.0	23.5	42.0	45.8	35.9	27.9	16.0	17.5	66.1
2-1	control	ISO	2	1	1	0.231	0.207	0.140	0.075	0.035	0.012	0.008	0.007	0.008	0.008	0.005
2-1	control	ISO	2	1	2	0.220	0.207	0.129	0.041	0.015	0.006	0.005	0.005	0.007	0.008	0.006
2-1	control	ISO	2	1	3	0.210	0.201	0.119	0.028	0.009	0.006	0.004	0.004	0.007	0.008	0.005
2-1	control	ISO	2	1	4	0.221	0.198	0.139	0.032	0.007	0.005	0.006	0.002	0.004	0.006	0.004
2-1	control	ISO	2	1	5	0.222	0.217	0.138	0.034	0.007	0.003	0.004	0.003	0.005	0.007	0.003
2-1	control	ISO	2	1	6	0.223	0.206	0.143	0.035	0.009	0.005	0.005	0.004	0.006	0.007	0.004
2-1	control	ISO	2	1	7	0.241	0.210	0.147	0.052	0.016	0.005	0.006	0.007	0.006	0.010	0.004
2-1	control	ISO	2	1	8	0.242	0.214	0.141	0.055	0.021	0.006	0.005	0.012	0.009	0.008	0.003
	Average					0.226	0.207	0.137	0.044	0.015	0.006	0.005	0.005	0.006	0.008	0.004
	Std. Dev.					0.011	0.006	0.009	0.016	0.010	0.003	0.001	0.003	0.002	0.001	0.001
	Coeff. Var.					4.9	3.0	6.5	36.0	65.2	45.5	25.4	60.2	25.7	15.5	25.9
2-1	control	ISO	2	2	1	0.226	0.215	0.133	0.064	0.020	0.006	0.005	0.004	0.006	0.008	0.002
2-1	control	ISO	2	2	2	0.219	0.217	0.121	0.042	0.015	0.006	0.005	0.006	0.011	0.006	0.004
2-1	control	ISO	2	2	3	0.214	0.193	0.114	0.038	0.010	0.005	0.005	0.006	0.006	0.006	0.003
2-1	control	ISO	2	2	4	0.201	0.193	0.115	0.035	0.008	0.003	0.004	0.004	0.005	0.006	0.003
2-1	control	ISO	2	2	5	0.220	0.207	0.127	0.038	0.009	0.008	0.009	0.006	0.005	0.007	0.002
2-1	control	ISO	2	2	6	0.241	0.207	0.134	0.049	0.014	0.005	0.008	0.012	0.005	0.006	0.004
2-1	control	ISO	2	2	7	0.218	0.205	0.136	0.066	0.024	0.008	0.008	0.008	0.007	0.009	0.004
2-1	control	ISO	2	2	8	0.209	0.205	0.139	0.090	0.044	0.014	0.010	0.014	0.011	0.008	0.004
	Average					0.218	0.205	0.127	0.052	0.018	0.006	0.006	0.007	0.007	0.007	0.003
	Std. Dev.					0.012	0.009	0.010	0.019	0.012	0.003	0.002	0.004	0.003	0.001	0.001
	Coeff. Var.					5.4	4.3	7.6	36.7	67.8	52.0	36.0	52.4	39.4	18.4	32.2
3-3	control	ISO	3	1	1	0.404	0.307	0.163	0.103	0.041	0.015	0.009	0.006	0.006	0.038	0.004
3-3	control	ISO	3	1	2	0.331	0.297	0.151	0.099	0.037	0.010	0.007	0.006	0.005	0.041	0.006
3-3	control	ISO	3	1	3	0.339	0.278	0.166	0.083	0.021	0.008	0.005	0.006	0.005	0.043	0.005
3-3	control	ISO	3	1	4	0.337	0.292	0.168	0.082	0.016	0.004	0.003	0.003	0.002	0.039	0.003
3-3	control	ISO	3	1	5	0.346	0.293	0.179	0.082	0.011	0.004	0.003	0.003	0.002	0.042	0.002
3-3	control	ISO	3	1	6	0.347	0.312	0.156	0.085	0.013	0.005	0.004	0.003	0.003	0.041	0.004
3-3	control	ISO	3	1	7	0.350	0.314	0.169	0.094	0.027	0.009	0.007	0.005	0.004	0.041	0.003
3-3	control	ISO	3	1	8	0.376	0.328	0.186	0.124	0.055	0.017	0.008	0.006	0.004	0.038	0.002
	Average					0.354	0.303	0.168	0.094	0.028	0.009	0.006	0.005	0.004	0.041	0.004
	Std. Dev.					0.024	0.016	0.011	0.015	0.016	0.005	0.002	0.001	0.001	0.002	0.001
	Coeff. Var.					6.9	5.2	6.8	15.5	55.4	52.3	37.8	29.0	34.3	4.5	35.2

Table 2:

Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)

Run-Port Number	Sample ID	Smoking Condition	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
						Control *	Dose of Smoke Fraction in Solvent Control (µg TPM/mL)								SLS (µg/mL)	
							10	50	75	100	120	140	160	200	110	200
3-3	control	ISO	3	2	1	0.342	0.314	0.168	0.120	0.054	0.018	0.009	0.005	0.003	0.042	0.003
3-3	control	ISO	3	2	2	0.347	0.301	0.188	0.113	0.046	0.013	0.005	0.005	0.003	0.043	0.003
3-3	control	ISO	3	2	3	0.351	0.311	0.149	0.078	0.027	0.008	0.004	0.003	0.003	0.044	0.003
3-3	control	ISO	3	2	4	0.338	0.281	0.153	0.075	0.017	0.005	0.001	0.001	0.001	0.039	0.000
3-3	control	ISO	3	2	5	0.359	0.307	0.150	0.084	0.013	0.003	0.003	0.002	0.001	0.044	0.002
3-3	control	ISO	3	2	6	0.364	0.308	0.169	0.093	0.020	0.007	0.004	0.002	0.002	0.043	0.002
3-3	control	ISO	3	2	7	0.339	0.293	0.173	0.115	0.037	0.011	0.008	0.006	0.003	0.041	0.003
3-3	control	ISO	3	2	8	0.334	0.279	0.184	0.134	0.071	0.026	0.010	0.006	0.003	0.048	0.001
Average						0.347	0.300	0.167	0.102	0.036	0.012	0.006	0.004	0.003	0.043	0.003
Std. Dev.						0.011	0.014	0.015	0.022	0.020	0.008	0.003	0.002	0.001	0.003	0.001
Coeff. Var.						3.1	4.5	9.0	21.5	56.3	64.5	53.8	48.0	33.3	6.0	45.0

Note: The following code is used to indicate the applied smoking condition:
ISO - puff volume, 35mL; interval, 60 sec; duration, 2 sec; vent blocking, none.

Table 3:

**Neutral Red Cytotoxicity Assay Results
(Relative Absorbance Data)**

Run-Port Number	Sample ID	Smoking Condition	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
						Dose of Smoke Fraction in Solvent Control (µg TPM/mL)								SLS (µg/mL)	
						10	50	75	100	120	140	160	200	110	200
1-1	control	ISO	1	1	1	84.8	58.3	42.2	24.7	11.8	10.9	7.73	3.70	5.94	0.560
1-1	control	ISO	1	1	2	82.5	57.0	38.6	26.5	11.8	7.73	4.59	5.04	6.83	1.46
1-1	control	ISO	1	1	3	87.0	55.2	40.0	22.1	10.4	5.49	4.14	3.70	5.49	1.01
1-1	control	ISO	1	1	4	82.1	55.7	28.8	12.2	5.04	4.14	3.70	2.80	4.59	0.560
1-1	control	ISO	1	1	5	78.9	52.1	32.8	15.3	7.28	3.70	2.80	3.25	6.38	0.560
1-1	control	ISO	1	1	6	78.5	51.6	33.3	18.0	6.83	4.14	3.70	4.14	5.49	1.01
1-1	control	ISO	1	1	7	70.0	53.9	35.5	18.0	9.97	6.38	5.04	3.70	6.83	1.01
1-1	control	ISO	1	1	8	83.9	57.4	36.4	23.4	11.3	8.62	6.38	3.25	5.04	0.112
	Average					81.0	55.2	35.9	20.0	9.29	6.38	4.76	3.70	5.82	0.784
	Std. Dev.					5.3	2.5	4.3	4.9	2.57	2.53	1.61	0.68	0.82	0.415
	Coeff. Var.					6.5	4.5	12.1	24.7	27.6	39.7	33.7	18.3	14.1	52.9
1-1	control	ISO	1	2	1	79.7	53.6	37.5	23.4	11.4	6.42	5.59	3.52	4.35	0.621
1-1	control	ISO	1	2	2	85.5	46.6	30.0	15.5	6.83	4.76	4.35	3.11	4.76	0.207
1-1	control	ISO	1	2	3	83.0	48.2	23.8	8.90	3.93	3.11	3.11	3.11	3.93	0.207
1-1	control	ISO	1	2	4	90.5	55.7	19.3	8.90	3.93	1.86	2.28	2.69	3.52	0.207
1-1	control	ISO	1	2	5	87.2	51.1	22.2	7.25	3.52	3.11	3.11	3.11	5.18	0.207
1-1	control	ISO	1	2	6	88.8	52.8	28.0	12.2	4.76	3.52	3.11	3.93	5.18	0.621
1-1	control	ISO	1	2	7	85.9	53.6	31.3	16.8	8.49	5.18	4.35	4.35	6.00	0.621
1-1	control	ISO	1	2	8	85.1	54.0	37.5	21.3	9.73	5.18	3.93	3.11	5.59	1.04
	Average					85.7	52.0	28.7	14.3	6.57	4.14	3.73	3.36	4.81	0.466
	Std. Dev.					3.3	3.1	6.7	6.0	3.01	1.48	1.04	0.54	0.84	0.308
	Coeff. Var.					3.9	6.0	23.5	42.0	45.8	35.9	27.9	16.0	17.5	66.1

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Smoking Condition	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
						Dose of Smoke Fraction in Solvent Control (µg TPM/mL)								SLS (µg/mL)	
						10	50	75	100	120	140	160	200	110	200
2-1	control	ISO	2	1	1	91.5	61.8	33.1	15.4	5.20	3.43	2.99	3.43	3.43	2.10
2-1	control	ISO	2	1	2	91.5	57.0	18.0	6.53	2.54	2.10	2.10	2.99	3.43	2.54
2-1	control	ISO	2	1	3	88.8	52.5	12.3	3.87	2.54	1.66	1.66	2.99	3.43	2.10
2-1	control	ISO	2	1	4	87.5	61.4	14.0	2.99	2.10	2.54	0.774	1.66	2.54	1.66
2-1	control	ISO	2	1	5	95.9	61.0	14.9	2.99	1.22	1.66	1.22	2.10	2.99	1.22
2-1	control	ISO	2	1	6	91.0	63.2	15.4	3.87	2.10	2.10	1.66	2.54	2.99	1.66
2-1	control	ISO	2	1	7	92.8	64.9	22.9	6.97	2.10	2.54	2.99	2.54	4.31	1.66
2-1	control	ISO	2	1	8	94.6	62.3	24.2	9.18	2.54	2.10	5.20	3.87	3.43	1.22
Average						91.7	60.5	19.4	6.47	2.54	2.27	2.32	2.77	3.32	1.77
Std. Dev.						2.8	3.9	7.0	4.22	1.16	0.58	1.40	0.71	0.52	0.46
Coeff. Var.						3.0	6.5	36.0	65.2	45.5	25.4	60.2	25.7	15.5	25.9
2-1	control	ISO	2	2	1	98.4	60.8	29.1	8.94	2.52	2.06	1.61	2.52	3.44	0.688
2-1	control	ISO	2	2	2	99.3	55.3	19.0	6.65	2.52	2.06	2.52	4.82	2.52	1.61
2-1	control	ISO	2	2	3	88.3	52.1	17.2	4.36	2.06	2.06	2.52	2.52	2.52	1.15
2-1	control	ISO	2	2	4	88.3	52.5	15.8	3.44	1.15	1.61	1.61	2.06	2.52	1.15
2-1	control	ISO	2	2	5	94.7	58.0	17.2	3.90	3.44	3.90	2.52	2.06	2.98	0.688
2-1	control	ISO	2	2	6	94.7	61.2	22.2	6.19	2.06	3.44	5.28	2.06	2.52	1.61
2-1	control	ISO	2	2	7	93.8	62.2	30.0	10.8	3.44	3.44	3.44	2.98	3.90	1.61
2-1	control	ISO	2	2	8	93.8	63.5	41.1	20.0	6.19	4.36	6.19	4.82	3.44	1.61
Average						93.9	58.2	24.0	8.03	2.92	2.87	3.21	2.98	2.98	1.26
Std. Dev.						4.0	4.4	8.8	5.44	1.52	1.03	1.68	1.18	0.55	0.41
Coeff. Var.						4.3	7.6	36.7	67.8	52.0	36.0	52.4	39.4	18.4	32.2

Table 3:

**Neutral Red Cytotoxicity Assay Results
(Relative Absorbance Data)**

Run-Port Number	Sample ID	Smoking Condition	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
						Dose of Smoke Fraction in Solvent Control (µg TPM/mL)								SLS (µg/mL)	
						10	50	75	100	120	140	160	200	110	200
3-3	control	ISO	3	1	1	86.8	46.1	29.2	11.7	4.34	2.65	1.80	1.80	10.8	1.24
3-3	control	ISO	3	1	2	84.0	42.7	28.1	10.6	2.93	2.08	1.80	1.52	11.7	1.80
3-3	control	ISO	3	1	3	78.6	47.0	23.5	6.04	2.36	1.52	1.80	1.52	12.2	1.52
3-3	control	ISO	3	1	4	82.6	47.5	23.3	4.62	1.24	0.953	0.953	0.671	11.1	0.953
3-3	control	ISO	3	1	5	82.8	50.7	23.3	3.21	1.24	0.953	0.953	0.671	12.0	0.671
3-3	control	ISO	3	1	6	88.2	44.2	24.1	3.78	1.52	1.24	0.953	0.953	11.7	1.24
3-3	control	ISO	3	1	7	88.8	47.8	26.7	7.73	2.65	2.08	1.52	1.24	11.7	0.953
3-3	control	ISO	3	1	8	92.7	52.6	35.1	15.6	4.91	2.36	1.80	1.24	10.8	0.671
Average						85.6	47.3	26.7	7.91	2.65	1.73	1.45	1.20	11.5	1.13
Std. Dev.						4.4	3.2	4.1	4.38	1.38	0.65	0.42	0.41	0.5	0.40
Coeff. Var.						5.2	6.8	15.5	55.4	52.3	37.8	29.0	34.3	4.5	35.2
3-3	control	ISO	3	2	1	90.6	48.5	34.7	15.7	5.29	2.70	1.55	0.972	12.2	0.972
3-3	control	ISO	3	2	2	86.8	54.3	32.7	13.4	3.85	1.55	1.55	0.972	12.5	0.972
3-3	control	ISO	3	2	3	89.7	43.0	22.6	7.89	2.41	1.26	0.972	0.972	12.8	0.972
3-3	control	ISO	3	2	4	81.1	44.2	21.7	5.01	1.55	0.396	0.396	0.396	11.3	0.108
3-3	control	ISO	3	2	5	88.5	43.3	24.3	3.85	0.972	0.972	0.684	0.396	12.8	0.684
3-3	control	ISO	3	2	6	88.8	48.8	26.9	5.87	2.12	1.26	0.684	0.684	12.5	0.684
3-3	control	ISO	3	2	7	84.5	49.9	33.2	10.8	3.28	2.41	1.84	0.972	11.9	0.972
3-3	control	ISO	3	2	8	80.5	53.1	38.7	20.6	7.60	2.99	1.84	0.972	13.9	0.396
Average						86.3	48.1	29.3	10.4	3.38	1.69	1.19	0.792	12.5	0.720
Std. Dev.						3.9	4.3	6.3	5.8	2.18	0.91	0.57	0.264	0.8	0.324
Coeff. Var.						4.5	9.0	21.5	56.3	64.5	53.8	48.0	33.3	6.0	45.0

Note: The following code is used to indicate the applied smoking condition:

ISO - puff volume, 35mL; interval, 60 sec; duration, 2 sec; vent blocking, none.

Solvent Control Acceptance for Smoked Cigarette Samples

Set-Run Number	Sample ID	Replicate Number	SLS = 110µg/mL			SLS = 200µg/mL		
			Smoked Cigarette Samples			Smoked Cigarette Samples		
			Average	z-score	p-value	Average	Std. Dev.	Criteria
1-1	control	1	5.82	1.21	0.226	0.784	0.415	<=10
1-1	control	1	4.81	1.37	0.171	0.466	0.308	<=10
2-1	control	2	3.32	1.60	0.110	1.77	0.46	<=10
2-1	control	2	2.98	1.65	0.098	1.26	0.41	<=10
3-3	control	3	11.5	0.33	0.743	1.13	0.40	<=10
3-3	control	3	12.5	0.17	0.862	0.720	0.324	<=10
1-2	084396	1	9.03	0.71	0.477	1.30	0.64	<=10
1-2	084396	1	12.0	0.25	0.802	1.43	0.70	<=10
1-2	084396	1	11.5	0.33	0.740	1.73	0.71	<=10
1-2	084396	1	9.84	0.59	0.557	1.80	0.82	<=10
2-2	084396	2	7.63	0.93	0.353	1.20	0.96	<=10
2-2	084396	2	7.26	0.99	0.324	0.411	0.467	<=10
2-2	084396	2	8.98	0.72	0.471	3.22	1.92	<=10
2-2	084396	2	10.7	0.45	0.654	1.70	1.36	<=10
3-2	084396	3	8.21	0.84	0.401	2.42	0.83	<=10
3-2	084396	3	9.43	0.65	0.515	1.01	0.41	<=10
3-2	084396	3	12.4	0.19	0.849	0.904	0.234	<=10
3-2	084396	3	8.19	0.84	0.399	0.886	0.260	<=10

Solvent Control Acceptance for Smokeless Tobacco Samples

Set-Run Number	Sample ID	Replicate Number	SLS = 110µg/mL			SLS = 200µg/mL		
			Smokeless Tobacco Samples			Smokeless Tobacco Samples		
			Average	z-score	p-value	Average	Std. Dev.	Criteria
3-4	084394	1	1.86	1.83	0.068	0.809	0.450	<=10
3-4	084394	1	1.39	1.90	0.057	0.667	0.407	<=10
3-4	084394	1	1.86	1.83	0.068	0.690	0.401	<=10
3-4	084394	1	3.21	1.62	0.106	1.16	0.58	<=10
3-6	084394	2	2.34	1.75	0.080	1.32	0.29	<=10
3-6	084394	2	2.41	1.74	0.082	0.655	0.407	<=10
3-6	084394	2	2.93	1.66	0.097	1.30	0.66	<=10
3-6	084394	2	1.97	1.81	0.070	0.898	0.313	<=10
3-13	084394	3	2.39	1.74	0.081	1.01	0.51	<=10
3-13	084394	3	5.16	1.31	0.189	1.04	0.53	<=10
3-13	084394	3	3.29	1.61	0.108	1.24	0.45	<=10
3-13	084394	3	5.03	1.33	0.182	1.23	0.46	<=10
3-9	084395	1	7.92	0.88	0.376	1.43	0.80	<=10
3-9	084395	1	2.17	1.78	0.075	0.925	0.741	<=10
3-9	084395	1	2.83	1.68	0.094	0.113	0.320	<=10
3-9	084395	1	2.59	1.71	0.087	1.59	0.69	<=10
3-11	084395	2	6.95	1.04	0.300	1.31	0.57	<=10
3-11	084395	2	9.79	0.59	0.552	1.45	0.59	<=10
3-11	084395	2	4.60	1.40	0.161	1.53	0.42	<=10
3-11	084395	2	4.49	1.42	0.156	2.13	0.89	<=10
3-15	084395	3	2.43	1.74	0.082	0.599	0.258	<=10
3-15	084395	3	2.59	1.71	0.087	0.616	0.326	<=10
3-15	084395	3	2.05	1.80	0.072	0.619	0.331	<=10
3-15	084395	3	2.21	1.77	0.076	1.04	0.40	<=10
3-2	084454	1	2.11	1.79	0.074	0.643	0.358	<=10
3-2	084454	1	2.31	1.76	0.079	0.215	0.183	<=10
3-2	084454	1	2.35	1.75	0.080	0.387	0.330	<=10
3-2	084454	1	2.41	1.74	0.082	1.06	0.46	<=10
3-10	084454	2	2.33	1.75	0.080	0.963	0.641	<=10
3-10	084454	2	4.52	1.41	0.158	1.97	0.65	<=10
3-10	084454	2	3.75	1.53	0.125	1.27	0.64	<=10
3-10	084454	2	2.83	1.68	0.094	0.961	0.480	<=10
3-12	084454	3	2.39	1.74	0.081	1.77	0.64	<=10
3-12	084454	3	2.17	1.78	0.075	1.44	0.31	<=10
3-12	084454	3	1.68	1.86	0.064	0.510	0.418	<=10
3-12	084454	3	2.29	1.76	0.078	1.50	0.47	<=10
3-1	084455	1	2.37	1.75	0.081	1.23	0.32	<=10
3-1	084455	1	1.37	1.90	0.057	0.611	0.405	<=10
3-1	084455	1	2.38	1.75	0.081	1.57	0.38	<=10
3-1	084455	1	1.99	1.81	0.071	1.40	0.34	<=10
3-3	084455	2	4.98	1.34	0.180	1.01	0.89	<=10
3-3	084455	2	4.64	1.39	0.163	2.27	1.35	<=10

Solvent Control Acceptance for Smoked Cigarette Samples

Set-Run Number	Sample ID	Replicate Number	SLS = 110µg/mL			SLS = 200µg/mL		
			Smoked Cigarette Samples			Smoked Cigarette Samples		
			Average	z-score	p-value	Average	Std. Dev.	Criteria

Solvent Control Acceptance for Smokeless Tobacco Samples

Set-Run Number	Sample ID	Replicate Number	SLS = 110µg/mL			SLS = 200µg/mL		
			Smokeless Tobacco Samples			Smokeless Tobacco Samples		
			Average	z-score	p-value	Average	Std. Dev.	Criteria
3-3	084455	2	4.75	1.38	0.168	3.97	1.92	<=10
3-3	084455	2	4.33	1.44	0.149	1.12	1.75	<=10
3-7	084455	3	8.76	0.75	0.450	0.779	0.661	<=10
3-7	084455	3	14.8	0.18	0.856	1.87	1.34	<=10
3-7	084455	3	13.7	0.02	0.986	1.23	0.39	<=10
3-7	084455	3	11.2	0.37	0.713	0.906	0.352	<=10
2-7	084456	1	13.6	0.00	0.997	1.52	0.87	<=10
2-7	084456	1	17.3	0.57	0.571	1.98	0.44	<=10
2-7	084456	1	14.0	0.06	0.956	2.33	0.28	<=10
2-7	084456	1	13.2	0.06	0.953	1.62	0.40	<=10
2-9	084456	2	12.2	0.22	0.822	1.59	0.35	<=10
2-9	084456	2	9.60	0.62	0.533	2.10	0.97	<=10
2-9	084456	2	7.57	0.94	0.348	0.924	0.496	<=10
2-9	084456	2	12.4	0.19	0.849	1.22	0.58	<=10
2-10	084456	3	2.17	1.78	0.075	1.05	0.39	<=10
2-10	084456	3	2.35	1.75	0.080	1.22	0.53	<=10
2-10	084456	3	2.51	1.73	0.084	1.56	0.41	<=10
2-10	084456	3	2.18	1.78	0.076	1.07	0.33	<=10
2-3	084457	1	3.75	1.53	0.125	0.864	0.468	<=10
2-3	084457	1	3.47	1.58	0.115	1.08	0.33	<=10
2-3	084457	1	3.63	1.55	0.121	1.66	0.44	<=10
2-3	084457	1	4.12	1.48	0.140	1.54	0.40	<=10
2-5	084457	2	2.11	1.79	0.074	1.51	0.50	<=10
2-5	084457	2	4.23	1.46	0.145	1.04	0.48	<=10
2-5	084457	2	1.93	1.82	0.069	1.50	0.52	<=10
2-5	084457	2	1.67	1.86	0.063	0.976	0.516	<=10
2-6	084457	3	7.05	1.02	0.308	1.07	0.41	<=10
2-6	084457	3	6.38	1.13	0.261	0.651	0.193	<=10
2-6	084457	3	7.43	0.96	0.337	1.59	0.35	<=10
2-6	084457	3	5.43	1.27	0.204	0.733	0.449	<=10
2-2	084458	1	3.93	1.50	0.132	2.46	0.53	<=10
2-2	084458	1	4.38	1.44	0.151	2.52	0.35	<=10
2-2	084458	1	3.27	1.61	0.108	2.69	0.36	<=10
2-2	084458	1	3.09	1.64	0.102	1.92	0.37	<=10
2-4	084458	2	13.2	0.07	0.945	1.73	0.54	<=10
2-4	084458	2	16.7	0.49	0.627	1.73	0.99	<=10
2-4	084458	2	16.8	0.50	0.618	1.68	0.90	<=10
2-4	084458	2	17.3	0.57	0.570	2.01	0.87	<=10
2-8	084458	3	3.00	1.65	0.099	0.882	0.210	<=10
2-8	084458	3	4.12	1.48	0.140	1.22	0.41	<=10
2-8	084458	3	6.43	1.12	0.264	1.31	0.41	<=10
2-8	084458	3	3.73	1.54	0.124	1.31	0.42	<=10

Solvent Control Acceptance for Smoked Cigarette Samples

Set-Run Number	Sample ID	Replicate Number	Solvent Control		
			Smoked Cigarette Samples		
			Average	Std. Dev.	Criteria
1-1	control	1	0.320	0.011	>= 0.25
1-1	control	1	0.339	0.013	>= 0.25
2-1	control	2	0.319	0.011	>= 0.25
2-1	control	2	0.313	0.012	>= 0.25
3-3	control	3	0.448	0.024	>= 0.25
3-3	control	3	0.441	0.011	>= 0.25
1-2	084396	1	0.323	0.014	>= 0.25
1-2	084396	1	0.293	0.018	>= 0.25
1-2	084396	1	0.324	0.035	>= 0.25
1-2	084396	1	0.322	0.030	>= 0.25
2-2	084396	2	0.308	0.016	>= 0.25
2-2	084396	2	0.301	0.034	>= 0.25
2-2	084396	2	0.284	0.022	>= 0.25
2-2	084396	2	0.283	0.034	>= 0.25
3-2	084396	3	0.412	0.015	>= 0.25
3-2	084396	3	0.416	0.017	>= 0.25
3-2	084396	3	0.412	0.013	>= 0.25
3-2	084396	3	0.446	0.018	>= 0.25

Solvent Control Acceptance for Extracted Smokeless Tobacco Samples

Set-Run Number	Sample ID	Replicate Number	Solvent Control		
			Smokeless Tobacco Samples		
			Average	Std. Dev.	Criteria
3-4	084394	1	0.333	0.014	>= 0.25
3-4	084394	1	0.323	0.011	>= 0.25
3-4	084394	1	0.340	0.025	>= 0.25
3-4	084394	1	0.322	0.013	>= 0.25
3-6	084394	2	0.352	0.019	>= 0.25
3-6	084394	2	0.367	0.020	>= 0.25
3-6	084394	2	0.329	0.024	>= 0.25
3-6	084394	2	0.389	0.021	>= 0.25
3-13	084394	3	0.439	0.037	>= 0.25
3-13	084394	3	0.466	0.032	>= 0.25
3-13	084394	3	0.416	0.036	>= 0.25
3-13	084394	3	0.419	0.027	>= 0.25
3-9	084395	1	0.297	0.016	>= 0.25
3-9	084395	1	0.333	0.025	>= 0.25
3-9	084395	1	0.321	0.027	>= 0.25
3-9	084395	1	0.308	0.010	>= 0.25
3-11	084395	2	0.276	0.021	>= 0.25
3-11	084395	2	0.276	0.019	>= 0.25
3-11	084395	2	0.273	0.013	>= 0.25
3-11	084395	2	0.264	0.013	>= 0.25
3-15	084395	3	0.448	0.025	>= 0.25
3-15	084395	3	0.399	0.017	>= 0.25
3-15	084395	3	0.417	0.009	>= 0.25
3-15	084395	3	0.394	0.016	>= 0.25
3-2	084454	1	0.384	0.016	>= 0.25
3-2	084454	1	0.375	0.019	>= 0.25
3-2	084454	1	0.386	0.008	>= 0.25
3-2	084454	1	0.358	0.014	>= 0.25
3-10	084454	2	0.344	0.013	>= 0.25
3-10	084454	2	0.312	0.024	>= 0.25
3-10	084454	2	0.324	0.021	>= 0.25
3-10	084454	2	0.346	0.027	>= 0.25
3-12	084454	3	0.374	0.010	>= 0.25
3-12	084454	3	0.385	0.019	>= 0.25
3-12	084454	3	0.370	0.025	>= 0.25
3-12	084454	3	0.343	0.011	>= 0.25
3-1	084455	1	0.370	0.010	>= 0.25
3-1	084455	1	0.371	0.013	>= 0.25
3-1	084455	1	0.374	0.018	>= 0.25
3-1	084455	1	0.390	0.019	>= 0.25
3-3	084455	2	0.365	0.024	>= 0.25
3-3	084455	2	0.328	0.009	>= 0.25
3-3	084455	2	0.308	0.013	>= 0.25
3-3	084455	2	0.370	0.018	>= 0.25
3-7	084455	3	0.415	0.020	>= 0.25
3-7	084455	3	0.353	0.022	>= 0.25
3-7	084455	3	0.356	0.014	>= 0.25
3-7	084455	3	0.395	0.015	>= 0.25

Solvent Control Acceptance for Smoked Cigarette Samples

Set-Run Number	Sample ID	Replicate Number	Solvent Control		
			Smoked Cigarette Samples		
			Average	Std. Dev.	Criteria

Solvent Control Acceptance for Extracted Smokeless Tobacco Samples

Set-Run Number	Sample ID	Replicate Number	Solvent Control		
			Smokeless Tobacco Samples		
			Average	Std. Dev.	Criteria
2-7	084456	1	0.339	0.017	>= 0.25
2-7	084456	1	0.303	0.022	>= 0.25
2-7	084456	1	0.364	0.021	>= 0.25
2-7	084456	1	0.343	0.017	>= 0.25
2-9	084456	2	0.355	0.010	>= 0.25
2-9	084456	2	0.370	0.017	>= 0.25
2-9	084456	2	0.381	0.007	>= 0.25
2-9	084456	2	0.312	0.009	>= 0.25
2-10	084456	3	0.428	0.020	>= 0.25
2-10	084456	3	0.380	0.039	>= 0.25
2-10	084456	3	0.421	0.028	>= 0.25
2-10	084456	3	0.408	0.021	>= 0.25
2-3	084457	1	0.328	0.014	>= 0.25
2-3	084457	1	0.351	0.012	>= 0.25
2-3	084457	1	0.337	0.015	>= 0.25
2-3	084457	1	0.323	0.013	>= 0.25
2-5	084457	2	0.258	0.005	>= 0.25
2-5	084457	2	0.250	0.007	>= 0.25
2-5	084457	2	0.268	0.022	>= 0.25
2-5	084457	2	0.274	0.006	>= 0.25
2-6	084457	3	0.398	0.023	>= 0.25
2-6	084457	3	0.362	0.023	>= 0.25
2-6	084457	3	0.361	0.039	>= 0.25
2-6	084457	3	0.383	0.032	>= 0.25
2-2	084458	1	0.361	0.015	>= 0.25
2-2	084458	1	0.359	0.015	>= 0.25
2-2	084458	1	0.353	0.017	>= 0.25
2-2	084458	1	0.346	0.010	>= 0.25
2-4	084458	2	0.327	0.008	>= 0.25
2-4	084458	2	0.335	0.009	>= 0.25
2-4	084458	2	0.349	0.010	>= 0.25
2-4	084458	2	0.332	0.015	>= 0.25
2-8	084458	3	0.449	0.012	>= 0.25
2-8	084458	3	0.412	0.014	>= 0.25
2-8	084458	3	0.379	0.010	>= 0.25
2-8	084458	3	0.398	0.021	>= 0.25

LABSTAT INTERNATIONAL ULC

262 Manitou Drive, Kitchener, Ontario, Canada N2C 1L3

Phone: (519)748-5409 FAX: (519)748-1654

Project: M100

Period: December 2 - 9, 2008

Control: Kentucky Reference 3R4F

Comparison of Internal KR 3R4F Control IC₅₀'s with Expected (Historical) IC₅₀'s

Set-Run	Sample ID	Smoking Condition ¹	Replicate Number	Plate Number	Target IC ₅₀		Observed IC ₅₀	Z Score	P Value
					Average	Std. Dev.			
1-1	control	ISO	1	1	73.9	11.4	67.0	0.61	0.545
1-1	control	ISO	1	2	73.9	11.4	58.2	1.37	0.170
2-1	control	ISO	2	1	73.9	11.4	57.3	1.45	0.146
2-1	control	ISO	2	2	73.9	11.4	56.6	1.51	0.131
3-3	control	ISO	3	1	73.9	11.4	54.8	1.68	0.094
3-3	control	ISO	3	2	73.9	11.4	55.8	1.58	0.114

1. Smoking Condition**ISO** - puff volume, 35mL; interval, 60 sec; duration, 2 sec; vent blocking, none.

**Nicotine Extracted from Processed Tobacco
('As Received' Basis)**

Sample ID	Nicotine [mg/g]
084394	12.5
084394	12.9
084394	13.3
Average	12.9
Std. Dev.	0.4
Coeff. Var.	2.9
084395	13.5
084395	13.2
084395	14.1
Average	13.6
Std. Dev.	0.5
Coeff. Var.	3.5
084454	3.69
084454	3.60
084454	3.45
Average	3.58
Std. Dev.	0.12
Coeff. Var.	3.5
084455	3.97
084455	3.63
084455	4.83
Average	3.80
Std. Dev.	0.24
Coeff. Var.	6.3
084456	12.7
084456	12.3
084456	12.2
Average	12.4
Std. Dev.	0.3
Coeff. Var.	2.1

**Nicotine Extracted from Processed Tobacco
('As Received' Basis)**

Sample ID	Nicotine [mg/g]
084457	5.63
084457	5.61
084457	5.62
Average	5.62
Std. Dev.	0.01
Coeff. Var.	0.1
084458	2.08
084458	2.35
084458	2.22
Average	2.22
Std. Dev.	0.13
Coeff. Var.	6.1

**Yields of Nicotine in Mainstream Tobacco Smoke:
'FTC' Conditions ***

Set Number	Run Number	Sample ID	Weight [mg/cig]	Puff Count [per cig]	MS TPM [mg/cig]	Nicotine [mg/cig]
1	1	control	1037	8.5	9.17	0.655
2	1	control	1038	8.5	9.37	0.763
3	3	control	1046	8.8	9.33	0.669
		Average	1040	8.6	9.29	0.695
		Std. Dev.	5	0.2	0.11	0.059
		Coeff. Var.	0.5	2.0	1.2	8.5
1	2	084396	1045	8.9	10.6	0.919
2	2	084396	1043	8.9	11.4	0.767
3	2	084396	1043	8.9	11.2	0.780
		Average	1044	8.9	11.1	0.822
		Std. Dev.	1	0.0	0.4	0.084
		Coeff. Var.	0.1	0.4	4.0	10.3

* puff volume, 35mL; interval, 60 sec; duration, 2 sec; vent blocking, 0%.
See text for additional details.

**Yields of Nicotine in Mainstream Tobacco Smoke:
'FTC' Conditions ***

Set Number	Run Number	Sample ID	Weight [mg/cig]	Puff Count [per cig]	MS TPM [mg/cig]	Nicotine [mg/cig]
1	2	084396	1045	8.8	11.0	0.734
1	3	084396	1036	9.1	10.8	0.767
1	4	084396	1038	8.7	10.5	0.731
Average			1039	8.9	10.7	0.744
Std. Dev.			5	0.2	0.3	0.020
Coeff. Var.			0.5	2.1	2.5	2.7

* puff volume, 35mL; interval, 60 sec; duration, 2 sec; vent blocking, 0%.
See text for additional details.

Smoking Data for Analysis:
Neutral Red Cytotoxicity Assay

TPM and Nicotine Dosing Data:
Neutral Red Cytotoxicity Assay

Set- Run	Sample ID	Smoking Condition ¹	Replicate Number	Smoking Date	Cigarettes Smoked	Puff Count (per cig.)	TPM (mg/cig) ²	Nicotine (mg/cig)	Smoking Machine	TPM Dose (µg/mL)								Nicotine Dose (µg/mL)							
										1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1-2	084396	ISO	1	02-Dec-08	20	8.9	10.6	0.919	Borgwaldt Rotary	10	50	75	100	120	140	160	200	0.869	4.34	6.52	8.69	10.4	12.2	13.9	17.4
2-2	084396	ISO	2	04-Dec-08	20	8.8	11.4	0.767	Borgwaldt Rotary	10	50	75	100	120	140	160	200	0.673	3.36	5.04	6.73	8.07	9.42	10.8	13.5
3-2	084396	ISO	3	09-Dec-08	20	8.9	11.2	0.780	Borgwaldt Rotary	10	50	75	100	120	140	160	200	0.694	3.47	5.20	6.94	8.33	9.71	11.1	13.9

1. Smoking Condition
ISO - puff volume, 35mL; interval, 60 sec; duration, 2 sec; vent blocking, none.

2. Samples extracted in appropriate solvent control to give a final concentration of 10.0 mg/mL

Table 1:

**Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)**

Run-Port Number	Sample ID	Smoking Condition	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
						Assay Blank	Control *	Dose of Smoke Fraction in Solvent Control (µg TPM/mL)								SLS (µg/mL)	
								10	50	75	100	120	140	160	200	110	200
1-2	084396	ISO	1	1	1	0.116	0.348	0.286	0.241	0.184	0.146	0.127	0.111	0.105	0.105	0.119	0.104
1-2	084396	ISO	1	1	2	0.098	0.331	0.285	0.217	0.181	0.146	0.131	0.111	0.106	0.104	0.119	0.104
1-2	084396	ISO	1	1	3	0.100	0.326	0.284	0.232	0.168	0.132	0.121	0.108	0.106	0.105	0.121	0.104
1-2	084396	ISO	1	1	4	0.098	0.314	0.277	0.220	0.158	0.124	0.105	0.099	0.101	0.101	0.121	0.102
1-2	084396	ISO	1	1	5	0.099	0.325	0.261	0.217	0.165	0.117	0.103	0.102	0.107	0.103	0.125	0.105
1-2	084396	ISO	1	1	6	0.099	0.316	0.272	0.227	0.168	0.119	0.107	0.104	0.103	0.104	0.125	0.107
1-2	084396	ISO	1	1	7	0.102	0.321	0.278	0.224	0.173	0.129	0.115	0.107	0.104	0.102	0.123	0.105
1-2	084396	ISO	1	1	8	0.100	0.302	0.271	0.225	0.170	0.132	0.115	0.107	0.104	0.106	0.119	0.104
	Average					0.102	0.323	0.277	0.225	0.171	0.131	0.116	0.106	0.105	0.104	0.122	0.104
	Std. Dev.					0.006	0.014	0.009	0.008	0.008	0.011	0.010	0.004	0.002	0.002	0.003	0.001
	Coeff. Var.					5.9	4.2	3.1	3.6	4.9	8.4	8.9	4.0	1.8	1.6	2.1	1.3
1-2	084396	ISO	1	2	1	0.101	0.303	0.289	0.240	0.196	0.160	0.144	0.118	0.108	0.106	0.125	0.102
1-2	084396	ISO	1	2	2	0.099	0.299	0.277	0.228	0.171	0.137	0.124	0.111	0.108	0.104	0.127	0.103
1-2	084396	ISO	1	2	3	0.100	0.303	0.274	0.230	0.163	0.122	0.113	0.105	0.105	0.104	0.121	0.102
1-2	084396	ISO	1	2	4	0.099	0.316	0.297	0.239	0.160	0.117	0.107	0.101	0.104	0.103	0.121	0.101
1-2	084396	ISO	1	2	5	0.100	0.304	0.266	0.223	0.158	0.124	0.107	0.102	0.103	0.102	0.124	0.104
1-2	084396	ISO	1	2	6	0.101	0.286	0.251	0.229	0.169	0.123	0.108	0.104	0.103	0.103	0.122	0.104
1-2	084396	ISO	1	2	7	0.102	0.273	0.244	0.213	0.172	0.127	0.116	0.106	0.104	0.102	0.124	0.104
1-2	084396	ISO	1	2	8	0.101	0.261	0.230	0.205	0.166	0.132	0.117	0.109	0.105	0.104	0.124	0.105
	Average					0.100	0.293	0.266	0.226	0.169	0.130	0.117	0.107	0.105	0.104	0.124	0.103
	Std. Dev.					0.001	0.018	0.023	0.012	0.012	0.014	0.012	0.006	0.002	0.001	0.002	0.001
	Coeff. Var.					1.1	6.3	8.6	5.3	7.0	10.4	10.6	5.2	1.9	1.3	1.7	1.3
1-2	084396	ISO	1	3	1	0.101	0.329	0.296	0.235	0.192	0.162	0.143	0.116	0.104	0.102	0.129	0.102
1-2	084396	ISO	1	3	2	0.099	0.334	0.297	0.238	0.178	0.140	0.126	0.107	0.103	0.101	0.129	0.107
1-2	084396	ISO	1	3	3	0.099	0.358	0.296	0.238	0.162	0.125	0.113	0.105	0.103	0.102	0.127	0.102
1-2	084396	ISO	1	3	4	0.100	0.357	0.319	0.230	0.152	0.117	0.109	0.104	0.102	0.100	0.121	0.103
1-2	084396	ISO	1	3	5	0.099	0.359	0.337	0.259	0.157	0.118	0.107	0.104	0.103	0.102	0.123	0.104
1-2	084396	ISO	1	3	6	0.099	0.304	0.328	0.255	0.163	0.123	0.109	0.104	0.108	0.103	0.126	0.103
1-2	084396	ISO	1	3	7	0.101	0.277	0.271	0.231	0.171	0.133	0.113	0.106	0.104	0.102	0.123	0.104
1-2	084396	ISO	1	3	8	0.100	0.275	0.257	0.221	0.176	0.134	0.121	0.105	0.108	0.103	0.126	0.104
	Average					0.100	0.324	0.300	0.238	0.169	0.132	0.118	0.106	0.104	0.102	0.126	0.104
	Std. Dev.					0.001	0.035	0.027	0.013	0.013	0.015	0.012	0.004	0.002	0.001	0.003	0.002
	Coeff. Var.					0.9	10.8	9.1	5.4	7.7	11.2	10.3	3.8	2.2	1.0	2.3	1.5
1-2	084396	ISO	1	4	1	0.099	0.309	0.292	0.223	0.176	0.133	0.115	0.107	0.102	0.104	0.116	0.101
1-2	084396	ISO	1	4	2	0.099	0.344	0.338	0.223	0.160	0.124	0.115	0.105	0.102	0.102	0.123	0.107
1-2	084396	ISO	1	4	3	0.099	0.345	0.309	0.227	0.153	0.116	0.105	0.103	0.102	0.102	0.122	0.103
1-2	084396	ISO	1	4	4	0.099	0.325	0.294	0.223	0.148	0.117	0.106	0.101	0.101	0.101	0.120	0.103
1-2	084396	ISO	1	4	5	0.098	0.347	0.296	0.236	0.147	0.112	0.104	0.103	0.102	0.101	0.122	0.102
1-2	084396	ISO	1	4	6	0.099	0.339	0.301	0.226	0.149	0.116	0.105	0.102	0.104	0.101	0.122	0.104
1-2	084396	ISO	1	4	7	0.102	0.305	0.281	0.213	0.145	0.117	0.108	0.102	0.102	0.101	0.122	0.104
1-2	084396	ISO	1	4	8	0.099	0.259	0.255	0.207	0.160	0.135	0.121	0.104	0.110	0.101	0.122	0.102
	Average					0.099	0.322	0.296	0.222	0.155	0.121	0.110	0.103	0.103	0.102	0.121	0.103
	Std. Dev.					0.001	0.030	0.024	0.009	0.010	0.009	0.006	0.002	0.003	0.001	0.002	0.002
	Coeff. Var.					1.2	9.4	8.0	4.0	6.7	7.1	5.7	1.9	2.8	1.0	1.8	1.8
2-2	084396	ISO	2	1	1	0.100	0.334	0.304	0.215	0.149	0.126	0.108	0.113	0.112	0.105	0.125	0.097
2-2	084396	ISO	2	1	2	0.101	0.301	0.292	0.180	0.140	0.125	0.110	0.106	0.116	0.108	0.114	0.103
2-2	084396	ISO	2	1	3	0.104	0.290	0.280	0.175	0.133	0.114	0.122	0.113	0.105	0.116	0.107	0.102
2-2	084396	ISO	2	1	4	0.101	0.311	0.290	0.175	0.127	0.104	0.110	0.102	0.107	0.104	0.116	0.106
2-2	084396	ISO	2	1	5	0.098	0.321	0.320	0.178	0.124	0.103	0.111	0.111	0.109	0.105	0.114	0.102
2-2	084396	ISO	2	1	6	0.099	0.318	0.334	0.185	0.130	0.109	0.106	0.107	0.101	0.112	0.112	0.104
2-2	084396	ISO	2	1	7	0.097	0.286	0.305	0.191	0.142	0.113	0.107	0.105	0.117	0.111	0.124	0.103
2-2	084396	ISO	2	1	8	0.100	0.303	0.275	0.198	0.138	0.127	0.115	0.108	0.102	0.103	0.115	0.100
	Average					0.100	0.308	0.300	0.187	0.135	0.115	0.111	0.108	0.109	0.108	0.116	0.102
	Std. Dev.					0.002	0.016	0.020	0.014	0.008	0.010	0.005	0.004	0.006	0.005	0.006	0.003
	Coeff. Var.					2.1	5.3	6.6	7.4	6.2	8.5	4.7	3.6	5.5	4.3	5.2	2.6

Table 1:

Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)

Run-Port Number	Sample ID	Smoking Condition	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
						Assay Blank	Control * Reading	Dose of Smoke Fraction in Solvent Control (µg TPM/mL)								SLS (µg/mL)	
								10	50	75	100	120	140	160	200	110	200
3-2	084396	ISO	3	3	1	0.093	0.399	0.392	0.266	0.179	0.138	0.108	0.106	0.105	0.103	0.134	0.097
3-2	084396	ISO	3	3	2	0.093	0.413	0.371	0.273	0.171	0.121	0.104	0.106	0.102	0.102	0.136	0.097
3-2	084396	ISO	3	3	3	0.093	0.436	0.377	0.267	0.169	0.112	0.105	0.102	0.102	0.100	0.143	0.097
3-2	084396	ISO	3	3	4	0.093	0.408	0.357	0.257	0.167	0.111	0.099	0.097	0.099	0.098	0.133	0.096
3-2	084396	ISO	3	3	5	0.092	0.422	0.356	0.257	0.168	0.106	0.099	0.099	0.098	0.097	0.130	0.097
3-2	084396	ISO	3	3	6	0.094	0.415	0.342	0.249	0.164	0.115	0.098	0.100	0.099	0.098	0.128	0.097
3-2	084396	ISO	3	3	7	0.099	0.402	0.351	0.259	0.201	0.121	0.104	0.101	0.101	0.100	0.129	0.097
3-2	084396	ISO	3	3	8	0.093	0.398	0.401	0.297	0.216	0.142	0.119	0.106	0.106	0.102	0.132	0.095
Average						0.094	0.412	0.368	0.266	0.179	0.121	0.105	0.102	0.102	0.100	0.133	0.097
Std. Dev.						0.002	0.013	0.021	0.015	0.019	0.013	0.007	0.004	0.003	0.002	0.005	0.001
Coeff. Var.						2.3	3.1	5.6	5.5	10.5	10.7	6.5	3.4	2.8	2.2	3.6	0.8
3-2	084396	ISO	3	4	1	0.093	0.442	0.418	0.294	0.172	0.115	0.103	0.101	0.099	0.099	0.122	0.096
3-2	084396	ISO	3	4	2	0.093	0.455	0.427	0.306	0.172	0.110	0.100	0.103	0.099	0.099	0.129	0.098
3-2	084396	ISO	3	4	3	0.093	0.464	0.431	0.307	0.157	0.106	0.099	0.099	0.099	0.098	0.126	0.096
3-2	084396	ISO	3	4	4	0.092	0.456	0.431	0.315	0.155	0.106	0.098	0.098	0.099	0.097	0.122	0.096
3-2	084396	ISO	3	4	5	0.092	0.450	0.438	0.316	0.162	0.104	0.098	0.098	0.098	0.096	0.122	0.097
3-2	084396	ISO	3	4	6	0.093	0.464	0.422	0.302	0.166	0.109	0.098	0.099	0.097	0.097	0.122	0.096
3-2	084396	ISO	3	4	7	0.099	0.425	0.394	0.285	0.187	0.123	0.104	0.103	0.101	0.099	0.119	0.098
3-2	084396	ISO	3	4	8	0.093	0.414	0.396	0.275	0.198	0.132	0.115	0.105	0.103	0.099	0.117	0.096
Average						0.094	0.446	0.420	0.300	0.171	0.113	0.102	0.101	0.099	0.098	0.122	0.097
Std. Dev.						0.002	0.018	0.016	0.014	0.015	0.010	0.006	0.003	0.002	0.001	0.004	0.001
Coeff. Var.						2.4	4.1	3.9	4.8	8.7	8.6	5.7	2.6	1.9	1.2	3.1	0.9

Note: The following code is used to indicate the applied smoking condition:
ISO - puff volume, 35mL; interval, 60 sec; duration, 2 sec; vent blocking, none.

Table 2:

Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)

Run-Port Number	Sample ID	Smoking Condition	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
						Control * Reading	Dose of Smoke Fraction in Solvent Control (µg TPM/mL)								SLS (µg/mL)	
							10	50	75	100	120	140	160	200	110	200
3-2	084396	ISO	3	3	1	0.305	0.298	0.172	0.085	0.044	0.014	0.012	0.011	0.009	0.040	0.003
3-2	084396	ISO	3	3	2	0.319	0.277	0.179	0.077	0.027	0.010	0.012	0.008	0.008	0.042	0.003
3-2	084396	ISO	3	3	3	0.342	0.283	0.173	0.075	0.018	0.011	0.008	0.008	0.006	0.049	0.003
3-2	084396	ISO	3	3	4	0.314	0.263	0.163	0.073	0.017	0.005	0.003	0.005	0.004	0.039	0.002
3-2	084396	ISO	3	3	5	0.328	0.262	0.163	0.074	0.012	0.005	0.005	0.004	0.003	0.036	0.003
3-2	084396	ISO	3	3	6	0.321	0.248	0.155	0.070	0.021	0.004	0.006	0.005	0.004	0.034	0.003
3-2	084396	ISO	3	3	7	0.308	0.257	0.165	0.107	0.027	0.010	0.007	0.007	0.006	0.035	0.003
3-2	084396	ISO	3	3	8	0.304	0.307	0.203	0.122	0.048	0.025	0.012	0.012	0.008	0.038	0.001
Average Std. Dev. Coeff. Var.						0.318	0.275	0.172	0.086	0.027	0.011	0.008	0.008	0.006	0.039	0.003
						0.013	0.021	0.015	0.019	0.013	0.007	0.004	0.003	0.002	0.005	0.001
						4.1	7.5	8.5	22.1	47.9	63.5	42.1	37.1	35.3	12.2	25.9
3-2	084396	ISO	3	4	1	0.349	0.325	0.201	0.079	0.022	0.010	0.008	0.006	0.006	0.029	0.003
3-2	084396	ISO	3	4	2	0.362	0.334	0.213	0.079	0.017	0.007	0.010	0.006	0.006	0.036	0.005
3-2	084396	ISO	3	4	3	0.371	0.338	0.214	0.064	0.013	0.006	0.006	0.006	0.005	0.033	0.003
3-2	084396	ISO	3	4	4	0.363	0.338	0.222	0.062	0.013	0.005	0.005	0.006	0.004	0.029	0.003
3-2	084396	ISO	3	4	5	0.357	0.345	0.223	0.069	0.011	0.005	0.005	0.005	0.003	0.029	0.004
3-2	084396	ISO	3	4	6	0.371	0.329	0.209	0.073	0.016	0.005	0.006	0.004	0.004	0.029	0.003
3-2	084396	ISO	3	4	7	0.332	0.301	0.192	0.094	0.030	0.011	0.010	0.008	0.006	0.026	0.005
3-2	084396	ISO	3	4	8	0.321	0.303	0.182	0.105	0.039	0.022	0.012	0.010	0.006	0.024	0.003
Average Std. Dev. Coeff. Var.						0.353	0.326	0.207	0.078	0.020	0.008	0.007	0.006	0.005	0.029	0.003
						0.018	0.016	0.014	0.015	0.010	0.006	0.003	0.002	0.001	0.004	0.001
						5.2	5.0	7.0	19.1	49.8	69.2	36.7	31.4	26.6	12.9	29.3

Note: The following code is used to indicate the applied smoking condition:
ISO - puff volume, 35mL; interval, 60 sec; duration, 2 sec; vent blocking, none.

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Smoking Condition	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
						Dose of Smoke Fraction in Solvent Control (µg TPM/mL)								SLS (µg/mL)	
						10	50	75	100	120	140	160	200	110	200
1-2	084396	ISO	1	1	1	83.3	63.0	37.3	20.1	11.5	4.29	1.58	1.58	7.91	1.13
1-2	084396	ISO	1	1	2	82.9	52.2	35.9	20.1	13.3	4.29	2.03	1.13	7.91	1.13
1-2	084396	ISO	1	1	3	82.4	58.9	30.0	13.8	8.81	2.94	2.03	1.58	8.81	1.13
1-2	084396	ISO	1	1	4	79.3	53.5	25.5	10.2	1.58	0	0	0	8.81	0.226
1-2	084396	ISO	1	1	5	72.0	52.2	28.7	7.00	0.678	0.226	2.48	0.678	10.6	1.58
1-2	084396	ISO	1	1	6	77.0	56.7	30.0	7.91	2.48	1.13	0.678	1.13	10.6	2.48
1-2	084396	ISO	1	1	7	79.7	55.3	32.3	12.4	6.10	2.48	1.13	0.226	9.71	1.58
1-2	084396	ISO	1	1	8	76.6	55.8	30.9	13.8	6.10	2.48	1.13	2.03	7.91	1.13
	Average					79.2	56.0	31.3	13.2	6.32	2.23	1.38	1.04	9.03	1.30
	Std. Dev.					3.9	3.7	3.8	5.0	4.65	1.66	0.81	0.70	1.16	0.64
	Coeff. Var.					4.9	6.6	12.1	37.7	73.5	74.5	58.8	67.3	12.8	49.0
1-2	084396	ISO	1	2	1	97.9	72.4	49.6	30.9	22.6	9.14	3.96	2.92	12.8	0.843
1-2	084396	ISO	1	2	2	91.6	66.2	36.6	19.0	12.3	5.51	3.96	1.88	13.8	1.36
1-2	084396	ISO	1	2	3	90.1	67.3	32.5	11.2	6.55	2.40	2.40	1.88	10.7	0.843
1-2	084396	ISO	1	2	4	102	71.9	30.9	8.63	3.44	0.324	1.88	1.36	10.7	0.324
1-2	084396	ISO	1	2	5	85.9	63.6	29.9	12.3	3.44	0.843	1.36	0.843	12.3	1.88
1-2	084396	ISO	1	2	6	78.1	66.7	35.6	11.7	3.96	1.88	1.36	1.36	11.2	1.88
1-2	084396	ISO	1	2	7	74.5	58.4	37.2	13.8	8.11	2.92	1.88	0.843	12.3	1.88
1-2	084396	ISO	1	2	8	67.3	54.3	34.0	16.4	8.63	4.47	2.40	1.88	12.3	2.40
	Average					85.9	65.1	35.8	15.5	8.63	3.44	2.40	1.62	12.0	1.43
	Std. Dev.					11.9	6.2	6.2	7.0	6.43	2.88	1.04	0.68	1.1	0.70
	Coeff. Var.					13.8	9.6	17.2	45.3	74.6	83.8	43.2	41.9	9.0	49.3
1-2	084396	ISO	1	3	1	87.5	60.3	41.1	27.7	19.3	7.24	1.89	1.00	13.0	1.00
1-2	084396	ISO	1	3	2	87.9	61.6	34.9	17.9	11.7	3.23	1.45	0.557	13.0	3.23
1-2	084396	ISO	1	3	3	87.5	61.6	27.7	11.3	5.91	2.34	1.45	1.00	12.1	1.00
1-2	084396	ISO	1	3	4	97.7	58.1	23.3	7.69	4.12	1.89	1.00	0.111	9.47	1.45
1-2	084396	ISO	1	3	5	106	71.0	25.5	8.13	3.23	1.89	1.45	1.00	10.4	1.89
1-2	084396	ISO	1	3	6	102	69.2	28.2	10.4	4.12	1.89	3.68	1.45	11.7	1.45
1-2	084396	ISO	1	3	7	76.3	58.5	31.8	14.8	5.91	2.79	1.89	1.00	10.4	1.89
1-2	084396	ISO	1	3	8	70.1	54.0	34.0	15.3	9.47	2.34	3.68	1.45	11.7	1.89
	Average					89.3	61.8	30.8	14.2	7.97	2.95	2.06	0.947	11.5	1.73
	Std. Dev.					12.2	5.7	5.8	6.6	5.41	1.80	1.04	0.442	1.3	0.71
	Coeff. Var.					13.7	9.2	18.8	46.4	67.9	60.9	50.3	46.6	11.4	41.2
1-2	084396	ISO	1	4	1	86.7	55.6	34.5	15.2	7.08	3.49	1.24	2.14	7.53	0.787
1-2	084396	ISO	1	4	2	107	55.6	27.3	11.1	7.08	2.59	1.24	1.24	10.7	3.49
1-2	084396	ISO	1	4	3	94.3	57.4	24.2	7.53	2.59	1.69	1.24	1.24	10.2	1.69
1-2	084396	ISO	1	4	4	87.6	55.6	21.9	7.98	3.04	0.787	0.787	0.787	9.33	1.69
1-2	084396	ISO	1	4	5	88.5	61.5	21.5	5.73	2.14	1.69	1.24	0.787	10.2	1.24
1-2	084396	ISO	1	4	6	90.7	57.0	22.4	7.53	2.59	1.24	2.14	0.787	10.2	2.14
1-2	084396	ISO	1	4	7	81.7	51.2	20.6	7.98	3.93	1.24	1.24	0.787	10.2	2.14
1-2	084396	ISO	1	4	8	70.0	48.5	27.3	16.1	9.78	2.14	4.83	0.787	10.2	1.24
	Average					88.4	55.3	25.0	9.89	4.78	1.85	1.74	1.07	9.84	1.80
	Std. Dev.					10.6	4.0	4.6	3.84	2.83	0.86	1.30	0.48	1.00	0.82
	Coeff. Var.					12.0	7.2	18.6	38.9	59.2	46.6	74.8	44.7	10.2	45.8

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Smoking Condition	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
						Dose of Smoke Fraction in Solvent Control (µg TPM/mL)								SLS (µg/mL)	
						10	50	75	100	120	140	160	200	110	200
2-2	084396	ISO	2	1	1	98.1	55.3	23.6	12.5	3.85	6.25	5.77	2.40	12.0	0
2-2	084396	ISO	2	1	2	92.3	38.5	19.2	12.0	4.81	2.88	7.69	3.85	6.73	1.44
2-2	084396	ISO	2	1	3	86.5	36.1	15.9	6.73	10.6	6.25	2.40	7.69	3.37	0.962
2-2	084396	ISO	2	1	4	91.3	36.1	13.0	1.92	4.81	0.962	3.37	1.92	7.69	2.88
2-2	084396	ISO	2	1	5	106	37.5	11.5	1.44	5.29	5.29	4.33	2.40	6.73	0.962
2-2	084396	ISO	2	1	6	113	40.9	14.4	4.33	2.88	3.37	0.481	5.77	5.77	1.92
2-2	084396	ISO	2	1	7	98.6	43.8	20.2	6.25	3.37	2.40	8.17	5.29	11.5	1.44
2-2	084396	ISO	2	1	8	84.1	47.1	18.3	13.0	7.21	3.85	0.962	1.44	7.21	0
	Average					96.2	41.9	17.0	7.27	5.35	3.91	4.15	3.85	7.63	1.20
	Std. Dev.					9.6	6.7	4.0	4.71	2.50	1.90	2.90	2.21	2.88	0.96
	Coeff. Var.					10.0	15.9	23.7	64.7	46.7	48.5	69.8	57.5	37.7	80.0
2-2	084396	ISO	2	2	1	113	55.3	22.0	8.84	5.81	4.80	0.758	3.28	5.31	0.758
2-2	084396	ISO	2	2	2	73.5	47.3	20.0	7.83	4.30	5.31	5.31	3.79	6.32	0.253
2-2	084396	ISO	2	2	3	70.0	45.7	12.9	5.31	0	3.79	3.79	3.28	4.30	0
2-2	084396	ISO	2	2	4	80.6	33.1	9.35	1.26	0.253	3.79	3.28	3.28	10.4	0
2-2	084396	ISO	2	2	5	79.6	39.2	7.83	4.80	0.253	5.31	1.26	3.79	6.82	1.26
2-2	084396	ISO	2	2	6	75.0	43.7	16.4	2.78	2.27	3.79	2.78	2.27	11.4	0.758
2-2	084396	ISO	2	2	7	88.7	47.8	21.0	6.32	7.83	3.79	2.78	1.77	8.84	0.253
2-2	084396	ISO	2	2	8	92.2	43.2	25.0	12.4	1.77	2.27	2.78	2.78	4.80	0
	Average					84.1	44.4	16.8	6.19	2.81	4.11	2.84	3.03	7.26	0.411
	Std. Dev.					14.0	6.5	6.2	3.52	2.90	1.01	1.41	0.71	2.64	0.467
	Coeff. Var.					16.7	14.7	37.2	56.9	103.1	24.6	49.8	23.6	36.3	113.6
2-2	084396	ISO	2	3	1	106	48.4	21.0	9.78	9.24	5.49	5.49	6.56	9.78	2.81
2-2	084396	ISO	2	3	2	89.6	42.5	21.0	12.5	8.71	4.96	8.17	5.49	9.78	7.10
2-2	084396	ISO	2	3	3	97.7	36.6	15.7	7.10	6.56	6.03	6.56	6.03	10.3	0.670
2-2	084396	ISO	2	3	4	99.8	34.4	11.9	5.49	9.78	14.1	8.71	7.10	11.4	4.42
2-2	084396	ISO	2	3	5	97.7	41.4	16.7	7.64	5.49	9.24	2.28	3.35	10.3	2.81
2-2	084396	ISO	2	3	6	95.0	40.9	14.6	4.42	6.03	3.35	2.81	9.24	8.17	1.74
2-2	084396	ISO	2	3	7	101	47.3	24.8	11.4	4.42	6.56	6.03	5.49	7.10	2.81
2-2	084396	ISO	2	3	8	86.4	45.1	24.8	10.9	4.96	6.56	4.42	2.81	4.96	3.35
	Average					96.6	42.1	18.8	8.64	6.90	7.03	5.56	5.76	8.98	3.22
	Std. Dev.					6.2	4.9	4.8	2.91	2.06	3.30	2.32	2.05	2.10	1.92
	Coeff. Var.					6.4	11.6	25.4	33.7	29.9	46.9	41.7	35.5	23.5	59.6
2-2	084396	ISO	2	4	1	114	49.5	30.5	20.2	12.0	8.76	8.21	6.04	15.3	2.78
2-2	084396	ISO	2	4	2	77.2	46.8	29.4	13.1	9.30	9.84	11.5	3.87	12.0	3.87
2-2	084396	ISO	2	4	3	89.7	51.7	17.4	8.76	4.96	4.41	9.30	7.13	12.0	2.78
2-2	084396	ISO	2	4	4	91.9	37.5	10.4	9.84	4.96	6.04	4.41	4.96	16.4	1.15
2-2	084396	ISO	2	4	5	91.9	36.5	13.6	5.50	3.87	3.87	3.87	6.04	7.13	0.068
2-2	084396	ISO	2	4	6	87.5	47.3	17.4	7.13	4.96	4.41	7.67	12.6	9.84	0.068
2-2	084396	ISO	2	4	7	99.5	51.7	22.3	9.84	9.30	4.41	3.87	1.70	8.21	1.15
2-2	084396	ISO	2	4	8	75.6	51.1	24.5	9.30	2.78	4.41	3.33	3.87	4.96	1.70
	Average					90.8	46.5	20.7	10.5	6.52	5.77	6.52	5.77	10.7	1.70
	Std. Dev.					12.1	6.2	7.2	4.5	3.25	2.29	3.05	3.22	3.9	1.36
	Coeff. Var.					13.3	13.2	34.9	43.1	49.9	39.6	46.8	55.8	36.8	80.2

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Smoking Condition	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
						Dose of Smoke Fraction in Solvent Control (µg TPM/mL)								SLS (µg/mL)	
						10	50	75	100	120	140	160	200	110	200
3-2	084396	ISO	3	1	1	84.6	54.9	31.8	10.3	5.11	2.03	1.73	1.73	7.56	2.96
3-2	084396	ISO	3	1	2	86.2	55.8	25.7	7.87	4.49	3.26	1.73	1.42	7.56	2.65
3-2	084396	ISO	3	1	3	85.6	60.7	23.5	5.11	1.73	1.42	1.42	1.42	7.56	1.73
3-2	084396	ISO	3	1	4	85.0	59.2	26.6	5.41	3.26	3.26	3.26	0.499	6.95	0.806
3-2	084396	ISO	3	1	5	95.7	65.6	35.2	9.71	4.18	3.88	3.26	2.96	8.48	2.34
3-2	084396	ISO	3	1	6	102	65.0	26.0	5.11	3.26	3.88	3.88	2.96	7.56	3.26
3-2	084396	ISO	3	1	7	100	68.1	30.6	9.10	2.96	4.18	3.88	3.26	9.10	3.26
3-2	084396	ISO	3	1	8	96.9	63.1	40.1	17.4	10.3	6.03	4.80	3.88	10.9	2.34
Average						92.0	61.5	29.9	8.75	4.41	3.49	2.99	2.26	8.21	2.42
						7.3	4.7	5.6	4.08	2.60	1.40	1.23	1.16	1.29	0.83
						8.0	7.7	18.8	46.6	59.0	40.1	41.2	51.1	15.7	34.4
Std. Dev.															
Coeff. Var.															
3-2	084396	ISO	3	2	1	90.4	55.6	25.8	7.84	3.80	2.56	2.25	2.56	11.3	0.698
3-2	084396	ISO	3	2	2	82.0	51.9	25.8	6.91	3.49	3.80	2.56	1.94	11.6	1.63
3-2	084396	ISO	3	2	3	91.7	59.7	19.0	5.67	2.87	1.94	2.87	2.25	9.70	1.32
3-2	084396	ISO	3	2	4	81.7	50.1	19.3	4.42	1.01	1.63	1.94	1.32	9.39	0.698
3-2	084396	ISO	3	2	5	86.7	55.6	17.8	3.18	0.698	1.01	1.01	1.01	6.91	1.01
3-2	084396	ISO	3	2	6	87.0	57.2	27.7	3.80	1.32	1.32	1.32	1.01	6.60	1.32
3-2	084396	ISO	3	2	7	81.7	57.8	30.5	11.9	2.87	2.56	3.18	2.25	10.3	1.01
3-2	084396	ISO	3	2	8	88.2	62.5	37.3	19.9	8.77	6.60	4.42	2.56	9.70	0.388
Average						86.2	56.3	25.4	7.95	3.10	2.68	2.44	1.86	9.43	1.01
						4.0	4.0	6.7	5.58	2.57	1.81	1.09	0.66	1.82	0.41
						4.6	7.1	26.2	70.1	82.8	67.6	44.5	35.4	19.3	40.3
Std. Dev.															
Coeff. Var.															
3-2	084396	ISO	3	3	1	93.8	54.2	26.8	13.9	4.48	3.85	3.54	2.91	12.7	1.02
3-2	084396	ISO	3	3	2	87.2	56.4	24.3	8.57	3.22	3.85	2.60	2.60	13.3	1.02
3-2	084396	ISO	3	3	3	89.1	54.5	23.7	5.74	3.54	2.60	2.60	1.97	15.5	1.02
3-2	084396	ISO	3	3	4	82.8	51.4	23.0	5.43	1.65	1.02	1.65	1.34	12.3	0.708
3-2	084396	ISO	3	3	5	82.5	51.4	23.4	3.85	1.65	1.65	1.34	1.02	11.4	1.02
3-2	084396	ISO	3	3	6	78.1	48.8	22.1	6.69	1.34	1.97	1.65	1.34	10.8	1.02
3-2	084396	ISO	3	3	7	80.9	52.0	33.7	8.57	3.22	2.28	2.28	1.97	11.1	1.02
3-2	084396	ISO	3	3	8	96.7	63.9	38.5	15.2	7.94	3.85	3.85	2.60	12.0	0.393
Average						86.4	54.1	26.9	8.49	3.38	2.63	2.44	1.97	12.4	0.904
						6.5	4.6	6.0	4.07	2.15	1.11	0.91	0.69	1.5	0.234
						7.5	8.5	22.1	47.9	63.5	42.1	37.1	35.3	12.2	25.9
Std. Dev.															
Coeff. Var.															
3-2	084396	ISO	3	4	1	92.0	56.8	22.3	6.09	2.69	2.13	1.56	1.56	8.08	0.709
3-2	084396	ISO	3	4	2	94.5	60.2	22.3	4.68	1.84	2.69	1.56	1.56	10.1	1.28
3-2	084396	ISO	3	4	3	95.7	60.5	18.0	3.54	1.56	1.56	1.56	1.28	9.21	0.709
3-2	084396	ISO	3	4	4	95.7	62.8	17.4	3.54	1.28	1.28	1.56	0.992	8.08	0.709
3-2	084396	ISO	3	4	5	97.7	63.1	19.4	2.98	1.28	1.28	1.28	0.709	8.08	0.992
3-2	084396	ISO	3	4	6	93.1	59.1	20.6	4.39	1.28	1.56	0.992	0.992	8.08	0.709
3-2	084396	ISO	3	4	7	85.2	54.3	26.5	8.36	2.98	2.69	2.13	1.56	7.23	1.28
3-2	084396	ISO	3	4	8	85.8	51.5	29.6	10.9	6.09	3.26	2.69	1.56	6.66	0.709
Average						92.5	58.5	22.0	5.56	2.37	2.06	1.67	1.28	8.19	0.886
						4.6	4.1	4.2	2.77	1.64	0.75	0.52	0.34	1.06	0.260
						5.0	7.0	19.1	49.8	69.2	36.7	31.4	26.6	12.9	29.3
Std. Dev.															
Coeff. Var.															

Note: The following code is used to indicate the applied smoking condition:
ISO - puff volume, 35mL; interval, 60 sec; duration, 2 sec; vent blocking, none.

Sample Generation Data for Analysis: Neutral Red Cytotoxicity Assay

Set-Run	Sample ID	Replicate Number	Assay Date	Extraction Date	Tobacco Weight (g)	Volume (mL) ¹	mg Tobacco per mL	Dry Matter (%)	mg (Tobacco-H ₂ O) per mL	Nicotine (mg/g)	Calculated Nicotine in Extraction Solution
											(mg/mL)
3-4	084394	1	02-Dec-08	19-Nov-08	2.5013	22.5	111.169	68.3	75.9	12.5	1.39
3-6	084394	2	04-Dec-08	19-Nov-08	2.5002	22.5	111.120		75.9	12.9	1.44
3-13	084394	3	09-Dec-08	19-Nov-08	2.5018	22.5	111.191		75.9	13.3	1.47
3-9	084395	1	02-Dec-08	19-Nov-08	2.5008	22.5	111.147	46.0	51.1	13.5	1.50
3-11	084395	2	04-Dec-08	19-Nov-08	2.5005	22.5	111.133		51.1	13.2	1.47
3-15	084395	3	09-Dec-08	19-Nov-08	2.5014	22.5	111.173		51.1	14.1	1.57
3-2	084454	1	02-Dec-08	19-Nov-08	2.5018	22.5	111.191	88.9	98.8	3.69	0.411
3-10	084454	2	04-Dec-08	19-Nov-08	2.5016	22.5	111.182		98.8	3.60	0.400
3-12	084454	3	09-Dec-08	19-Nov-08	2.5006	22.5	111.138		98.8	3.45	0.383
3-1	084455	1	02-Dec-08	19-Nov-08	2.5017	22.5	111.187	93.9	104	3.97	0.442
3-3	084455	2	04-Dec-08	19-Nov-08	2.5015	22.5	111.178		104	4.83	0.537
3-7	084455	3	09-Dec-08	19-Nov-08	2.5003	22.5	111.124		104	3.63	0.403
2-7	084456	1	02-Dec-08	13-Nov-08	2.5011	22.5	111.160	44.6	49.6	12.7	1.42
2-9	084456	2	04-Dec-08	13-Nov-08	2.5000	22.5	111.111		49.6	12.3	1.37
2-10	084456	3	09-Dec-08	13-Nov-08	2.5012	22.5	111.164		49.6	12.2	1.36
2-3	084457	1	02-Dec-08	13-Nov-08	2.5004	22.5	111.129	96.3	107	5.63	0.625
2-5	084457	2	04-Dec-08	13-Nov-08	2.5004	22.5	111.129		107	5.61	0.624
2-6	084457	3	09-Dec-08	13-Nov-08	2.5002	22.5	111.120		107	5.62	0.625
2-2	084458	1	02-Dec-08	13-Nov-08	2.5000	22.5	111.111	94.9	105	2.08	0.231
2-4	084458	2	04-Dec-08	13-Nov-08	2.5019	22.5	111.196		105	2.35	0.262
2-8	084458	3	09-Dec-08	13-Nov-08	2.5014	22.5	111.173		105	2.22	0.247

1. Samples extracted in appropriate solvent control to give a final concentration of 10.0 mg/mL

Extracted Smokeless Tobacco, Moisture-Corrected Smokeless Tobacco and Nicotine in Smokeless Tobacco Dosing Data

Set- Run	Sample ID	Replicate Number	µg Extracted Smokeless Tobacco/mL media								µg Extracted Moisture-Corrected Smokeless Tobacco /mL media							
			1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
3-4	084394	1	222	334	445	667	889	1334	1779	2223	152	228	304	455	607	911	1214	1518
3-6	084394	2	222	333	444	667	889	1333	1778	2222	152	228	303	455	607	910	1214	1517
3-13	084394	3	222	334	445	667	890	1334	1779	2224	152	228	304	455	607	911	1215	1518
3-9	084395	1	222	333	445	667	889	1334	1778	2223	102	153	204	307	409	613	818	1022
3-11	084395	2	222	333	445	667	889	1334	1778	2223	102	153	204	307	409	613	818	1022
3-15	084395	3	222	334	445	667	889	1334	1779	2223	102	153	204	307	409	613	818	1022
3-2	084454	1	222	334	445	667	890	1334	1779	2224	198	297	395	593	791	1186	1582	1977
3-10	084454	2	222	334	445	667	889	1334	1779	2224	198	297	395	593	791	1186	1581	1977
3-12	084454	3	222	333	445	667	889	1334	1778	2223	198	296	395	593	790	1186	1581	1976
3-1	084455	1	222	334	445	667	889	1334	1779	2224	209	313	418	627	835	1253	1671	2089
3-3	084455	2	222	334	445	667	889	1334	1779	2224	209	313	418	627	835	1253	1671	2089
3-7	084455	3	222	333	444	667	889	1333	1778	2222	209	313	418	626	835	1253	1670	2088
2-7	084456	1	222	333	445	667	889	1334	1779	2223	99.2	149	198	298	397	595	794	992
2-9	084456	2	222	333	444	667	889	1333	1778	2222	99.2	149	198	298	397	595	793	992
2-10	084456	3	222	333	445	667	889	1334	1779	2223	99.2	149	198	298	397	595	794	992
2-3	084457	1	222	333	445	667	889	1334	1778	2223	214	321	428	642	856	1285	1713	2141
2-5	084457	2	222	333	445	667	889	1334	1778	2223	214	321	428	642	856	1285	1713	2141
2-6	084457	3	222	333	444	667	889	1333	1778	2222	214	321	428	642	856	1284	1713	2141
2-2	084458	1	222	333	444	667	889	1333	1778	2222	211	316	422	632	843	1265	1686	2108
2-4	084458	2	222	334	445	667	890	1334	1779	2224	211	316	422	633	844	1266	1688	2110
2-8	084458	3	222	334	445	667	889	1334	1779	2223	211	316	422	633	844	1266	1687	2109

Smokeless Tobacco Extract in Solvent Control (µL/mL media)								
1	2	3	4	5	6	7	8	
2	3	4	6	8	12	16	20	

Set- Run	Sample ID	Replicate Number	µg Nicotine in Smokeless Tobacco/mL media							
			1	2	3	4	5	6	7	8
3-4	084394	1	2.78	4.17	5.56	8.34	11.12	16.69	22.25	27.81
3-6	084394	2	2.87	4.31	5.74	8.61	11.48	17.22	22.96	28.70
3-13	084394	3	2.95	4.42	5.90	8.84	11.79	17.69	23.58	29.48
3-9	084395	1	3.00	4.50	6.00	9.00	12.00	18.00	24.00	30.00
3-11	084395	2	2.94	4.41	5.88	8.82	11.75	17.63	23.51	29.39
3-15	084395	3	3.14	4.72	6.29	9.43	12.58	18.86	25.15	31.44
3-2	084454	1	0.822	1.23	1.64	2.47	3.29	4.93	6.57	8.22
3-10	084454	2	0.800	1.20	1.60	2.40	3.20	4.80	6.40	8.00
3-12	084454	3	0.766	1.15	1.53	2.30	3.06	4.60	6.13	7.66
3-1	084455	1	0.883	1.32	1.77	2.65	3.53	5.30	7.06	8.83
3-3	084455	2	1.07	1.61	2.15	3.22	4.29	6.44	8.58	10.73
3-7	084455	3	0.807	1.21	1.61	2.42	3.23	4.84	6.45	8.07
2-7	084456	1	2.83	4.25	5.66	8.50	11.33	16.99	22.66	28.32
2-9	084456	2	2.74	4.11	5.49	8.23	10.97	16.46	21.94	27.43
2-10	084456	3	2.72	4.08	5.44	8.16	10.88	16.32	21.76	27.20
2-3	084457	1	1.25	1.88	2.50	3.75	5.00	7.50	10.00	12.50
2-5	084457	2	1.25	1.87	2.49	3.74	4.99	7.48	9.98	12.47
2-6	084457	3	1.25	1.87	2.50	3.75	5.00	7.49	9.99	12.49
2-2	084458	1	0.463	0.694	0.926	1.39	1.85	2.78	3.70	4.63
2-4	084458	2	0.523	0.785	1.05	1.57	2.09	3.14	4.18	5.23
2-8	084458	3	0.494	0.741	0.989	1.48	1.98	2.97	3.95	4.94

Table 1:

**Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
3-9	084395	1	4	1	0.102	0.299	0.297	0.296	0.302	0.289	0.290	0.256	0.232	0.212	0.101	0.097
3-9	084395	1	4	2	0.094	0.305	0.307	0.318	0.312	0.307	0.290	0.259	0.241	0.217	0.101	0.098
3-9	084395	1	4	3	0.095	0.302	0.302	0.300	0.326	0.314	0.308	0.281	0.253	0.222	0.102	0.099
3-9	084395	1	4	4	0.095	0.306	0.295	0.303	0.304	0.296	0.292	0.268	0.245	0.218	0.100	0.099
3-9	084395	1	4	5	0.095	0.323	0.313	0.312	0.314	0.315	0.297	0.280	0.233	0.219	0.100	0.100
3-9	084395	1	4	6	0.095	0.315	0.307	0.312	0.337	0.318	0.313	0.271	0.239	0.218	0.101	0.099
3-9	084395	1	4	7	0.096	0.319	0.301	0.306	0.312	0.317	0.299	0.266	0.236	0.208	0.102	0.102
3-9	084395	1	4	8	0.094	0.294	0.303	0.308	0.322	0.297	0.292	0.257	0.247	0.209	0.103	0.099
					0.096	0.308	0.303	0.307	0.316	0.307	0.298	0.267	0.241	0.215	0.101	0.099
					0.003	0.010	0.006	0.007	0.012	0.011	0.009	0.010	0.007	0.005	0.001	0.001
					2.7	3.3	1.9	2.3	3.7	3.7	2.9	3.7	3.0	2.4	1.0	1.5
3-11	084395	2	1	1	0.094	0.274	0.275	0.273	0.264	0.247	0.241	0.234	0.211	0.205	0.104	0.095
3-11	084395	2	1	2	0.094	0.273	0.249	0.265	0.264	0.256	0.256	0.238	0.217	0.204	0.102	0.097
3-11	084395	2	1	3	0.094	0.284	0.260	0.264	0.277	0.266	0.271	0.248	0.224	0.201	0.102	0.097
3-11	084395	2	1	4	0.093	0.273	0.251	0.251	0.265	0.261	0.262	0.239	0.211	0.193	0.101	0.096
3-11	084395	2	1	5	0.094	0.289	0.265	0.274	0.271	0.275	0.270	0.256	0.226	0.211	0.103	0.095
3-11	084395	2	1	6	0.093	0.299	0.266	0.273	0.282	0.278	0.268	0.246	0.223	0.210	0.113	0.096
3-11	084395	2	1	7	0.094	0.285	0.278	0.281	0.276	0.276	0.270	0.248	0.224	0.208	0.114	0.098
3-11	084395	2	1	8	0.095	0.228	0.215	0.225	0.225	0.226	0.221	0.204	0.196	0.182	0.113	0.096
					0.094	0.276	0.257	0.263	0.266	0.261	0.257	0.239	0.217	0.202	0.107	0.096
					0.001	0.021	0.020	0.018	0.018	0.018	0.018	0.016	0.010	0.010	0.006	0.001
					0.7	7.7	7.7	6.8	6.7	6.8	6.9	6.6	4.7	4.9	5.4	1.1
3-11	084395	2	2	1	0.094	0.287	0.289	0.302	0.286	0.235	0.235	0.229	0.219	0.192	0.107	0.097
3-11	084395	2	2	2	0.094	0.267	0.256	0.277	0.285	0.264	0.252	0.237	0.223	0.195	0.107	0.097
3-11	084395	2	2	3	0.096	0.269	0.253	0.275	0.292	0.279	0.275	0.257	0.229	0.214	0.113	0.098
3-11	084395	2	2	4	0.094	0.290	0.264	0.276	0.289	0.296	0.276	0.256	0.233	0.213	0.113	0.097
3-11	084395	2	2	5	0.093	0.285	0.277	0.285	0.279	0.276	0.271	0.263	0.236	0.206	0.119	0.096
3-11	084395	2	2	6	0.093	0.287	0.282	0.289	0.287	0.279	0.258	0.256	0.228	0.203	0.116	0.098
3-11	084395	2	2	7	0.095	0.286	0.279	0.287	0.291	0.266	0.268	0.236	0.221	0.201	0.109	0.098
3-11	084395	2	2	8	0.096	0.235	0.247	0.263	0.249	0.232	0.237	0.195	0.197	0.170	0.113	0.095
					0.094	0.276	0.268	0.282	0.282	0.266	0.259	0.241	0.223	0.199	0.112	0.097
					0.001	0.019	0.015	0.012	0.014	0.022	0.016	0.022	0.012	0.014	0.004	0.001
					1.3	6.8	5.7	4.1	5.0	8.4	6.3	9.3	5.4	7.1	3.8	1.1
3-11	084395	2	3	1	0.095	0.282	0.278	0.268	0.274	0.259	0.250	0.226	0.220	0.198	0.103	0.097
3-11	084395	2	3	2	0.093	0.262	0.268	0.271	0.265	0.262	0.262	0.240	0.224	0.209	0.104	0.097
3-11	084395	2	3	3	0.094	0.275	0.279	0.279	0.277	0.269	0.279	0.258	0.232	0.205	0.101	0.096
3-11	084395	2	3	4	0.093	0.273	0.279	0.288	0.283	0.268	0.278	0.258	0.232	0.204	0.098	0.095
3-11	084395	2	3	5	0.093	0.286	0.284	0.292	0.292	0.284	0.284	0.270	0.248	0.214	0.099	0.096
3-11	084395	2	3	6	0.093	0.281	0.289	0.295	0.290	0.282	0.278	0.267	0.241	0.220	0.100	0.097
3-11	084395	2	3	7	0.093	0.279	0.287	0.291	0.293	0.284	0.272	0.256	0.236	0.215	0.104	0.097
3-11	084395	2	3	8	0.095	0.245	0.231	0.242	0.249	0.253	0.234	0.221	0.209	0.195	0.106	0.096
					0.094	0.273	0.274	0.278	0.278	0.270	0.267	0.250	0.230	0.208	0.102	0.096
					0.001	0.013	0.019	0.018	0.015	0.012	0.017	0.018	0.012	0.009	0.003	0.001
					1.0	4.9	6.8	6.4	5.5	4.5	6.5	7.4	5.4	4.2	2.7	0.8
3-11	084395	2	4	1	0.094	0.253	0.265	0.269	0.258	0.257	0.246	0.234	0.218	0.204	0.098	0.096
3-11	084395	2	4	2	0.093	0.266	0.276	0.285	0.283	0.287	0.272	0.259	0.239	0.213	0.102	0.098
3-11	084395	2	4	3	0.095	0.274	0.270	0.286	0.280	0.275	0.274	0.250	0.242	0.220	0.103	0.098
3-11	084395	2	4	4	0.094	0.278	0.276	0.293	0.284	0.277	0.281	0.264	0.236	0.241	0.101	0.096
3-11	084395	2	4	5	0.093	0.275	0.280	0.290	0.289	0.275	0.279	0.255	0.234	0.211	0.100	0.096
3-11	084395	2	4	6	0.093	0.268	0.281	0.284	0.286	0.276	0.280	0.256	0.232	0.209	0.102	0.097
3-11	084395	2	4	7	0.094	0.252	0.270	0.282	0.274	0.270	0.270	0.254	0.225	0.207	0.102	0.100
3-11	084395	2	4	8	0.095	0.244	0.249	0.282	0.272	0.272	0.268	0.255	0.236	0.219	0.104	0.099
					0.094	0.264	0.271	0.284	0.278	0.274	0.271	0.253	0.233	0.216	0.102	0.098
					0.001	0.013	0.010	0.007	0.010	0.008	0.011	0.009	0.008	0.012	0.002	0.002
					0.9	4.8	3.8	2.5	3.6	3.1	4.2	3.5	3.3	5.4	1.8	1.6

Table 1:

Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
3-15	084395	3	1	1	0.092	0.481	0.450	0.460	0.483	0.474	0.444	0.404	0.371	0.325	0.100	0.096
3-15	084395	3	1	2	0.093	0.422	0.435	0.425	0.430	0.419	0.412	0.366	0.353	0.295	0.101	0.097
3-15	084395	3	1	3	0.094	0.439	0.434	0.436	0.431	0.425	0.429	0.385	0.359	0.325	0.100	0.096
3-15	084395	3	1	4	0.092	0.411	0.420	0.417	0.413	0.414	0.410	0.372	0.353	0.309	0.098	0.095
3-15	084395	3	1	5	0.093	0.448	0.463	0.441	0.454	0.447	0.432	0.408	0.374	0.327	0.100	0.095
3-15	084395	3	1	6	0.093	0.442	0.434	0.430	0.461	0.450	0.442	0.406	0.382	0.338	0.103	0.096
3-15	084395	3	1	7	0.099	0.462	0.433	0.434	0.447	0.436	0.421	0.393	0.369	0.329	0.107	0.096
3-15	084395	3	1	8	0.092	0.480	0.464	0.445	0.445	0.435	0.423	0.384	0.360	0.321	0.108	0.094
	Average				0.094	0.448	0.442	0.436	0.446	0.438	0.427	0.390	0.365	0.321	0.102	0.096
	Std. Dev.				0.002	0.025	0.016	0.013	0.021	0.019	0.013	0.016	0.010	0.013	0.004	0.001
	Coeff. Var.				2.5	5.6	3.6	3.0	4.8	4.4	2.9	4.1	2.9	4.1	3.5	1.0
3-15	084395	3	2	1	0.092	0.379	0.378	0.420	0.433	0.446	0.430	0.394	0.354	0.319	0.100	0.095
3-15	084395	3	2	2	0.094	0.370	0.372	0.377	0.391	0.396	0.384	0.352	0.327	0.289	0.103	0.097
3-15	084395	3	2	3	0.094	0.395	0.388	0.374	0.390	0.395	0.396	0.363	0.337	0.309	0.102	0.097
3-15	084395	3	2	4	0.093	0.398	0.379	0.386	0.383	0.389	0.402	0.370	0.362	0.316	0.100	0.095
3-15	084395	3	2	5	0.092	0.419	0.421	0.407	0.436	0.447	0.450	0.404	0.375	0.320	0.102	0.095
3-15	084395	3	2	6	0.095	0.405	0.407	0.401	0.423	0.439	0.441	0.390	0.369	0.329	0.100	0.097
3-15	084395	3	2	7	0.101	0.412	0.416	0.411	0.406	0.394	0.388	0.354	0.358	0.324	0.107	0.097
3-15	084395	3	2	8	0.093	0.410	0.412	0.397	0.392	0.396	0.351	0.330	0.315	0.271	0.103	0.096
	Average				0.094	0.399	0.397	0.397	0.407	0.413	0.405	0.370	0.350	0.310	0.102	0.096
	Std. Dev.				0.003	0.017	0.019	0.016	0.021	0.026	0.033	0.025	0.021	0.020	0.002	0.001
	Coeff. Var.				3.1	4.2	4.9	4.1	5.2	6.3	8.2	6.8	6.0	6.4	2.3	1.0
3-15	084395	3	3	1	0.092	0.434	0.418	0.447	0.447	0.454	0.451	0.410	0.378	0.310	0.099	0.096
3-15	084395	3	3	2	0.094	0.405	0.417	0.424	0.419	0.417	0.409	0.373	0.337	0.298	0.101	0.097
3-15	084395	3	3	3	0.094	0.413	0.390	0.413	0.423	0.411	0.414	0.376	0.359	0.310	0.100	0.097
3-15	084395	3	3	4	0.093	0.411	0.408	0.415	0.409	0.421	0.418	0.375	0.365	0.308	0.098	0.096
3-15	084395	3	3	5	0.092	0.422	0.414	0.409	0.422	0.442	0.426	0.394	0.372	0.320	0.101	0.095
3-15	084395	3	3	6	0.093	0.425	0.400	0.411	0.418	0.437	0.430	0.398	0.361	0.323	0.098	0.096
3-15	084395	3	3	7	0.101	0.414	0.408	0.400	0.404	0.398	0.397	0.370	0.323	0.302	0.106	0.097
3-15	084395	3	3	8	0.093	0.412	0.403	0.330	0.330	0.322	0.372	0.284	0.264	0.282	0.102	0.094
	Average				0.094	0.417	0.407	0.406	0.409	0.413	0.415	0.373	0.345	0.307	0.101	0.096
	Std. Dev.				0.003	0.009	0.009	0.034	0.034	0.041	0.023	0.039	0.037	0.013	0.003	0.001
	Coeff. Var.				3.1	2.2	2.3	8.3	8.4	9.9	5.7	10.3	10.8	4.2	2.6	1.1
3-15	084395	3	4	1	0.092	0.411	0.418	0.476	0.470	0.449	0.422	0.386	0.353	0.305	0.098	0.096
3-15	084395	3	4	2	0.093	0.392	0.417	0.432	0.437	0.432	0.430	0.384	0.359	0.316	0.100	0.098
3-15	084395	3	4	3	0.093	0.394	0.413	0.432	0.443	0.432	0.430	0.386	0.356	0.318	0.100	0.097
3-15	084395	3	4	4	0.092	0.360	0.378	0.395	0.405	0.417	0.393	0.359	0.343	0.292	0.097	0.095
3-15	084395	3	4	5	0.092	0.393	0.415	0.418	0.423	0.420	0.412	0.383	0.356	0.319	0.101	0.096
3-15	084395	3	4	6	0.093	0.397	0.404	0.419	0.422	0.411	0.420	0.385	0.363	0.307	0.098	0.097
3-15	084395	3	4	7	0.099	0.412	0.399	0.408	0.412	0.413	0.421	0.386	0.354	0.291	0.106	0.098
3-15	084395	3	4	8	0.093	0.390	0.378	0.382	0.371	0.375	0.381	0.349	0.315	0.273	0.100	0.095
	Average				0.093	0.394	0.403	0.420	0.423	0.419	0.414	0.377	0.350	0.303	0.100	0.097
	Std. Dev.				0.002	0.016	0.017	0.028	0.029	0.022	0.018	0.015	0.015	0.016	0.003	0.001
	Coeff. Var.				2.5	4.1	4.1	6.8	6.9	5.2	4.3	3.9	4.3	5.3	2.8	1.2
3-2	084454	1	1	1	0.098	0.386	0.375	0.393	0.387	0.370	0.379	0.373	0.367	0.349	0.102	0.103
3-2	084454	1	1	2	0.101	0.360	0.373	0.387	0.384	0.375	0.391	0.369	0.359	0.349	0.104	0.101
3-2	084454	1	1	3	0.101	0.381	0.390	0.411	0.403	0.395	0.396	0.401	0.387	0.363	0.103	0.102
3-2	084454	1	1	4	0.100	0.386	0.424	0.423	0.410	0.392	0.388	0.376	0.346	0.333	0.105	0.102
3-2	084454	1	1	5	0.100	0.392	0.417	0.426	0.424	0.390	0.390	0.373	0.340	0.353	0.109	0.099
3-2	084454	1	1	6	0.099	0.414	0.417	0.435	0.438	0.404	0.404	0.400	0.388	0.355	0.108	0.101
3-2	084454	1	1	7	0.100	0.382	0.385	0.435	0.427	0.428	0.405	0.402	0.382	0.374	0.104	0.101
3-2	084454	1	1	8	0.098	0.371	0.388	0.385	0.401	0.382	0.394	0.388	0.378	0.336	0.110	0.102
	Average				0.100	0.384	0.396	0.412	0.409	0.392	0.393	0.385	0.368	0.352	0.106	0.101
	Std. Dev.				0.001	0.016	0.020	0.021	0.019	0.018	0.009	0.014	0.019	0.013	0.003	0.001
	Coeff. Var.				1.2	4.1	5.1	5.1	4.7	4.7	2.2	3.7	5.0	3.8	2.8	1.2

Table 1:

Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
3-2	084454	1	2	1	0.101	0.364	0.358	0.376	0.364	0.350	0.370	0.349	0.358	0.342	0.110	0.101
3-2	084454	1	2	2	0.099	0.372	0.352	0.376	0.388	0.373	0.396	0.388	0.373	0.371	0.108	0.100
3-2	084454	1	2	3	0.099	0.372	0.337	0.367	0.377	0.379	0.407	0.437	0.418	0.391	0.106	0.098
3-2	084454	1	2	4	0.099	0.395	0.386	0.381	0.380	0.425	0.419	0.411	0.388	0.376	0.104	0.100
3-2	084454	1	2	5	0.099	0.389	0.376	0.384	0.350	0.382	0.405	0.390	0.399	0.375	0.104	0.099
3-2	084454	1	2	6	0.099	0.390	0.377	0.366	0.397	0.418	0.424	0.415	0.409	0.372	0.104	0.100
3-2	084454	1	2	7	0.100	0.381	0.369	0.389	0.438	0.449	0.434	0.433	0.411	0.399	0.106	0.100
3-2	084454	1	2	8	0.099	0.337	0.342	0.386	0.393	0.414	0.432	0.402	0.395	0.380	0.104	0.100
	Average				0.099	0.375	0.362	0.378	0.386	0.399	0.411	0.403	0.394	0.376	0.106	0.100
	Std. Dev.				0.001	0.019	0.018	0.008	0.026	0.033	0.021	0.028	0.020	0.017	0.002	0.001
	Coeff. Var.				0.7	5.0	4.9	2.2	6.8	8.2	5.2	7.0	5.2	4.5	2.1	0.9
3-2	084454	1	3	1	0.099	0.393	0.387	0.397	0.406	0.382	0.399	0.367	0.373	0.356	0.107	0.100
3-2	084454	1	3	2	0.099	0.394	0.385	0.393	0.394	0.418	0.412	0.386	0.377	0.363	0.106	0.100
3-2	084454	1	3	3	0.099	0.374	0.380	0.380	0.406	0.429	0.440	0.408	0.374	0.400	0.105	0.099
3-2	084454	1	3	4	0.098	0.394	0.395	0.393	0.422	0.432	0.445	0.418	0.393	0.388	0.104	0.101
3-2	084454	1	3	5	0.099	0.373	0.380	0.387	0.412	0.408	0.418	0.398	0.400	0.377	0.104	0.099
3-2	084454	1	3	6	0.098	0.386	0.364	0.364	0.398	0.411	0.424	0.415	0.388	0.388	0.105	0.098
3-2	084454	1	3	7	0.100	0.388	0.367	0.390	0.400	0.420	0.415	0.427	0.420	0.397	0.108	0.101
3-2	084454	1	3	8	0.099	0.384	0.390	0.417	0.415	0.408	0.435	0.416	0.344	0.356	0.106	0.101
	Average				0.099	0.386	0.381	0.390	0.407	0.414	0.424	0.404	0.384	0.378	0.106	0.100
	Std. Dev.				0.001	0.008	0.011	0.015	0.009	0.016	0.016	0.020	0.022	0.018	0.001	0.001
	Coeff. Var.				0.6	2.2	2.8	3.9	2.3	3.8	3.7	4.9	5.8	4.7	1.3	1.1
3-2	084454	1	4	1	0.098	0.335	0.346	0.356	0.361	0.359	0.362	0.363	0.374	0.365	0.106	0.099
3-2	084454	1	4	2	0.099	0.337	0.347	0.406	0.388	0.372	0.379	0.366	0.359	0.376	0.105	0.102
3-2	084454	1	4	3	0.099	0.369	0.376	0.375	0.395	0.427	0.434	0.393	0.400	0.370	0.106	0.101
3-2	084454	1	4	4	0.098	0.364	0.371	0.428	0.418	0.401	0.414	0.400	0.389	0.385	0.103	0.102
3-2	084454	1	4	5	0.099	0.358	0.364	0.405	0.414	0.411	0.409	0.400	0.377	0.377	0.104	0.101
3-2	084454	1	4	6	0.099	0.365	0.396	0.456	0.419	0.436	0.425	0.418	0.397	0.392	0.104	0.101
3-2	084454	1	4	7	0.100	0.374	0.401	0.408	0.456	0.427	0.439	0.429	0.416	0.404	0.107	0.103
3-2	084454	1	4	8	0.097	0.361	0.360	0.393	0.427	0.398	0.413	0.398	0.380	0.362	0.104	0.102
	Average				0.099	0.358	0.370	0.403	0.410	0.404	0.409	0.396	0.387	0.379	0.105	0.101
	Std. Dev.				0.001	0.014	0.020	0.031	0.028	0.027	0.027	0.023	0.018	0.014	0.001	0.001
	Coeff. Var.				0.9	4.0	5.5	7.6	6.9	6.8	6.5	5.7	4.6	3.7	1.3	1.2
3-10	084454	2	1	1	0.098	0.330	0.326	0.321	0.332	0.335	0.340	0.323	0.324	0.321	0.103	0.098
3-10	084454	2	1	2	0.097	0.347	0.370	0.359	0.367	0.367	0.370	0.350	0.349	0.333	0.104	0.100
3-10	084454	2	1	3	0.098	0.354	0.385	0.370	0.389	0.382	0.375	0.375	0.351	0.340	0.104	0.101
3-10	084454	2	1	4	0.097	0.336	0.359	0.353	0.356	0.354	0.361	0.335	0.346	0.338	0.102	0.099
3-10	084454	2	1	5	0.097	0.349	0.365	0.363	0.359	0.361	0.373	0.354	0.342	0.350	0.103	0.099
3-10	084454	2	1	6	0.097	0.357	0.363	0.367	0.376	0.356	0.362	0.354	0.338	0.279	0.103	0.101
3-10	084454	2	1	7	0.098	0.359	0.370	0.368	0.367	0.362	0.346	0.352	0.286	0.271	0.105	0.103
3-10	084454	2	1	8	0.101	0.323	0.354	0.344	0.366	0.313	0.308	0.289	0.285	0.284	0.105	0.101
	Average				0.098	0.344	0.362	0.356	0.364	0.354	0.354	0.342	0.328	0.315	0.104	0.100
	Std. Dev.				0.001	0.013	0.017	0.016	0.016	0.021	0.023	0.026	0.027	0.031	0.001	0.002
	Coeff. Var.				1.4	3.8	4.7	4.6	4.5	6.0	6.4	7.6	8.3	10.0	1.0	1.6
3-10	084454	2	2	1	0.096	0.293	0.286	0.290	0.297	0.297	0.296	0.293	0.279	0.286	0.105	0.099
3-10	084454	2	2	2	0.096	0.331	0.329	0.313	0.340	0.329	0.346	0.335	0.320	0.317	0.107	0.102
3-10	084454	2	2	3	0.097	0.327	0.332	0.317	0.337	0.344	0.346	0.348	0.345	0.332	0.106	0.101
3-10	084454	2	2	4	0.096	0.333	0.331	0.338	0.353	0.363	0.358	0.368	0.347	0.328	0.106	0.100
3-10	084454	2	2	5	0.095	0.313	0.330	0.324	0.336	0.361	0.364	0.352	0.330	0.318	0.105	0.099
3-10	084454	2	2	6	0.096	0.322	0.330	0.323	0.338	0.332	0.342	0.338	0.336	0.277	0.105	0.101
3-10	084454	2	2	7	0.097	0.314	0.341	0.316	0.332	0.313	0.314	0.330	0.290	0.279	0.107	0.103
3-10	084454	2	2	8	0.098	0.263	0.260	0.263	0.269	0.278	0.276	0.266	0.256	0.251	0.108	0.100
	Average				0.096	0.312	0.317	0.311	0.325	0.327	0.330	0.329	0.313	0.299	0.106	0.101
	Std. Dev.				0.001	0.024	0.029	0.023	0.028	0.030	0.031	0.033	0.034	0.029	0.001	0.001
	Coeff. Var.				1.0	7.6	9.0	7.6	8.5	9.1	9.5	10.1	10.8	9.8	1.1	1.4

Table 1:

Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
3-10	084454	2	3	1	0.097	0.326	0.311	0.328	0.331	0.328	0.338	0.323	0.335	0.332	0.104	0.099
3-10	084454	2	3	2	0.099	0.333	0.343	0.360	0.345	0.343	0.334	0.334	0.325	0.300	0.105	0.102
3-10	084454	2	3	3	0.098	0.339	0.316	0.337	0.342	0.340	0.359	0.350	0.334	0.317	0.106	0.101
3-10	084454	2	3	4	0.097	0.340	0.325	0.335	0.351	0.352	0.363	0.366	0.353	0.317	0.106	0.100
3-10	084454	2	3	5	0.096	0.335	0.334	0.339	0.360	0.365	0.372	0.370	0.347	0.321	0.105	0.098
3-10	084454	2	3	6	0.096	0.327	0.330	0.342	0.371	0.359	0.370	0.357	0.344	0.329	0.104	0.100
3-10	084454	2	3	7	0.097	0.316	0.336	0.333	0.344	0.347	0.349	0.334	0.316	0.286	0.109	0.102
3-10	084454	2	3	8	0.098	0.277	0.275	0.297	0.296	0.305	0.299	0.292	0.292	0.281	0.107	0.099
	Average				0.097	0.324	0.321	0.334	0.343	0.342	0.348	0.341	0.331	0.310	0.106	0.100
	Std. Dev.				0.001	0.021	0.021	0.018	0.022	0.019	0.024	0.026	0.020	0.019	0.002	0.001
	Coeff. Var.				1.1	6.4	6.7	5.3	6.5	5.5	7.0	7.5	6.0	6.2	1.6	1.5
3-10	084454	2	4	1	0.096	0.353	0.325	0.315	0.339	0.336	0.366	0.327	0.327	0.331	0.105	0.099
3-10	084454	2	4	2	0.098	0.350	0.361	0.369	0.367	0.371	0.364	0.349	0.340	0.325	0.105	0.101
3-10	084454	2	4	3	0.099	0.358	0.362	0.393	0.388	0.376	0.379	0.373	0.365	0.333	0.105	0.100
3-10	084454	2	4	4	0.097	0.371	0.363	0.377	0.381	0.383	0.374	0.361	0.361	0.349	0.105	0.100
3-10	084454	2	4	5	0.098	0.358	0.365	0.376	0.378	0.378	0.371	0.363	0.362	0.356	0.104	0.100
3-10	084454	2	4	6	0.098	0.364	0.362	0.384	0.387	0.397	0.383	0.380	0.380	0.354	0.104	0.101
3-10	084454	2	4	7	0.100	0.317	0.326	0.321	0.318	0.330	0.344	0.345	0.319	0.289	0.107	0.103
3-10	084454	2	4	8	0.100	0.293	0.286	0.287	0.296	0.314	0.313	0.312	0.308	0.288	0.107	0.101
	Average				0.098	0.346	0.344	0.353	0.357	0.361	0.362	0.351	0.345	0.328	0.105	0.101
	Std. Dev.				0.001	0.027	0.029	0.039	0.035	0.030	0.023	0.023	0.026	0.027	0.001	0.001
	Coeff. Var.				1.4	7.7	8.4	11.1	9.8	8.2	6.4	6.6	7.4	8.2	1.1	1.2
3-12	084454	3	1	1	0.091	0.372	0.371	0.376	0.389	0.389	0.405	0.405	0.389	0.379	0.099	0.098
3-12	084454	3	1	2	0.092	0.371	0.389	0.379	0.379	0.397	0.390	0.392	0.378	0.365	0.102	0.100
3-12	084454	3	1	3	0.092	0.374	0.390	0.425	0.404	0.402	0.400	0.414	0.402	0.385	0.100	0.097
3-12	084454	3	1	4	0.092	0.376	0.388	0.379	0.375	0.401	0.422	0.412	0.397	0.378	0.097	0.097
3-12	084454	3	1	5	0.091	0.389	0.375	0.387	0.403	0.401	0.422	0.418	0.398	0.382	0.098	0.095
3-12	084454	3	1	6	0.092	0.383	0.380	0.384	0.395	0.393	0.405	0.390	0.384	0.370	0.098	0.097
3-12	084454	3	1	7	0.092	0.372	0.389	0.388	0.397	0.403	0.410	0.427	0.379	0.357	0.098	0.097
3-12	084454	3	1	8	0.093	0.354	0.369	0.412	0.400	0.387	0.387	0.406	0.394	0.375	0.097	0.094
	Average				0.092	0.374	0.381	0.391	0.393	0.397	0.405	0.408	0.390	0.374	0.099	0.097
	Std. Dev.				0.001	0.010	0.009	0.018	0.011	0.006	0.013	0.013	0.009	0.009	0.002	0.002
	Coeff. Var.				0.7	2.7	2.3	4.5	2.8	1.6	3.2	3.1	2.3	2.5	1.7	1.9
3-12	084454	3	2	1	0.090	0.374	0.373	0.370	0.373	0.382	0.392	0.362	0.370	0.325	0.098	0.095
3-12	084454	3	2	2	0.091	0.400	0.398	0.372	0.377	0.378	0.386	0.370	0.364	0.360	0.098	0.096
3-12	084454	3	2	3	0.091	0.369	0.363	0.384	0.381	0.377	0.381	0.375	0.366	0.332	0.098	0.096
3-12	084454	3	2	4	0.091	0.392	0.383	0.386	0.383	0.371	0.360	0.359	0.377	0.335	0.096	0.095
3-12	084454	3	2	5	0.091	0.352	0.391	0.392	0.398	0.384	0.384	0.363	0.388	0.339	0.097	0.095
3-12	084454	3	2	6	0.091	0.410	0.375	0.401	0.402	0.395	0.421	0.392	0.396	0.350	0.098	0.096
3-12	084454	3	2	7	0.092	0.397	0.385	0.371	0.381	0.373	0.384	0.349	0.369	0.351	0.099	0.097
3-12	084454	3	2	8	0.093	0.389	0.381	0.379	0.400	0.380	0.395	0.386	0.360	0.348	0.097	0.094
	Average				0.091	0.385	0.381	0.382	0.387	0.380	0.388	0.370	0.374	0.343	0.098	0.096
	Std. Dev.				0.001	0.019	0.011	0.011	0.011	0.007	0.017	0.014	0.012	0.012	0.001	0.001
	Coeff. Var.				1.0	4.9	2.9	2.9	2.9	2.0	4.4	3.9	3.3	3.4	0.9	1.0
3-12	084454	3	3	1	0.091	0.425	0.388	0.382	0.376	0.395	0.387	0.373	0.387	0.357	0.099	0.094
3-12	084454	3	3	2	0.109	0.360	0.386	0.371	0.359	0.366	0.364	0.366	0.365	0.348	0.099	0.097
3-12	084454	3	3	3	0.092	0.384	0.375	0.380	0.374	0.377	0.387	0.376	0.382	0.371	0.100	0.096
3-12	084454	3	3	4	0.091	0.360	0.376	0.362	0.370	0.375	0.384	0.377	0.377	0.367	0.097	0.095
3-12	084454	3	3	5	0.092	0.348	0.369	0.369	0.384	0.380	0.393	0.379	0.383	0.378	0.099	0.095
3-12	084454	3	3	6	0.093	0.357	0.371	0.376	0.370	0.383	0.396	0.388	0.376	0.367	0.100	0.096
3-12	084454	3	3	7	0.093	0.370	0.384	0.373	0.388	0.377	0.385	0.386	0.362	0.352	0.097	0.097
3-12	084454	3	3	8	0.092	0.353	0.358	0.359	0.366	0.373	0.392	0.371	0.373	0.350	0.099	0.094
	Average				0.094	0.370	0.376	0.372	0.373	0.378	0.386	0.377	0.376	0.361	0.099	0.096
	Std. Dev.				0.006	0.025	0.010	0.008	0.009	0.008	0.010	0.007	0.009	0.011	0.001	0.001
	Coeff. Var.				6.4	6.8	2.7	2.2	2.5	2.2	2.5	2.0	2.3	3.0	1.2	1.3

Table 1:

Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
3-3	084455	2	1	1	0.100	0.385	0.338	0.318	0.314	0.321	0.344	0.319	0.302	0.292	0.115	0.103
3-3	084455	2	1	2	0.102	0.333	0.329	0.348	0.356	0.362	0.346	0.342	0.326	0.313	0.113	0.101
3-3	084455	2	1	3	0.102	0.328	0.319	0.371	0.399	0.390	0.406	0.366	0.372	0.335	0.111	0.102
3-3	084455	2	1	4	0.098	0.373	0.385	0.388	0.404	0.389	0.387	0.381	0.369	0.335	0.108	0.099
3-3	084455	2	1	5	0.100	0.387	0.382	0.392	0.410	0.403	0.411	0.392	0.380	0.336	0.119	0.104
3-3	084455	2	1	6	0.103	0.387	0.391	0.385	0.413	0.420	0.410	0.395	0.381	0.340	0.119	0.107
3-3	084455	2	1	7	0.103	0.369	0.393	0.407	0.395	0.388	0.387	0.386	0.367	0.339	0.117	0.106
3-3	084455	2	1	8	0.101	0.354	0.367	0.360	0.323	0.350	0.355	0.369	0.246	0.333	0.112	0.106
	Average				0.101	0.365	0.363	0.371	0.377	0.378	0.381	0.369	0.343	0.328	0.114	0.104
	Std. Dev.				0.002	0.024	0.030	0.028	0.040	0.032	0.029	0.026	0.048	0.017	0.004	0.003
	Coeff. Var.				1.7	6.5	8.2	7.7	10.6	8.4	7.5	7.2	14.1	5.1	3.5	2.7
3-3	084455	2	2	1	0.101	0.322	0.317	0.321	0.322	0.325	0.329	0.304	0.301	0.299	0.110	0.108
3-3	084455	2	2	2	0.103	0.324	0.311	0.307	0.316	0.315	0.323	0.330	0.308	0.285	0.111	0.106
3-3	084455	2	2	3	0.102	0.324	0.294	0.318	0.329	0.349	0.356	0.343	0.317	0.284	0.106	0.103
3-3	084455	2	2	4	0.103	0.333	0.322	0.346	0.354	0.367	0.373	0.359	0.344	0.305	0.113	0.109
3-3	084455	2	2	5	0.106	0.318	0.318	0.317	0.344	0.379	0.377	0.372	0.358	0.332	0.107	0.104
3-3	084455	2	2	6	0.100	0.324	0.306	0.325	0.353	0.370	0.359	0.383	0.331	0.304	0.117	0.110
3-3	084455	2	2	7	0.102	0.338	0.331	0.343	0.360	0.352	0.361	0.365	0.361	0.338	0.120	0.112
3-3	084455	2	2	8	0.100	0.344	0.352	0.345	0.369	0.357	0.352	0.348	0.309	0.273	0.117	0.106
	Average				0.102	0.328	0.319	0.328	0.343	0.352	0.354	0.351	0.329	0.303	0.113	0.107
	Std. Dev.				0.002	0.009	0.017	0.015	0.019	0.022	0.019	0.025	0.023	0.023	0.005	0.003
	Coeff. Var.				1.9	2.7	5.4	4.6	5.6	6.3	5.4	7.2	7.1	7.6	4.5	2.9
3-3	084455	2	3	1	0.096	0.333	0.312	0.309	0.310	0.313	0.302	0.299	0.308	0.292	0.113	0.104
3-3	084455	2	3	2	0.103	0.304	0.295	0.306	0.302	0.318	0.314	0.322	0.320	0.287	0.107	0.105
3-3	084455	2	3	3	0.100	0.315	0.310	0.297	0.333	0.331	0.347	0.329	0.324	0.300	0.110	0.108
3-3	084455	2	3	4	0.098	0.307	0.300	0.312	0.323	0.345	0.359	0.347	0.328	0.305	0.111	0.107
3-3	084455	2	3	5	0.101	0.315	0.292	0.309	0.312	0.339	0.342	0.358	0.329	0.293	0.107	0.115
3-3	084455	2	3	6	0.102	0.298	0.294	0.297	0.325	0.358	0.354	0.351	0.340	0.310	0.111	0.110
3-3	084455	2	3	7	0.097	0.294	0.304	0.319	0.328	0.340	0.342	0.321	0.315	0.281	0.111	0.113
3-3	084455	2	3	8	0.104	0.299	0.290	0.285	0.315	0.302	0.314	0.284	0.285	0.284	0.110	0.105
	Average				0.100	0.308	0.300	0.304	0.319	0.331	0.334	0.326	0.319	0.294	0.110	0.108
	Std. Dev.				0.003	0.013	0.008	0.011	0.010	0.019	0.021	0.026	0.017	0.010	0.002	0.004
	Coeff. Var.				2.9	4.1	2.8	3.5	3.3	5.6	6.3	7.9	5.2	3.5	1.9	3.7
3-3	084455	2	4	1	0.100	0.358	0.346	0.368	0.365	0.360	0.364	0.336	0.322	0.321	0.108	0.097
3-3	084455	2	4	2	0.095	0.374	0.369	0.383	0.393	0.369	0.377	0.369	0.338	0.330	0.118	0.104
3-3	084455	2	4	3	0.100	0.391	0.371	0.399	0.393	0.394	0.392	0.368	0.351	0.334	0.110	0.102
3-3	084455	2	4	4	0.100	0.396	0.390	0.405	0.397	0.393	0.399	0.368	0.352	0.337	0.115	0.102
3-3	084455	2	4	5	0.115	0.378	0.360	0.368	0.370	0.370	0.366	0.350	0.363	0.318	0.117	0.110
3-3	084455	2	4	6	0.105	0.358	0.345	0.351	0.365	0.384	0.346	0.353	0.327	0.304	0.122	0.110
3-3	084455	2	4	7	0.107	0.361	0.352	0.373	0.358	0.350	0.355	0.346	0.320	0.299	0.119	0.117
3-3	084455	2	4	8	0.113	0.342	0.369	0.377	0.360	0.342	0.336	0.314	0.297	0.291	0.118	0.102
	Average				0.104	0.370	0.363	0.378	0.375	0.370	0.367	0.351	0.334	0.317	0.116	0.106
	Std. Dev.				0.007	0.018	0.015	0.018	0.016	0.019	0.022	0.019	0.021	0.017	0.005	0.006
	Coeff. Var.				6.7	5.0	4.2	4.6	4.4	5.2	5.9	5.4	6.4	5.4	4.1	6.0
3-7	084455	3	1	1	0.093	0.398	0.399	0.404	0.424	0.424	0.405	0.401	0.380	0.374	0.118	0.096
3-7	084455	3	1	2	0.096	0.405	0.406	0.430	0.430	0.430	0.425	0.414	0.392	0.372	0.127	0.099
3-7	084455	3	1	3	0.096	0.446	0.429	0.438	0.456	0.437	0.429	0.414	0.411	0.383	0.118	0.100
3-7	084455	3	1	4	0.095	0.422	0.412	0.422	0.436	0.414	0.421	0.409	0.402	0.390	0.121	0.095
3-7	084455	3	1	5	0.092	0.444	0.420	0.429	0.425	0.421	0.427	0.419	0.412	0.393	0.127	0.094
3-7	084455	3	1	6	0.092	0.408	0.407	0.432	0.426	0.416	0.407	0.408	0.388	0.382	0.126	0.095
3-7	084455	3	1	7	0.093	0.395	0.397	0.421	0.410	0.405	0.398	0.386	0.360	0.341	0.119	0.096
3-7	084455	3	1	8	0.093	0.401	0.388	0.372	0.370	0.372	0.392	0.398	0.354	0.320	0.119	0.095
	Average				0.094	0.415	0.407	0.419	0.422	0.415	0.413	0.406	0.387	0.369	0.122	0.096
	Std. Dev.				0.002	0.020	0.013	0.021	0.025	0.020	0.014	0.011	0.022	0.026	0.004	0.002
	Coeff. Var.				1.8	4.9	3.2	5.1	5.9	4.8	3.5	2.6	5.6	6.9	3.4	2.2

Table 1:

Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
3-7	084455	3	2	1	0.091	0.352	0.358	0.375	0.374	0.384	0.376	0.388	0.372	0.332	0.121	0.095
3-7	084455	3	2	2	0.092	0.340	0.347	0.368	0.382	0.397	0.373	0.386	0.367	0.338	0.129	0.098
3-7	084455	3	2	3	0.092	0.386	0.381	0.393	0.421	0.412	0.396	0.385	0.387	0.372	0.145	0.096
3-7	084455	3	2	4	0.091	0.335	0.325	0.350	0.343	0.368	0.349	0.357	0.344	0.345	0.131	0.094
3-7	084455	3	2	5	0.092	0.365	0.345	0.354	0.379	0.376	0.372	0.393	0.383	0.366	0.129	0.095
3-7	084455	3	2	6	0.092	0.364	0.355	0.366	0.393	0.394	0.391	0.385	0.361	0.370	0.125	0.096
3-7	084455	3	2	7	0.093	0.364	0.377	0.367	0.386	0.378	0.372	0.380	0.372	0.359	0.138	0.098
3-7	084455	3	2	8	0.095	0.316	0.292	0.300	0.311	0.299	0.336	0.320	0.300	0.300	0.128	0.105
Average					0.092	0.353	0.348	0.359	0.374	0.376	0.371	0.374	0.361	0.348	0.131	0.097
Std. Dev.					0.001	0.022	0.029	0.027	0.033	0.034	0.020	0.024	0.028	0.024	0.008	0.003
Coeff. Var.					1.4	6.2	8.2	7.6	8.9	9.1	5.4	6.5	7.7	7.0	5.8	3.6
3-7	084455	3	3	1	0.092	0.340	0.340	0.342	0.356	0.364	0.358	0.352	0.342	0.321	0.131	0.094
3-7	084455	3	3	2	0.092	0.343	0.348	0.366	0.376	0.378	0.371	0.367	0.355	0.322	0.129	0.097
3-7	084455	3	3	3	0.092	0.360	0.349	0.359	0.391	0.383	0.374	0.373	0.359	0.347	0.127	0.096
3-7	084455	3	3	4	0.092	0.373	0.343	0.361	0.384	0.381	0.370	0.368	0.363	0.342	0.121	0.095
3-7	084455	3	3	5	0.092	0.364	0.340	0.371	0.398	0.406	0.399	0.394	0.382	0.352	0.129	0.095
3-7	084455	3	3	6	0.092	0.361	0.338	0.361	0.381	0.393	0.405	0.388	0.372	0.344	0.130	0.095
3-7	084455	3	3	7	0.092	0.369	0.363	0.364	0.378	0.377	0.368	0.361	0.347	0.329	0.126	0.096
3-7	084455	3	3	8	0.092	0.339	0.310	0.315	0.335	0.316	0.303	0.306	0.286	0.284	0.133	0.094
Average					0.092	0.356	0.341	0.355	0.375	0.375	0.369	0.364	0.351	0.330	0.128	0.095
Std. Dev.					0.000	0.014	0.015	0.018	0.020	0.027	0.031	0.027	0.029	0.022	0.004	0.001
Coeff. Var.					0.0	3.8	4.4	5.1	5.4	7.1	8.4	7.4	8.3	6.7	2.8	1.1
3-7	084455	3	4	1	0.092	0.371	0.403	0.410	0.422	0.405	0.406	0.384	0.369	0.343	0.120	0.094
3-7	084455	3	4	2	0.092	0.391	0.384	0.406	0.425	0.408	0.422	0.398	0.381	0.363	0.131	0.096
3-7	084455	3	4	3	0.092	0.401	0.394	0.418	0.437	0.423	0.413	0.395	0.378	0.370	0.128	0.096
3-7	084455	3	4	4	0.091	0.384	0.379	0.400	0.397	0.403	0.408	0.399	0.379	0.366	0.121	0.094
3-7	084455	3	4	5	0.091	0.411	0.382	0.411	0.405	0.388	0.390	0.393	0.379	0.363	0.118	0.094
3-7	084455	3	4	6	0.092	0.403	0.415	0.419	0.398	0.396	0.392	0.390	0.385	0.373	0.132	0.094
3-7	084455	3	4	7	0.092	0.415	0.398	0.416	0.410	0.409	0.406	0.402	0.384	0.370	0.127	0.095
3-7	084455	3	4	8	0.092	0.385	0.378	0.382	0.375	0.373	0.361	0.379	0.370	0.328	0.130	0.093
Average					0.092	0.395	0.392	0.408	0.409	0.401	0.400	0.393	0.378	0.360	0.126	0.095
Std. Dev.					0.000	0.015	0.013	0.012	0.019	0.015	0.019	0.008	0.006	0.016	0.005	0.001
Coeff. Var.					0.5	3.8	3.4	3.0	4.8	3.8	4.7	2.0	1.6	4.4	4.3	1.1
2-7	084456	1	1	1	0.097	0.315	0.337	0.330	0.340	0.345	0.336	0.303	0.297	0.263	0.122	0.093
2-7	084456	1	1	2	0.095	0.334	0.332	0.386	0.398	0.396	0.382	0.357	0.339	0.308	0.138	0.102
2-7	084456	1	1	3	0.096	0.358	0.360	0.402	0.405	0.400	0.380	0.354	0.324	0.320	0.136	0.103
2-7	084456	1	1	4	0.096	0.325	0.345	0.384	0.380	0.389	0.378	0.338	0.327	0.298	0.127	0.099
2-7	084456	1	1	5	0.095	0.351	0.353	0.385	0.390	0.408	0.388	0.354	0.331	0.305	0.126	0.100
2-7	084456	1	1	6	0.100	0.363	0.369	0.404	0.396	0.389	0.391	0.359	0.344	0.310	0.129	0.102
2-7	084456	1	1	7	0.098	0.339	0.343	0.369	0.396	0.400	0.389	0.370	0.342	0.320	0.127	0.100
2-7	084456	1	1	8	0.095	0.330	0.354	0.379	0.369	0.374	0.360	0.332	0.324	0.303	0.131	0.099
Average					0.097	0.339	0.349	0.380	0.384	0.388	0.376	0.346	0.329	0.303	0.130	0.100
Std. Dev.					0.002	0.017	0.012	0.023	0.021	0.020	0.019	0.021	0.015	0.018	0.005	0.003
Coeff. Var.					1.8	4.9	3.5	6.1	5.5	5.2	5.0	6.1	4.6	5.9	4.1	3.1
2-7	084456	1	2	1	0.096	0.315	0.305	0.320	0.347	0.356	0.347	0.344	0.314	0.296	0.134	0.099
2-7	084456	1	2	2	0.096	0.275	0.293	0.328	0.352	0.366	0.375	0.351	0.335	0.296	0.135	0.101
2-7	084456	1	2	3	0.095	0.305	0.305	0.334	0.350	0.370	0.372	0.359	0.332	0.316	0.134	0.101
2-7	084456	1	2	4	0.096	0.325	0.339	0.339	0.339	0.373	0.383	0.344	0.324	0.295	0.133	0.099
2-7	084456	1	2	5	0.096	0.329	0.328	0.325	0.335	0.369	0.356	0.347	0.323	0.302	0.133	0.099
2-7	084456	1	2	6	0.095	0.313	0.321	0.331	0.373	0.373	0.383	0.348	0.321	0.307	0.133	0.100
2-7	084456	1	2	7	0.096	0.294	0.313	0.328	0.349	0.364	0.362	0.350	0.333	0.302	0.126	0.099
2-7	084456	1	2	8	0.094	0.271	0.284	0.312	0.319	0.303	0.300	0.293	0.286	0.257	0.123	0.099
Average					0.096	0.303	0.311	0.327	0.346	0.359	0.360	0.342	0.321	0.296	0.131	0.100
Std. Dev.					0.001	0.022	0.018	0.008	0.016	0.023	0.027	0.020	0.016	0.017	0.004	0.001
Coeff. Var.					0.8	7.2	5.8	2.6	4.5	6.5	7.6	6.0	4.9	5.9	3.3	0.9

Table 1:

Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
2-7	084456	1	3	1	0.095	0.345	0.348	0.357	0.368	0.355	0.351	0.325	0.296	0.270	0.131	0.100
2-7	084456	1	3	2	0.094	0.332	0.347	0.360	0.375	0.371	0.357	0.341	0.322	0.297	0.137	0.102
2-7	084456	1	3	3	0.096	0.360	0.369	0.372	0.382	0.361	0.365	0.355	0.327	0.297	0.137	0.102
2-7	084456	1	3	4	0.095	0.395	0.376	0.359	0.374	0.364	0.370	0.349	0.328	0.308	0.132	0.101
2-7	084456	1	3	5	0.096	0.388	0.386	0.379	0.382	0.359	0.436	0.358	0.322	0.298	0.135	0.101
2-7	084456	1	3	6	0.095	0.371	0.363	0.376	0.394	0.390	0.391	0.357	0.331	0.311	0.130	0.102
2-7	084456	1	3	7	0.096	0.355	0.373	0.397	0.401	0.395	0.372	0.354	0.337	0.303	0.133	0.102
2-7	084456	1	3	8	0.094	0.362	0.383	0.384	0.382	0.354	0.365	0.327	0.320	0.301	0.126	0.101
	Average				0.095	0.364	0.368	0.373	0.382	0.369	0.376	0.346	0.323	0.298	0.133	0.101
	Std. Dev.				0.001	0.021	0.015	0.014	0.011	0.016	0.027	0.013	0.012	0.012	0.004	0.001
	Coeff. Var.				0.9	5.8	4.0	3.7	2.8	4.3	7.2	3.9	3.8	4.2	2.8	0.7
2-7	084456	1	4	1	0.097	0.317	0.339	0.334	0.344	0.349	0.340	0.305	0.298	0.268	0.127	0.101
2-7	084456	1	4	2	0.096	0.338	0.336	0.392	0.403	0.399	0.386	0.361	0.343	0.309	0.136	0.101
2-7	084456	1	4	3	0.097	0.362	0.365	0.407	0.409	0.405	0.385	0.360	0.328	0.323	0.129	0.101
2-7	084456	1	4	4	0.096	0.330	0.351	0.388	0.384	0.394	0.380	0.341	0.332	0.301	0.128	0.100
2-7	084456	1	4	5	0.095	0.358	0.357	0.390	0.395	0.412	0.391	0.359	0.334	0.308	0.127	0.100
2-7	084456	1	4	6	0.101	0.367	0.373	0.409	0.401	0.395	0.396	0.364	0.346	0.313	0.130	0.103
2-7	084456	1	4	7	0.098	0.342	0.347	0.373	0.400	0.406	0.394	0.375	0.345	0.325	0.128	0.101
2-7	084456	1	4	8	0.095	0.333	0.357	0.380	0.371	0.376	0.363	0.336	0.327	0.305	0.131	0.100
	Average				0.097	0.343	0.353	0.384	0.388	0.392	0.379	0.350	0.332	0.307	0.130	0.101
	Std. Dev.				0.002	0.017	0.013	0.024	0.022	0.020	0.019	0.022	0.016	0.018	0.003	0.001
	Coeff. Var.				2.0	5.1	3.6	6.2	5.6	5.2	5.0	6.3	4.7	5.8	2.3	1.0
2-9	084456	2	1	1	0.096	0.345	0.364	0.358	0.358	0.347	0.341	0.325	0.301	0.282	0.131	0.101
2-9	084456	2	1	2	0.097	0.369	0.359	0.389	0.376	0.350	0.342	0.341	0.316	0.279	0.131	0.101
2-9	084456	2	1	3	0.096	0.351	0.347	0.390	0.384	0.380	0.368	0.340	0.335	0.308	0.130	0.102
2-9	084456	2	1	4	0.100	0.343	0.369	0.390	0.397	0.397	0.392	0.362	0.336	0.299	0.127	0.100
2-9	084456	2	1	5	0.095	0.354	0.350	0.363	0.368	0.410	0.406	0.379	0.346	0.313	0.126	0.099
2-9	084456	2	1	6	0.096	0.363	0.364	0.374	0.393	0.384	0.390	0.366	0.346	0.313	0.129	0.100
2-9	084456	2	1	7	0.096	0.368	0.366	0.388	0.385	0.406	0.367	0.381	0.350	0.315	0.130	0.101
2-9	084456	2	1	8	0.096	0.350	0.363	0.357	0.352	0.335	0.314	0.318	0.291	0.282	0.120	0.101
	Average				0.097	0.355	0.360	0.376	0.377	0.376	0.365	0.352	0.328	0.299	0.128	0.101
	Std. Dev.				0.002	0.010	0.008	0.015	0.016	0.029	0.031	0.024	0.022	0.016	0.004	0.001
	Coeff. Var.				1.6	2.8	2.2	4.0	4.3	7.6	8.5	6.8	6.8	5.2	2.9	0.9
2-9	084456	2	2	1	0.095	0.374	0.379	0.389	0.406	0.372	0.386	0.357	0.340	0.311	0.124	0.099
2-9	084456	2	2	2	0.099	0.352	0.381	0.389	0.391	0.389	0.355	0.351	0.333	0.310	0.126	0.104
2-9	084456	2	2	3	0.097	0.391	0.395	0.416	0.418	0.409	0.399	0.389	0.360	0.326	0.127	0.106
2-9	084456	2	2	4	0.096	0.378	0.409	0.418	0.427	0.409	0.381	0.382	0.370	0.336	0.122	0.101
2-9	084456	2	2	5	0.095	0.380	0.378	0.421	0.414	0.410	0.409	0.382	0.347	0.317	0.119	0.101
2-9	084456	2	2	6	0.096	0.369	0.386	0.406	0.417	0.400	0.386	0.351	0.342	0.306	0.123	0.103
2-9	084456	2	2	7	0.097	0.376	0.407	0.392	0.392	0.391	0.369	0.322	0.319	0.287	0.119	0.105
2-9	084456	2	2	8	0.097	0.339	0.375	0.384	0.377	0.367	0.393	0.348	0.340	0.313	0.122	0.099
	Average				0.097	0.370	0.389	0.402	0.405	0.393	0.385	0.360	0.344	0.313	0.123	0.102
	Std. Dev.				0.001	0.017	0.013	0.015	0.017	0.017	0.017	0.023	0.016	0.014	0.003	0.003
	Coeff. Var.				1.4	4.5	3.4	3.8	4.2	4.3	4.4	6.3	4.6	4.6	2.4	2.6
2-9	084456	2	3	1	0.094	0.372	0.362	0.377	0.363	0.362	0.368	0.331	0.323	0.287	0.121	0.098
2-9	084456	2	3	2	0.096	0.373	0.373	0.399	0.393	0.381	0.350	0.355	0.321	0.302	0.119	0.100
2-9	084456	2	3	3	0.098	0.392	0.405	0.423	0.446	0.405	0.389	0.379	0.337	0.309	0.116	0.100
2-9	084456	2	3	4	0.094	0.381	0.353	0.391	0.397	0.380	0.362	0.338	0.333	0.315	0.111	0.099
2-9	084456	2	3	5	0.097	0.376	0.388	0.408	0.413	0.417	0.408	0.385	0.360	0.337	0.123	0.098
2-9	084456	2	3	6	0.099	0.380	0.405	0.404	0.424	0.430	0.404	0.387	0.371	0.329	0.116	0.100
2-9	084456	2	3	7	0.100	0.386	0.392	0.412	0.418	0.408	0.383	0.371	0.350	0.327	0.123	0.102
2-9	084456	2	3	8	0.096	0.386	0.407	0.391	0.400	0.383	0.358	0.353	0.328	0.316	0.117	0.098
	Average				0.097	0.381	0.386	0.401	0.407	0.396	0.378	0.362	0.340	0.315	0.118	0.099
	Std. Dev.				0.002	0.007	0.021	0.014	0.025	0.023	0.022	0.021	0.018	0.016	0.004	0.001
	Coeff. Var.				2.3	1.8	5.4	3.6	6.1	5.8	5.7	5.9	5.3	5.1	3.5	1.4

Table 1:

Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
2-9	084456	2	4	1	0.097	0.318	0.328	0.336	0.327	0.333	0.308	0.291	0.278	0.257	0.128	0.099
2-9	084456	2	4	2	0.096	0.311	0.326	0.334	0.337	0.343	0.338	0.297	0.293	0.284	0.132	0.101
2-9	084456	2	4	3	0.100	0.308	0.312	0.330	0.346	0.342	0.343	0.323	0.297	0.270	0.125	0.100
2-9	084456	2	4	4	0.096	0.323	0.331	0.348	0.360	0.339	0.337	0.309	0.291	0.283	0.124	0.098
2-9	084456	2	4	5	0.096	0.308	0.304	0.320	0.347	0.343	0.351	0.331	0.309	0.283	0.122	0.099
2-9	084456	2	4	6	0.099	0.309	0.315	0.321	0.340	0.338	0.339	0.327	0.316	0.288	0.117	0.100
2-9	084456	2	4	7	0.095	0.324	0.338	0.362	0.361	0.344	0.345	0.347	0.329	0.304	0.118	0.102
2-9	084456	2	4	8	0.099	0.296	0.374	0.349	0.349	0.353	0.339	0.326	0.319	0.299	0.125	0.100
	Average				0.097	0.312	0.329	0.338	0.346	0.342	0.338	0.319	0.304	0.284	0.124	0.100
	Std. Dev.				0.002	0.009	0.021	0.015	0.011	0.006	0.013	0.019	0.017	0.015	0.005	0.001
	Coeff. Var.				1.9	3.0	6.5	4.3	3.3	1.7	3.8	5.8	5.6	5.3	4.0	1.2
2-10	084456	3	1	1	0.092	0.469	0.471	0.492	0.486	0.466	0.465	0.448	0.416	0.397	0.100	0.095
2-10	084456	3	1	2	0.094	0.439	0.474	0.475	0.471	0.463	0.450	0.425	0.412	0.389	0.100	0.097
2-10	084456	3	1	3	0.094	0.404	0.465	0.484	0.477	0.475	0.455	0.432	0.409	0.410	0.101	0.099
2-10	084456	3	1	4	0.093	0.410	0.455	0.458	0.477	0.455	0.437	0.409	0.385	0.377	0.098	0.096
2-10	084456	3	1	5	0.092	0.431	0.473	0.478	0.498	0.488	0.466	0.441	0.406	0.391	0.101	0.097
2-10	084456	3	1	6	0.093	0.418	0.438	0.481	0.471	0.476	0.465	0.436	0.404	0.379	0.101	0.096
2-10	084456	3	1	7	0.093	0.428	0.468	0.477	0.477	0.457	0.451	0.430	0.402	0.388	0.100	0.097
2-10	084456	3	1	8	0.093	0.423	0.440	0.420	0.441	0.450	0.431	0.396	0.364	0.336	0.101	0.095
	Average				0.093	0.428	0.461	0.471	0.475	0.466	0.453	0.427	0.400	0.383	0.100	0.097
	Std. Dev.				0.001	0.020	0.015	0.023	0.016	0.013	0.013	0.017	0.017	0.022	0.001	0.001
	Coeff. Var.				0.8	4.7	3.2	4.8	3.4	2.7	2.9	4.0	4.3	5.7	1.0	1.4
2-10	084456	3	2	1	0.091	0.393	0.373	0.391	0.426	0.415	0.396	0.381	0.372	0.342	0.100	0.096
2-10	084456	3	2	2	0.093	0.397	0.422	0.409	0.392	0.364	0.384	0.352	0.351	0.334	0.101	0.098
2-10	084456	3	2	3	0.094	0.411	0.422	0.408	0.393	0.373	0.386	0.373	0.365	0.362	0.099	0.099
2-10	084456	3	2	4	0.092	0.420	0.410	0.404	0.384	0.400	0.394	0.370	0.365	0.344	0.100	0.096
2-10	084456	3	2	5	0.092	0.377	0.446	0.392	0.407	0.390	0.426	0.379	0.393	0.350	0.100	0.096
2-10	084456	3	2	6	0.093	0.405	0.434	0.431	0.432	0.411	0.394	0.386	0.373	0.360	0.099	0.097
2-10	084456	3	2	7	0.093	0.321	0.426	0.357	0.385	0.400	0.380	0.374	0.350	0.336	0.101	0.096
2-10	084456	3	2	8	0.096	0.319	0.302	0.282	0.324	0.313	0.306	0.287	0.278	0.254	0.098	0.094
	Average				0.093	0.380	0.404	0.384	0.393	0.383	0.383	0.363	0.356	0.335	0.100	0.097
	Std. Dev.				0.002	0.039	0.047	0.046	0.033	0.033	0.034	0.032	0.034	0.034	0.001	0.002
	Coeff. Var.				1.6	10.4	11.5	12.1	8.4	8.7	8.9	8.9	9.6	10.3	1.0	1.6
2-10	084456	3	3	1	0.092	0.440	0.431	0.442	0.444	0.443	0.434	0.419	0.398	0.366	0.103	0.100
2-10	084456	3	3	2	0.094	0.424	0.447	0.431	0.421	0.426	0.402	0.423	0.357	0.342	0.102	0.097
2-10	084456	3	3	3	0.093	0.424	0.422	0.442	0.445	0.415	0.407	0.394	0.352	0.339	0.102	0.099
2-10	084456	3	3	4	0.093	0.442	0.444	0.433	0.437	0.420	0.418	0.395	0.365	0.342	0.100	0.099
2-10	084456	3	3	5	0.093	0.439	0.442	0.419	0.452	0.422	0.420	0.400	0.374	0.369	0.101	0.097
2-10	084456	3	3	6	0.094	0.422	0.420	0.417	0.432	0.417	0.411	0.381	0.373	0.355	0.101	0.098
2-10	084456	3	3	7	0.093	0.424	0.432	0.422	0.416	0.412	0.399	0.388	0.364	0.356	0.101	0.099
2-10	084456	3	3	8	0.092	0.355	0.345	0.338	0.345	0.357	0.323	0.295	0.289	0.288	0.100	0.096
	Average				0.093	0.421	0.423	0.418	0.424	0.414	0.402	0.387	0.359	0.345	0.101	0.098
	Std. Dev.				0.001	0.028	0.033	0.034	0.034	0.025	0.034	0.040	0.032	0.025	0.001	0.001
	Coeff. Var.				0.8	6.7	7.8	8.1	8.1	6.0	8.4	10.3	8.8	7.4	1.0	1.4
2-10	084456	3	4	1	0.092	0.399	0.425	0.428	0.432	0.435	0.435	0.402	0.384	0.359	0.101	0.096
2-10	084456	3	4	2	0.093	0.379	0.425	0.439	0.413	0.442	0.409	0.384	0.372	0.342	0.100	0.098
2-10	084456	3	4	3	0.092	0.404	0.422	0.435	0.436	0.424	0.411	0.391	0.371	0.349	0.100	0.097
2-10	084456	3	4	4	0.092	0.381	0.411	0.434	0.446	0.395	0.384	0.360	0.347	0.328	0.098	0.095
2-10	084456	3	4	5	0.092	0.413	0.454	0.464	0.452	0.433	0.415	0.392	0.378	0.362	0.100	0.096
2-10	084456	3	4	6	0.095	0.435	0.449	0.455	0.454	0.432	0.413	0.381	0.368	0.361	0.099	0.096
2-10	084456	3	4	7	0.093	0.429	0.438	0.451	0.452	0.414	0.403	0.397	0.359	0.389	0.100	0.097
2-10	084456	3	4	8	0.094	0.423	0.438	0.434	0.429	0.425	0.411	0.393	0.360	0.346	0.100	0.095
	Average				0.093	0.408	0.433	0.443	0.439	0.425	0.410	0.388	0.367	0.355	0.100	0.096
	Std. Dev.				0.001	0.021	0.015	0.013	0.014	0.015	0.014	0.013	0.012	0.018	0.001	0.001
	Coeff. Var.				1.2	5.1	3.4	2.9	3.3	3.5	3.4	3.3	3.2	5.1	0.9	1.1

Table 1:

**Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
2-3	084457	1	1	1	0.094	0.335	0.330	0.326	0.324	0.313	0.310	0.259	0.238	0.234	0.102	0.094
2-3	084457	1	1	2	0.094	0.322	0.314	0.320	0.312	0.307	0.289	0.258	0.243	0.234	0.107	0.097
2-3	084457	1	1	3	0.095	0.334	0.330	0.345	0.342	0.339	0.316	0.280	0.253	0.239	0.104	0.097
2-3	084457	1	1	4	0.094	0.313	0.318	0.327	0.321	0.329	0.301	0.258	0.230	0.223	0.101	0.095
2-3	084457	1	1	5	0.094	0.332	0.342	0.347	0.340	0.319	0.308	0.273	0.247	0.231	0.102	0.096
2-3	084457	1	1	6	0.094	0.352	0.341	0.352	0.345	0.317	0.293	0.270	0.256	0.239	0.101	0.097
2-3	084457	1	1	7	0.095	0.325	0.325	0.333	0.330	0.303	0.298	0.280	0.262	0.246	0.105	0.097
2-3	084457	1	1	8	0.093	0.307	0.315	0.318	0.321	0.304	0.293	0.266	0.249	0.226	0.101	0.096
					0.094	0.328	0.327	0.334	0.329	0.316	0.301	0.268	0.247	0.234	0.103	0.096
					0.001	0.014	0.011	0.013	0.012	0.013	0.010	0.009	0.010	0.007	0.002	0.001
					0.7	4.3	3.3	3.9	3.6	4.0	3.2	3.5	4.1	3.2	2.2	1.2
2-3	084457	1	2	1	0.095	0.347	0.338	0.338	0.341	0.331	0.331	0.287	0.256	0.236	0.105	0.097
2-3	084457	1	2	2	0.094	0.345	0.314	0.309	0.314	0.294	0.301	0.288	0.250	0.225	0.107	0.099
2-3	084457	1	2	3	0.096	0.351	0.333	0.314	0.304	0.308	0.303	0.289	0.244	0.234	0.106	0.099
2-3	084457	1	2	4	0.096	0.353	0.331	0.327	0.329	0.315	0.309	0.275	0.242	0.237	0.102	0.097
2-3	084457	1	2	5	0.095	0.354	0.341	0.333	0.335	0.346	0.316	0.293	0.256	0.246	0.102	0.098
2-3	084457	1	2	6	0.095	0.363	0.337	0.324	0.334	0.340	0.326	0.286	0.265	0.245	0.103	0.098
2-3	084457	1	2	7	0.096	0.365	0.331	0.327	0.335	0.330	0.320	0.298	0.265	0.235	0.105	0.098
2-3	084457	1	2	8	0.094	0.327	0.315	0.332	0.340	0.321	0.319	0.294	0.272	0.244	0.102	0.097
					0.095	0.351	0.330	0.326	0.329	0.323	0.316	0.289	0.256	0.238	0.104	0.098
					0.001	0.012	0.010	0.010	0.013	0.017	0.011	0.007	0.011	0.007	0.002	0.001
					0.9	3.4	3.1	3.0	4.0	5.3	3.4	2.4	4.2	3.0	1.9	0.9
2-3	084457	1	3	1	0.095	0.314	0.319	0.326	0.352	0.328	0.318	0.288	0.265	0.250	0.102	0.098
2-3	084457	1	3	2	0.094	0.355	0.351	0.339	0.326	0.319	0.310	0.277	0.251	0.244	0.107	0.101
2-3	084457	1	3	3	0.096	0.324	0.353	0.340	0.333	0.307	0.311	0.277	0.248	0.243	0.105	0.100
2-3	084457	1	3	4	0.096	0.320	0.351	0.343	0.344	0.318	0.301	0.284	0.250	0.246	0.103	0.099
2-3	084457	1	3	5	0.096	0.340	0.344	0.344	0.351	0.326	0.314	0.282	0.264	0.249	0.103	0.098
2-3	084457	1	3	6	0.095	0.341	0.339	0.351	0.339	0.328	0.327	0.284	0.262	0.247	0.104	0.100
2-3	084457	1	3	7	0.097	0.351	0.355	0.355	0.349	0.330	0.322	0.296	0.270	0.255	0.106	0.100
2-3	084457	1	3	8	0.094	0.347	0.335	0.338	0.329	0.324	0.313	0.283	0.262	0.247	0.103	0.099
					0.095	0.337	0.343	0.342	0.340	0.323	0.315	0.284	0.259	0.248	0.104	0.099
					0.001	0.015	0.012	0.009	0.010	0.008	0.008	0.006	0.008	0.004	0.002	0.001
					1.1	4.5	3.5	2.6	3.0	2.4	2.5	2.2	3.2	1.5	1.7	1.1
2-3	084457	1	4	1	0.095	0.344	0.324	0.349	0.334	0.316	0.311	0.270	0.259	0.235	0.104	0.098
2-3	084457	1	4	2	0.095	0.322	0.313	0.319	0.317	0.337	0.296	0.265	0.251	0.234	0.107	0.098
2-3	084457	1	4	3	0.095	0.338	0.296	0.299	0.304	0.290	0.291	0.263	0.247	0.226	0.108	0.100
2-3	084457	1	4	4	0.096	0.322	0.306	0.315	0.310	0.315	0.279	0.265	0.243	0.238	0.104	0.097
2-3	084457	1	4	5	0.095	0.317	0.307	0.310	0.319	0.310	0.291	0.267	0.241	0.236	0.103	0.099
2-3	084457	1	4	6	0.095	0.312	0.301	0.289	0.312	0.306	0.291	0.265	0.238	0.226	0.104	0.099
2-3	084457	1	4	7	0.096	0.323	0.297	0.300	0.300	0.293	0.275	0.251	0.230	0.219	0.104	0.099
2-3	084457	1	4	8	0.094	0.303	0.284	0.291	0.288	0.277	0.268	0.247	0.225	0.215	0.102	0.099
					0.095	0.323	0.304	0.309	0.311	0.306	0.288	0.262	0.242	0.229	0.105	0.099
					0.001	0.013	0.012	0.019	0.014	0.019	0.013	0.008	0.011	0.008	0.002	0.001
					0.7	4.1	4.0	6.3	4.4	6.1	4.7	3.1	4.5	3.7	1.9	0.9
2-5	084457	2	1	1	0.093	0.253	0.244	0.241	0.232	0.224	0.216	0.200	0.184	0.168	0.097	0.094
2-5	084457	2	1	2	0.093	0.265	0.238	0.236	0.243	0.220	0.214	0.201	0.179	0.166	0.097	0.096
2-5	084457	2	1	3	0.092	0.259	0.242	0.243	0.242	0.220	0.214	0.199	0.183	0.168	0.097	0.096
2-5	084457	2	1	4	0.092	0.260	0.274	0.254	0.248	0.229	0.230	0.269	0.185	0.170	0.095	0.095
2-5	084457	2	1	5	0.092	0.257	0.245	0.238	0.241	0.244	0.234	0.206	0.184	0.169	0.096	0.094
2-5	084457	2	1	6	0.093	0.263	0.240	0.247	0.259	0.244	0.236	0.207	0.192	0.174	0.095	0.095
2-5	084457	2	1	7	0.093	0.259	0.252	0.247	0.254	0.248	0.225	0.204	0.190	0.173	0.096	0.096
2-5	084457	2	1	8	0.093	0.249	0.268	0.265	0.254	0.237	0.226	0.198	0.183	0.173	0.096	0.095
					0.093	0.258	0.250	0.246	0.247	0.233	0.224	0.211	0.185	0.170	0.096	0.095
					0.001	0.005	0.013	0.009	0.009	0.011	0.009	0.024	0.004	0.003	0.001	0.001
					0.6	2.0	5.4	3.8	3.6	4.9	3.9	11.3	2.2	1.7	0.9	0.9

Table 1:

**Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
2-5	084457	2	2	1	0.093	0.254	0.236	0.231	0.225	0.219	0.222	0.196	0.180	0.167	0.098	0.094
2-5	084457	2	2	2	0.094	0.241	0.231	0.229	0.242	0.222	0.220	0.199	0.178	0.171	0.100	0.096
2-5	084457	2	2	3	0.094	0.242	0.223	0.231	0.226	0.217	0.219	0.204	0.186	0.168	0.100	0.096
2-5	084457	2	2	4	0.093	0.247	0.260	0.237	0.226	0.229	0.223	0.198	0.179	0.168	0.099	0.096
2-5	084457	2	2	5	0.093	0.248	0.249	0.239	0.244	0.247	0.240	0.213	0.189	0.174	0.102	0.095
2-5	084457	2	2	6	0.093	0.256	0.243	0.252	0.265	0.248	0.239	0.213	0.190	0.174	0.101	0.096
2-5	084457	2	2	7	0.094	0.257	0.238	0.243	0.240	0.235	0.225	0.210	0.189	0.174	0.101	0.095
2-5	084457	2	2	8	0.096	0.257	0.268	0.245	0.247	0.234	0.218	0.206	0.185	0.187	0.102	0.095
Average					0.094	0.250	0.244	0.238	0.239	0.231	0.226	0.205	0.185	0.173	0.100	0.095
Std. Dev.					0.001	0.007	0.015	0.008	0.014	0.012	0.009	0.007	0.005	0.006	0.001	0.001
Coeff. Var.					1.1	2.6	6.1	3.4	5.7	5.1	3.9	3.3	2.6	3.7	1.4	0.8
2-5	084457	2	3	1	0.092	0.268	0.246	0.238	0.239	0.233	0.233	0.212	0.185	0.173	0.096	0.094
2-5	084457	2	3	2	0.093	0.278	0.262	0.253	0.252	0.240	0.232	0.222	0.191	0.176	0.097	0.096
2-5	084457	2	3	3	0.093	0.276	0.262	0.261	0.266	0.235	0.231	0.220	0.192	0.169	0.097	0.096
2-5	084457	2	3	4	0.093	0.265	0.256	0.247	0.258	0.241	0.225	0.215	0.194	0.167	0.095	0.095
2-5	084457	2	3	5	0.093	0.293	0.270	0.262	0.267	0.249	0.261	0.227	0.196	0.174	0.096	0.095
2-5	084457	2	3	6	0.093	0.287	0.267	0.268	0.271	0.266	0.254	0.218	0.198	0.175	0.096	0.096
2-5	084457	2	3	7	0.093	0.255	0.268	0.262	0.260	0.246	0.239	0.221	0.186	0.176	0.098	0.097
2-5	084457	2	3	8	0.094	0.222	0.223	0.232	0.246	0.234	0.225	0.204	0.195	0.183	0.096	0.096
Average					0.093	0.268	0.257	0.253	0.257	0.243	0.238	0.217	0.192	0.174	0.096	0.096
Std. Dev.					0.001	0.022	0.016	0.013	0.011	0.011	0.013	0.007	0.005	0.005	0.001	0.001
Coeff. Var.					0.6	8.3	6.1	5.1	4.3	4.5	5.6	3.2	2.4	2.8	1.0	1.0
2-5	084457	2	4	1	0.093	0.278	0.257	0.242	0.244	0.224	0.231	0.205	0.191	0.175	0.096	0.095
2-5	084457	2	4	2	0.094	0.266	0.252	0.244	0.249	0.234	0.225	0.203	0.191	0.172	0.101	0.097
2-5	084457	2	4	3	0.094	0.273	0.243	0.253	0.266	0.237	0.238	0.218	0.200	0.170	0.097	0.097
2-5	084457	2	4	4	0.095	0.280	0.256	0.253	0.260	0.252	0.230	0.212	0.191	0.171	0.095	0.096
2-5	084457	2	4	5	0.094	0.270	0.252	0.243	0.255	0.238	0.232	0.212	0.186	0.166	0.099	0.095
2-5	084457	2	4	6	0.095	0.283	0.261	0.251	0.266	0.251	0.243	0.214	0.192	0.176	0.096	0.096
2-5	084457	2	4	7	0.094	0.268	0.250	0.248	0.252	0.239	0.227	0.210	0.199	0.179	0.097	0.097
2-5	084457	2	4	8	0.095	0.270	0.251	0.247	0.244	0.236	0.225	0.207	0.194	0.180	0.097	0.095
Average					0.094	0.274	0.253	0.248	0.255	0.239	0.231	0.210	0.193	0.174	0.097	0.096
Std. Dev.					0.001	0.006	0.005	0.004	0.009	0.009	0.006	0.005	0.005	0.005	0.002	0.001
Coeff. Var.					0.8	2.2	2.1	1.8	3.5	3.8	2.7	2.4	2.4	2.7	2.0	1.0
2-6	084457	3	1	1	0.092	0.396	0.377	0.362	0.355	0.321	0.322	0.298	0.273	0.255	0.114	0.096
2-6	084457	3	1	2	0.093	0.381	0.387	0.396	0.381	0.340	0.348	0.310	0.290	0.256	0.120	0.098
2-6	084457	3	1	3	0.093	0.396	0.389	0.404	0.392	0.352	0.359	0.314	0.297	0.268	0.121	0.097
2-6	084457	3	1	4	0.092	0.385	0.394	0.389	0.370	0.331	0.342	0.290	0.272	0.241	0.114	0.095
2-6	084457	3	1	5	0.093	0.433	0.416	0.413	0.397	0.367	0.343	0.315	0.284	0.260	0.110	0.096
2-6	084457	3	1	6	0.093	0.415	0.398	0.393	0.381	0.354	0.339	0.302	0.274	0.240	0.108	0.097
2-6	084457	3	1	7	0.094	0.416	0.429	0.412	0.405	0.365	0.338	0.302	0.279	0.245	0.112	0.096
2-6	084457	3	1	8	0.093	0.360	0.380	0.373	0.337	0.282	0.268	0.272	0.224	0.200	0.116	0.094
Average					0.093	0.398	0.396	0.393	0.377	0.339	0.332	0.300	0.274	0.246	0.114	0.096
Std. Dev.					0.001	0.023	0.018	0.018	0.023	0.028	0.028	0.014	0.022	0.021	0.005	0.001
Coeff. Var.					0.7	5.8	4.5	4.6	6.0	8.3	8.4	4.7	8.1	8.5	4.0	1.3
2-6	084457	3	2	1	0.092	0.371	0.356	0.341	0.336	0.315	0.312	0.295	0.274	0.233	0.108	0.095
2-6	084457	3	2	2	0.093	0.379	0.374	0.357	0.328	0.337	0.304	0.279	0.241	0.221	0.112	0.096
2-6	084457	3	2	3	0.095	0.390	0.362	0.351	0.345	0.315	0.304	0.277	0.263	0.232	0.110	0.096
2-6	084457	3	2	4	0.094	0.379	0.355	0.363	0.372	0.349	0.336	0.294	0.275	0.238	0.106	0.095
2-6	084457	3	2	5	0.094	0.371	0.346	0.330	0.347	0.350	0.337	0.304	0.268	0.223	0.110	0.095
2-6	084457	3	2	6	0.095	0.345	0.337	0.348	0.352	0.341	0.331	0.286	0.257	0.229	0.110	0.095
2-6	084457	3	2	7	0.094	0.333	0.347	0.344	0.351	0.350	0.320	0.287	0.247	0.210	0.117	0.096
2-6	084457	3	2	8	0.092	0.330	0.310	0.314	0.333	0.303	0.305	0.269	0.219	0.212	0.113	0.095
Average					0.094	0.362	0.348	0.344	0.346	0.333	0.319	0.286	0.256	0.225	0.111	0.095
Std. Dev.					0.001	0.023	0.019	0.016	0.014	0.019	0.014	0.011	0.019	0.010	0.003	0.001
Coeff. Var.					1.3	6.3	5.5	4.5	4.0	5.6	4.5	3.9	7.5	4.5	3.0	0.5

Table 1:

Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
2-6	084457	3	3	1	0.093	0.336	0.344	0.358	0.346	0.347	0.332	0.275	0.267	0.254	0.120	0.098
2-6	084457	3	3	2	0.093	0.406	0.365	0.379	0.348	0.329	0.299	0.261	0.261	0.229	0.116	0.098
2-6	084457	3	3	3	0.094	0.366	0.343	0.370	0.340	0.318	0.300	0.292	0.249	0.225	0.114	0.098
2-6	084457	3	3	4	0.093	0.432	0.335	0.327	0.332	0.316	0.321	0.292	0.265	0.226	0.111	0.097
2-6	084457	3	3	5	0.093	0.346	0.352	0.355	0.359	0.335	0.341	0.327	0.284	0.222	0.110	0.096
2-6	084457	3	3	6	0.093	0.332	0.352	0.339	0.400	0.372	0.347	0.327	0.269	0.223	0.114	0.099
2-6	084457	3	3	7	0.094	0.327	0.301	0.347	0.359	0.345	0.340	0.268	0.228	0.208	0.109	0.097
2-6	084457	3	3	8	0.093	0.340	0.320	0.310	0.324	0.308	0.277	0.232	0.230	0.214	0.111	0.097
	Average				0.093	0.361	0.339	0.348	0.351	0.334	0.320	0.284	0.257	0.225	0.113	0.098
	Std. Dev.				0.000	0.039	0.020	0.023	0.023	0.021	0.025	0.033	0.020	0.014	0.004	0.001
	Coeff. Var.				0.5	10.7	6.0	6.5	6.6	6.2	7.8	11.4	7.6	6.0	3.2	0.9
2-6	084457	3	4	1	0.093	0.427	0.401	0.412	0.385	0.364	0.324	0.317	0.301	0.267	0.112	0.095
2-6	084457	3	4	2	0.094	0.398	0.412	0.404	0.372	0.362	0.328	0.312	0.277	0.262	0.111	0.097
2-6	084457	3	4	3	0.093	0.408	0.393	0.396	0.385	0.350	0.328	0.305	0.277	0.258	0.111	0.096
2-6	084457	3	4	4	0.093	0.393	0.401	0.393	0.374	0.340	0.340	0.295	0.280	0.251	0.109	0.094
2-6	084457	3	4	5	0.092	0.397	0.386	0.372	0.392	0.366	0.345	0.322	0.293	0.269	0.107	0.095
2-6	084457	3	4	6	0.098	0.367	0.378	0.400	0.379	0.358	0.350	0.312	0.291	0.259	0.106	0.095
2-6	084457	3	4	7	0.093	0.345	0.369	0.372	0.378	0.350	0.338	0.300	0.263	0.247	0.110	0.098
2-6	084457	3	4	8	0.092	0.332	0.322	0.373	0.327	0.301	0.304	0.240	0.213	0.207	0.108	0.095
	Average				0.094	0.383	0.383	0.390	0.374	0.349	0.332	0.300	0.274	0.253	0.109	0.096
	Std. Dev.				0.002	0.032	0.028	0.016	0.020	0.021	0.015	0.026	0.027	0.020	0.002	0.001
	Coeff. Var.				2.1	8.5	7.3	4.1	5.4	6.1	4.4	8.6	10.0	7.8	1.9	1.4
2-2	084458	1	1	1	0.097	0.364	0.368	0.384	0.375	0.360	0.366	0.334	0.314	0.301	0.108	0.103
2-2	084458	1	1	2	0.097	0.372	0.363	0.374	0.375	0.380	0.363	0.336	0.330	0.301	0.108	0.102
2-2	084458	1	1	3	0.097	0.368	0.365	0.376	0.379	0.362	0.363	0.337	0.307	0.287	0.108	0.104
2-2	084458	1	1	4	0.097	0.363	0.374	0.384	0.384	0.372	0.356	0.358	0.336	0.305	0.106	0.105
2-2	084458	1	1	5	0.097	0.360	0.368	0.383	0.366	0.365	0.361	0.341	0.331	0.299	0.106	0.102
2-2	084458	1	1	6	0.097	0.374	0.350	0.377	0.376	0.359	0.351	0.324	0.315	0.306	0.107	0.103
2-2	084458	1	1	7	0.098	0.362	0.351	0.354	0.356	0.356	0.345	0.332	0.312	0.286	0.111	0.106
2-2	084458	1	1	8	0.097	0.325	0.333	0.345	0.359	0.339	0.326	0.316	0.299	0.277	0.106	0.104
	Average				0.097	0.361	0.359	0.372	0.371	0.362	0.354	0.335	0.318	0.295	0.108	0.104
	Std. Dev.				0.000	0.015	0.013	0.015	0.010	0.012	0.013	0.012	0.013	0.011	0.002	0.001
	Coeff. Var.				0.4	4.3	3.7	3.9	2.7	3.3	3.8	3.7	4.1	3.6	1.6	1.4
2-2	084458	1	2	1	0.096	0.330	0.322	0.346	0.351	0.350	0.349	0.323	0.323	0.294	0.105	0.102
2-2	084458	1	2	2	0.096	0.355	0.327	0.352	0.359	0.372	0.357	0.337	0.308	0.302	0.107	0.105
2-2	084458	1	2	3	0.096	0.357	0.328	0.327	0.356	0.363	0.351	0.340	0.325	0.285	0.107	0.103
2-2	084458	1	2	4	0.097	0.359	0.341	0.341	0.382	0.337	0.353	0.327	0.326	0.306	0.107	0.104
2-2	084458	1	2	5	0.098	0.362	0.346	0.340	0.354	0.354	0.368	0.354	0.328	0.299	0.108	0.103
2-2	084458	1	2	6	0.097	0.364	0.330	0.345	0.365	0.364	0.373	0.353	0.339	0.301	0.110	0.103
2-2	084458	1	2	7	0.098	0.384	0.353	0.364	0.354	0.354	0.338	0.337	0.312	0.290	0.111	0.104
2-2	084458	1	2	8	0.097	0.364	0.341	0.357	0.346	0.342	0.314	0.320	0.309	0.288	0.112	0.104
	Average				0.097	0.359	0.336	0.347	0.358	0.355	0.350	0.336	0.321	0.296	0.108	0.104
	Std. Dev.				0.001	0.015	0.011	0.011	0.011	0.012	0.018	0.013	0.011	0.008	0.002	0.001
	Coeff. Var.				0.9	4.1	3.2	3.3	3.1	3.3	5.2	3.8	3.4	2.5	2.2	0.9
2-2	084458	1	3	1	0.097	0.321	0.316	0.342	0.338	0.339	0.325	0.304	0.297	0.271	0.107	0.104
2-2	084458	1	3	2	0.097	0.353	0.330	0.345	0.336	0.347	0.336	0.320	0.298	0.271	0.108	0.105
2-2	084458	1	3	3	0.097	0.351	0.312	0.318	0.353	0.335	0.348	0.301	0.306	0.269	0.106	0.104
2-2	084458	1	3	4	0.097	0.368	0.340	0.336	0.331	0.333	0.313	0.322	0.297	0.283	0.105	0.104
2-2	084458	1	3	5	0.098	0.377	0.353	0.338	0.348	0.351	0.359	0.338	0.307	0.305	0.107	0.105
2-2	084458	1	3	6	0.097	0.355	0.326	0.328	0.330	0.322	0.329	0.315	0.290	0.276	0.104	0.103
2-2	084458	1	3	7	0.099	0.363	0.325	0.325	0.329	0.322	0.308	0.302	0.300	0.267	0.106	0.106
2-2	084458	1	3	8	0.098	0.339	0.313	0.314	0.309	0.301	0.287	0.280	0.283	0.256	0.104	0.104
	Average				0.098	0.353	0.327	0.331	0.334	0.331	0.326	0.310	0.297	0.275	0.106	0.104
	Std. Dev.				0.001	0.017	0.014	0.011	0.013	0.016	0.023	0.017	0.008	0.014	0.001	0.001
	Coeff. Var.				0.8	4.9	4.3	3.4	4.0	4.8	7.1	5.6	2.7	5.3	1.4	0.9

Table 1:

Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
2-2	084458	1	4	1	0.098	0.327	0.349	0.355	0.358	0.330	0.335	0.308	0.297	0.272	0.107	0.104
2-2	084458	1	4	2	0.100	0.360	0.339	0.356	0.349	0.353	0.345	0.311	0.293	0.279	0.107	0.104
2-2	084458	1	4	3	0.099	0.350	0.338	0.351	0.367	0.349	0.321	0.315	0.310	0.287	0.105	0.103
2-2	084458	1	4	4	0.100	0.348	0.336	0.345	0.332	0.344	0.325	0.301	0.299	0.282	0.103	0.103
2-2	084458	1	4	5	0.099	0.339	0.346	0.343	0.335	0.340	0.330	0.308	0.294	0.288	0.107	0.103
2-2	084458	1	4	6	0.099	0.346	0.342	0.356	0.373	0.364	0.357	0.338	0.321	0.280	0.112	0.105
2-2	084458	1	4	7	0.100	0.346	0.350	0.366	0.389	0.363	0.357	0.341	0.318	0.276	0.107	0.105
2-2	084458	1	4	8	0.099	0.355	0.341	0.355	0.359	0.337	0.334	0.313	0.307	0.279	0.107	0.105
	Average				0.099	0.346	0.343	0.353	0.358	0.348	0.338	0.317	0.305	0.280	0.107	0.104
	Std. Dev.				0.001	0.010	0.005	0.007	0.019	0.012	0.014	0.015	0.011	0.005	0.003	0.001
	Coeff. Var.				0.7	2.9	1.5	2.0	5.3	3.5	4.1	4.6	3.5	1.9	2.4	0.9
2-4	084458	2	1	1	0.094	0.318	0.313	0.303	0.307	0.301	0.291	0.284	0.253	0.243	0.130	0.097
2-4	084458	2	1	2	0.095	0.324	0.325	0.339	0.312	0.325	0.306	0.285	0.255	0.249	0.128	0.098
2-4	084458	2	1	3	0.095	0.332	0.320	0.333	0.323	0.338	0.326	0.307	0.285	0.267	0.122	0.099
2-4	084458	2	1	4	0.094	0.318	0.327	0.341	0.339	0.342	0.316	0.307	0.293	0.268	0.125	0.098
2-4	084458	2	1	5	0.094	0.326	0.322	0.323	0.330	0.344	0.331	0.307	0.289	0.262	0.122	0.099
2-4	084458	2	1	6	0.095	0.336	0.325	0.325	0.339	0.341	0.328	0.311	0.286	0.279	0.122	0.101
2-4	084458	2	1	7	0.096	0.319	0.317	0.316	0.320	0.329	0.308	0.292	0.281	0.269	0.132	0.100
2-4	084458	2	1	8	0.096	0.339	0.323	0.324	0.327	0.328	0.293	0.282	0.257	0.239	0.122	0.099
	Average				0.095	0.327	0.322	0.326	0.325	0.331	0.312	0.297	0.275	0.260	0.125	0.099
	Std. Dev.				0.001	0.008	0.005	0.012	0.012	0.014	0.016	0.012	0.017	0.014	0.004	0.001
	Coeff. Var.				0.9	2.5	1.4	3.8	3.6	4.3	5.0	4.1	6.1	5.5	3.3	1.3
2-4	084458	2	2	1	0.095	0.325	0.308	0.313	0.322	0.307	0.306	0.288	0.273	0.260	0.146	0.097
2-4	084458	2	2	2	0.095	0.333	0.313	0.322	0.314	0.309	0.308	0.294	0.271	0.251	0.154	0.098
2-4	084458	2	2	3	0.096	0.344	0.309	0.349	0.329	0.331	0.324	0.307	0.286	0.260	0.142	0.100
2-4	084458	2	2	4	0.096	0.333	0.329	0.332	0.345	0.338	0.327	0.311	0.297	0.266	0.130	0.099
2-4	084458	2	2	5	0.095	0.327	0.322	0.324	0.344	0.340	0.335	0.314	0.291	0.260	0.134	0.101
2-4	084458	2	2	6	0.095	0.335	0.332	0.328	0.334	0.323	0.321	0.290	0.282	0.272	0.122	0.104
2-4	084458	2	2	7	0.096	0.328	0.323	0.318	0.322	0.321	0.296	0.281	0.268	0.249	0.127	0.102
2-4	084458	2	2	8	0.098	0.352	0.329	0.318	0.321	0.309	0.297	0.283	0.268	0.252	0.131	0.098
	Average				0.096	0.335	0.321	0.326	0.329	0.322	0.314	0.296	0.280	0.259	0.136	0.100
	Std. Dev.				0.001	0.009	0.009	0.011	0.011	0.013	0.014	0.013	0.011	0.008	0.011	0.002
	Coeff. Var.				1.1	2.7	3.0	3.5	3.4	4.1	4.6	4.4	4.0	3.0	7.9	2.4
2-4	084458	2	3	1	0.095	0.334	0.330	0.325	0.334	0.323	0.311	0.307	0.287	0.269	0.146	0.098
2-4	084458	2	3	2	0.097	0.347	0.330	0.336	0.343	0.337	0.332	0.300	0.288	0.287	0.141	0.100
2-4	084458	2	3	3	0.097	0.353	0.332	0.344	0.360	0.365	0.346	0.316	0.299	0.284	0.138	0.100
2-4	084458	2	3	4	0.096	0.349	0.336	0.366	0.365	0.370	0.355	0.327	0.304	0.280	0.136	0.101
2-4	084458	2	3	5	0.095	0.347	0.338	0.368	0.380	0.384	0.357	0.339	0.306	0.292	0.135	0.098
2-4	084458	2	3	6	0.098	0.368	0.348	0.375	0.380	0.366	0.361	0.338	0.308	0.285	0.137	0.102
2-4	084458	2	3	7	0.096	0.344	0.329	0.344	0.355	0.353	0.346	0.316	0.302	0.284	0.137	0.101
2-4	084458	2	3	8	0.097	0.350	0.341	0.350	0.351	0.349	0.334	0.302	0.305	0.291	0.141	0.105
	Average				0.096	0.349	0.336	0.351	0.359	0.356	0.343	0.318	0.300	0.284	0.139	0.101
	Std. Dev.				0.001	0.010	0.007	0.017	0.016	0.020	0.017	0.015	0.008	0.007	0.004	0.002
	Coeff. Var.				1.1	2.7	2.0	4.9	4.6	5.5	4.8	4.8	2.7	2.5	2.6	2.2
2-4	084458	2	4	1	0.096	0.329	0.307	0.312	0.327	0.316	0.316	0.293	0.281	0.272	0.150	0.099
2-4	084458	2	4	2	0.096	0.345	0.321	0.319	0.309	0.312	0.313	0.292	0.287	0.268	0.140	0.100
2-4	084458	2	4	3	0.097	0.320	0.302	0.317	0.323	0.322	0.319	0.307	0.281	0.269	0.138	0.101
2-4	084458	2	4	4	0.097	0.324	0.306	0.312	0.313	0.321	0.316	0.292	0.266	0.256	0.136	0.099
2-4	084458	2	4	5	0.095	0.321	0.312	0.310	0.324	0.340	0.344	0.311	0.284	0.270	0.133	0.099
2-4	084458	2	4	6	0.095	0.331	0.304	0.318	0.327	0.321	0.329	0.294	0.290	0.263	0.138	0.101
2-4	084458	2	4	7	0.096	0.324	0.315	0.319	0.323	0.318	0.314	0.284	0.277	0.264	0.129	0.105
2-4	084458	2	4	8	0.096	0.362	0.348	0.313	0.320	0.317	0.313	0.284	0.297	0.268	0.130	0.102
	Average				0.096	0.332	0.314	0.315	0.321	0.321	0.321	0.295	0.283	0.266	0.137	0.101
	Std. Dev.				0.001	0.015	0.015	0.004	0.007	0.008	0.011	0.010	0.009	0.005	0.007	0.002
	Coeff. Var.				0.8	4.4	4.8	1.2	2.0	2.6	3.4	3.3	3.3	1.9	4.9	2.0

Table 1:

Neutral Red Cytotoxicity Assay Results
(Uncorrected Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Raw Assay Plate Absorbance Readings											
					Assay Blank	Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
							2	3	4	6	8	12	16	20	110	200
2-8	084458	3	1	1	0.095	0.466	0.423	0.451	0.441	0.428	0.406	0.387	0.373	0.354	0.103	0.098
2-8	084458	3	1	2	0.095	0.430	0.441	0.482	0.436	0.427	0.417	0.397	0.385	0.370	0.109	0.097
2-8	084458	3	1	3	0.096	0.446	0.466	0.482	0.454	0.435	0.438	0.412	0.406	0.363	0.109	0.098
2-8	084458	3	1	4	0.094	0.452	0.460	0.469	0.464	0.450	0.434	0.413	0.393	0.351	0.105	0.098
2-8	084458	3	1	5	0.093	0.459	0.473	0.482	0.472	0.445	0.447	0.402	0.397	0.359	0.103	0.097
2-8	084458	3	1	6	0.093	0.455	0.458	0.477	0.472	0.458	0.446	0.425	0.397	0.365	0.103	0.097
2-8	084458	3	1	7	0.094	0.440	0.479	0.481	0.463	0.452	0.434	0.427	0.401	0.353	0.104	0.098
2-8	084458	3	1	8	0.094	0.440	0.437	0.443	0.438	0.417	0.413	0.382	0.362	0.353	0.103	0.096
	Average				0.094	0.449	0.455	0.471	0.455	0.439	0.429	0.406	0.389	0.359	0.105	0.097
	Std. Dev.				0.001	0.012	0.019	0.016	0.015	0.014	0.015	0.017	0.015	0.007	0.003	0.001
	Coeff. Var.				1.1	2.6	4.2	3.3	3.3	3.3	3.6	4.1	3.9	1.9	2.5	0.8
2-8	084458	3	2	1	0.093	0.429	0.402	0.405	0.396	0.383	0.392	0.369	0.351	0.337	0.108	0.096
2-8	084458	3	2	2	0.093	0.415	0.428	0.368	0.389	0.348	0.366	0.373	0.351	0.336	0.110	0.099
2-8	084458	3	2	3	0.094	0.414	0.403	0.420	0.416	0.391	0.404	0.372	0.374	0.345	0.109	0.098
2-8	084458	3	2	4	0.093	0.396	0.381	0.420	0.412	0.417	0.398	0.384	0.347	0.326	0.103	0.096
2-8	084458	3	2	5	0.092	0.420	0.424	0.439	0.445	0.435	0.434	0.415	0.379	0.365	0.105	0.098
2-8	084458	3	2	6	0.094	0.417	0.400	0.399	0.430	0.436	0.405	0.390	0.364	0.344	0.105	0.097
2-8	084458	3	2	7	0.093	0.419	0.410	0.398	0.414	0.401	0.377	0.369	0.346	0.336	0.105	0.097
2-8	084458	3	2	8	0.093	0.385	0.380	0.389	0.415	0.409	0.390	0.380	0.366	0.333	0.105	0.095
	Average				0.093	0.412	0.404	0.405	0.415	0.403	0.396	0.382	0.360	0.340	0.106	0.097
	Std. Dev.				0.001	0.014	0.017	0.022	0.018	0.029	0.020	0.015	0.013	0.012	0.002	0.001
	Coeff. Var.				0.7	3.5	4.3	5.4	4.2	7.2	5.1	4.1	3.5	3.4	2.3	1.3
2-8	084458	3	3	1	0.094	0.397	0.384	0.392	0.395	0.381	0.356	0.394	0.378	0.344	0.117	0.097
2-8	084458	3	3	2	0.094	0.387	0.401	0.395	0.380	0.388	0.381	0.371	0.381	0.344	0.115	0.099
2-8	084458	3	3	3	0.094	0.382	0.386	0.392	0.403	0.394	0.401	0.374	0.369	0.329	0.113	0.098
2-8	084458	3	3	4	0.093	0.379	0.372	0.377	0.372	0.401	0.369	0.381	0.371	0.333	0.106	0.096
2-8	084458	3	3	5	0.093	0.379	0.372	0.385	0.411	0.401	0.407	0.369	0.354	0.318	0.108	0.098
2-8	084458	3	3	6	0.093	0.371	0.369	0.384	0.392	0.387	0.383	0.359	0.353	0.307	0.110	0.096
2-8	084458	3	3	7	0.094	0.376	0.379	0.373	0.364	0.362	0.346	0.326	0.331	0.272	0.112	0.098
2-8	084458	3	3	8	0.093	0.364	0.376	0.370	0.338	0.368	0.351	0.346	0.358	0.304	0.114	0.096
	Average				0.094	0.379	0.380	0.384	0.382	0.385	0.374	0.365	0.362	0.319	0.112	0.097
	Std. Dev.				0.001	0.010	0.010	0.009	0.024	0.014	0.023	0.021	0.016	0.024	0.004	0.001
	Coeff. Var.				0.6	2.6	2.7	2.4	6.2	3.7	6.1	5.8	4.5	7.6	3.3	1.2
2-8	084458	3	4	1	0.093	0.418	0.388	0.398	0.398	0.360	0.371	0.357	0.369	0.329	0.106	0.097
2-8	084458	3	4	2	0.092	0.392	0.415	0.416	0.397	0.400	0.406	0.387	0.403	0.363	0.104	0.099
2-8	084458	3	4	3	0.093	0.386	0.420	0.434	0.399	0.406	0.406	0.373	0.385	0.348	0.104	0.096
2-8	084458	3	4	4	0.092	0.386	0.408	0.423	0.381	0.396	0.366	0.353	0.366	0.328	0.102	0.095
2-8	084458	3	4	5	0.092	0.427	0.434	0.443	0.422	0.418	0.399	0.387	0.397	0.359	0.105	0.096
2-8	084458	3	4	6	0.093	0.408	0.430	0.437	0.418	0.414	0.411	0.374	0.379	0.346	0.102	0.097
2-8	084458	3	4	7	0.094	0.405	0.388	0.399	0.401	0.389	0.384	0.360	0.362	0.324	0.106	0.098
2-8	084458	3	4	8	0.093	0.360	0.366	0.381	0.371	0.342	0.348	0.328	0.325	0.306	0.104	0.096
	Average				0.093	0.398	0.406	0.416	0.398	0.391	0.386	0.365	0.373	0.338	0.104	0.097
	Std. Dev.				0.001	0.021	0.024	0.022	0.017	0.027	0.023	0.020	0.024	0.019	0.002	0.001
	Coeff. Var.				0.8	5.3	5.8	5.3	4.2	6.8	5.9	5.4	6.5	5.7	1.5	1.3

Table 2: Neutral Red Cytotoxicity Assay Results (Blank-Corrected Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)							SLS (µg/mL)		
						2	3	4	6	8	12	16	20	110	200
3-4	084394	1	1	1	0.238	0.221	0.219	0.221	0.202	0.189	0.171	0.153	0.138	0.005	0.000
3-4	084394	1	1	2	0.238	0.219	0.246	0.237	0.215	0.209	0.184	0.158	0.142	0.005	0.004
3-4	084394	1	1	3	0.217	0.205	0.233	0.227	0.217	0.217	0.192	0.161	0.136	0.005	0.002
3-4	084394	1	1	4	0.218	0.211	0.225	0.241	0.247	0.222	0.197	0.165	0.145	0.004	0.002
3-4	084394	1	1	5	0.258	0.240	0.244	0.268	0.252	0.241	0.210	0.170	0.158	0.004	0.002
3-4	084394	1	1	6	0.235	0.223	0.237	0.247	0.250	0.233	0.207	0.160	0.147	0.004	0.002
3-4	084394	1	1	7	0.246	0.231	0.241	0.240	0.235	0.239	0.199	0.167	0.149	0.006	0.003
3-4	084394	1	1	8	0.237	0.252	0.241	0.234	0.206	0.213	0.158	0.136	0.126	0.004	0.002
Average					0.236	0.225	0.236	0.239	0.228	0.220	0.190	0.159	0.142	0.004	0.002
Std. Dev.					0.014	0.015	0.010	0.014	0.020	0.017	0.018	0.011	0.010	0.001	0.001
Coeff. Var.					5.7	6.8	4.0	5.9	9.0	7.9	9.4	6.7	6.7	17.0	60.1
3-4	084394	1	2	1	0.226	0.211	0.224	0.219	0.206	0.194	0.175	0.151	0.132	0.004	0.001
3-4	084394	1	2	2	0.203	0.210	0.238	0.222	0.202	0.179	0.153	0.139	0.131	0.002	0.002
3-4	084394	1	2	3	0.220	0.212	0.265	0.244	0.216	0.196	0.170	0.145	0.140	0.004	0.003
3-4	084394	1	2	4	0.222	0.211	0.271	0.243	0.210	0.201	0.167	0.156	0.138	0.001	0.001
3-4	084394	1	2	5	0.244	0.242	0.266	0.258	0.229	0.214	0.180	0.153	0.144	0.003	0.001
3-4	084394	1	2	6	0.231	0.229	0.255	0.251	0.244	0.209	0.184	0.154	0.151	0.003	0.001
3-4	084394	1	2	7	0.228	0.222	0.248	0.245	0.233	0.214	0.193	0.155	0.138	0.004	0.002
3-4	084394	1	2	8	0.224	0.217	0.226	0.230	0.220	0.208	0.173	0.136	0.119	0.003	0.000
Average					0.225	0.219	0.249	0.239	0.220	0.202	0.175	0.149	0.137	0.003	0.002
Std. Dev.					0.011	0.011	0.018	0.014	0.014	0.012	0.012	0.008	0.010	0.001	0.001
Coeff. Var.					5.1	5.2	7.3	5.8	6.6	5.9	6.9	5.2	7.0	34.2	61.1
3-4	084394	1	3	1	0.228	0.241	0.228	0.228	0.211	0.183	0.172	0.146	0.138	0.006	0.001
3-4	084394	1	3	2	0.230	0.230	0.256	0.234	0.217	0.195	0.167	0.154	0.138	0.004	0.003
3-4	084394	1	3	3	0.255	0.236	0.257	0.258	0.219	0.205	0.170	0.147	0.129	0.005	0.003
3-4	084394	1	3	4	0.269	0.242	0.259	0.261	0.242	0.223	0.185	0.152	0.134	0.004	0.002
3-4	084394	1	3	5	0.259	0.236	0.254	0.250	0.213	0.207	0.173	0.140	0.131	0.005	0.000
3-4	084394	1	3	6	0.257	0.233	0.276	0.273	0.242	0.226	0.181	0.141	0.139	0.004	0.002
3-4	084394	1	3	7	0.252	0.242	0.250	0.247	0.236	0.221	0.183	0.154	0.099	0.006	0.003
3-4	084394	1	3	8	0.192	0.197	0.187	0.183	0.166	0.159	0.138	0.123	0.114	0.005	0.002
Average					0.242	0.232	0.246	0.241	0.218	0.202	0.171	0.144	0.127	0.005	0.002
Std. Dev.					0.025	0.015	0.027	0.028	0.025	0.023	0.015	0.010	0.014	0.001	0.001
Coeff. Var.					10.3	6.4	11.1	11.5	11.3	11.3	8.7	7.1	11.1	18.5	65.8
3-4	084394	1	4	1	0.225	0.206	0.231	0.236	0.200	0.197	0.170	0.151	0.136	0.009	0.004
3-4	084394	1	4	2	0.236	0.226	0.230	0.226	0.219	0.200	0.168	0.150	0.136	0.009	0.003
3-4	084394	1	4	3	0.219	0.202	0.234	0.258	0.235	0.213	0.171	0.148	0.132	0.008	0.004
3-4	084394	1	4	4	0.201	0.195	0.217	0.231	0.230	0.215	0.174	0.142	0.126	0.004	0.002
3-4	084394	1	4	5	0.245	0.226	0.234	0.259	0.243	0.218	0.176	0.156	0.133	0.005	0.001
3-4	084394	1	4	6	0.218	0.205	0.216	0.231	0.227	0.211	0.189	0.150	0.134	0.004	0.003
3-4	084394	1	4	7	0.231	0.219	0.226	0.240	0.230	0.210	0.184	0.154	0.137	0.010	0.005
3-4	084394	1	4	8	0.233	0.229	0.236	0.238	0.221	0.210	0.182	0.147	0.131	0.012	0.002
Average					0.226	0.213	0.228	0.240	0.225	0.209	0.176	0.149	0.133	0.007	0.003
Std. Dev.					0.013	0.013	0.008	0.012	0.013	0.007	0.007	0.004	0.004	0.003	0.001
Coeff. Var.					6.0	6.1	3.4	5.1	5.7	3.4	4.3	2.9	2.7	41.0	49.9
3-6	084394	2	1	1	0.285	0.254	0.261	0.267	0.247	0.232	0.199	0.178	0.143	0.005	0.002
3-6	084394	2	1	2	0.253	0.239	0.240	0.238	0.209	0.200	0.163	0.140	0.125	0.004	0.004
3-6	084394	2	1	3	0.248	0.234	0.236	0.232	0.216	0.207	0.178	0.142	0.121	0.006	0.003
3-6	084394	2	1	4	0.241	0.221	0.232	0.236	0.240	0.225	0.179	0.147	0.118	0.004	0.003
3-6	084394	2	1	5	0.236	0.215	0.238	0.238	0.252	0.249	0.212	0.170	0.125	0.005	0.002
3-6	084394	2	1	6	0.239	0.220	0.224	0.235	0.242	0.233	0.204	0.155	0.129	0.004	0.003
3-6	084394	2	1	7	0.263	0.235	0.238	0.240	0.235	0.213	0.179	0.161	0.131	0.010	0.004
3-6	084394	2	1	8	0.282	0.238	0.232	0.258	0.223	0.199	0.161	0.141	0.121	0.007	0.003
Average					0.256	0.232	0.238	0.243	0.233	0.220	0.185	0.155	0.127	0.006	0.003
Std. Dev.					0.019	0.013	0.011	0.013	0.015	0.018	0.019	0.014	0.008	0.002	0.001
Coeff. Var.					7.5	5.5	4.5	5.1	6.6	8.1	10.2	9.3	6.2	34.4	22.4

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)							SLS (µg/mL)		
						2	3	4	6	8	12	16	20	110	200
3-6	084394	2	2	1	0.296	0.298	0.284	0.275	0.270	0.255	0.207	0.180	0.154	0.003	0.001
3-6	084394	2	2	2	0.268	0.273	0.270	0.283	0.255	0.250	0.219	0.169	0.154	0.006	0.003
3-6	084394	2	2	3	0.248	0.271	0.275	0.265	0.241	0.243	0.214	0.164	0.155	0.006	0.002
3-6	084394	2	2	4	0.253	0.271	0.279	0.267	0.242	0.239	0.211	0.174	0.136	0.008	0.002
3-6	084394	2	2	5	0.248	0.254	0.261	0.251	0.243	0.249	0.225	0.177	0.153	0.006	0.000
3-6	084394	2	2	6	0.266	0.259	0.252	0.265	0.256	0.258	0.225	0.175	0.151	0.006	0.003
3-6	084394	2	2	7	0.285	0.247	0.240	0.247	0.253	0.236	0.202	0.170	0.130	0.011	0.003
3-6	084394	2	2	8	0.295	0.256	0.246	0.253	0.237	0.228	0.190	0.164	0.139	0.007	0.001
					0.270	0.266	0.263	0.263	0.250	0.245	0.212	0.172	0.146	0.007	0.002
					0.020	0.016	0.016	0.012	0.011	0.010	0.012	0.006	0.010	0.002	0.001
					7.4	6.0	6.1	4.7	4.4	4.1	5.7	3.4	6.8	34.8	64.3
3-6	084394	2	3	1	0.282	0.245	0.241	0.236	0.236	0.211	0.193	0.173	0.161	0.006	0.004
3-6	084394	2	3	2	0.237	0.228	0.221	0.229	0.213	0.193	0.169	0.148	0.123	0.007	0.005
3-6	084394	2	3	3	0.235	0.221	0.219	0.211	0.203	0.187	0.165	0.144	0.135	0.005	0.002
3-6	084394	2	3	4	0.223	0.214	0.217	0.212	0.213	0.205	0.179	0.140	0.116	0.003	0.001
3-6	084394	2	3	5	0.216	0.213	0.221	0.218	0.237	0.227	0.197	0.155	0.124	0.008	0.002
3-6	084394	2	3	6	0.227	0.225	0.223	0.233	0.232	0.237	0.197	0.155	0.126	0.006	0.003
3-6	084394	2	3	7	0.229	0.227	0.233	0.248	0.221	0.203	0.178	0.151	0.130	0.012	0.005
3-6	084394	2	3	8	0.196	0.214	0.207	0.213	0.209	0.201	0.187	0.149	0.124	0.007	0.002
					0.231	0.223	0.223	0.225	0.221	0.208	0.183	0.152	0.130	0.007	0.003
					0.024	0.011	0.010	0.014	0.013	0.017	0.012	0.010	0.014	0.003	0.002
					10.6	4.8	4.6	6.0	5.9	8.0	6.7	6.6	10.6	38.6	50.4
3-6	084394	2	4	1	0.298	0.296	0.295	0.266	0.265	0.239	0.196	0.151	0.128	0.005	0.003
3-6	084394	2	4	2	0.284	0.279	0.277	0.261	0.247	0.247	0.204	0.169	0.150	0.006	0.003
3-6	084394	2	4	3	0.286	0.274	0.290	0.273	0.261	0.243	0.213	0.172	0.144	0.006	0.003
3-6	084394	2	4	4	0.266	0.273	0.293	0.277	0.262	0.230	0.213	0.171	0.141	0.004	0.002
3-6	084394	2	4	5	0.271	0.273	0.281	0.285	0.260	0.242	0.219	0.183	0.152	0.005	0.001
3-6	084394	2	4	6	0.291	0.271	0.291	0.285	0.270	0.258	0.233	0.193	0.165	0.004	0.003
3-6	084394	2	4	7	0.319	0.270	0.268	0.275	0.271	0.263	0.218	0.178	0.128	0.010	0.004
3-6	084394	2	4	8	0.324	0.288	0.283	0.266	0.239	0.241	0.210	0.166	0.157	0.006	0.002
					0.292	0.278	0.285	0.274	0.259	0.245	0.213	0.173	0.146	0.006	0.003
					0.021	0.009	0.009	0.009	0.011	0.011	0.011	0.012	0.013	0.002	0.001
					7.1	3.3	3.2	3.2	4.3	4.3	5.1	7.2	9.0	33.2	34.9
3-13	084394	3	1	1	0.316	0.332	0.342	0.335	0.349	0.325	0.260	0.221	0.180	0.010	0.003
3-13	084394	3	1	2	0.368	0.373	0.353	0.348	0.336	0.318	0.280	0.230	0.183	0.009	0.004
3-13	084394	3	1	3	0.362	0.360	0.355	0.347	0.325	0.320	0.271	0.233	0.193	0.010	0.006
3-13	084394	3	1	4	0.394	0.382	0.379	0.366	0.342	0.313	0.274	0.232	0.196	0.006	0.002
3-13	084394	3	1	5	0.335	0.337	0.343	0.343	0.327	0.288	0.256	0.233	0.208	0.008	0.004
3-13	084394	3	1	6	0.366	0.364	0.356	0.345	0.324	0.315	0.261	0.226	0.202	0.007	0.003
3-13	084394	3	1	7	0.348	0.325	0.329	0.328	0.302	0.275	0.234	0.201	0.172	0.007	0.004
3-13	084394	3	1	8	0.273	0.337	0.280	0.282	0.267	0.254	0.208	0.174	0.158	0.007	0.000
					0.346	0.352	0.342	0.337	0.322	0.301	0.256	0.219	0.187	0.008	0.004
					0.037	0.021	0.029	0.025	0.026	0.026	0.024	0.021	0.017	0.002	0.002
					10.8	6.0	8.5	7.3	8.1	8.5	9.3	9.6	8.8	18.3	50.1
3-13	084394	3	2	1	0.387	0.399	0.420	0.391	0.390	0.365	0.309	0.257	0.196	0.015	0.003
3-13	084394	3	2	2	0.387	0.389	0.397	0.384	0.367	0.357	0.294	0.252	0.212	0.023	0.008
3-13	084394	3	2	3	0.387	0.391	0.400	0.391	0.366	0.358	0.295	0.246	0.225	0.036	0.006
3-13	084394	3	2	4	0.384	0.396	0.385	0.375	0.352	0.345	0.301	0.247	0.218	0.024	0.003
3-13	084394	3	2	5	0.385	0.383	0.389	0.389	0.355	0.334	0.297	0.239	0.219	0.019	0.003
3-13	084394	3	2	6	0.379	0.375	0.369	0.366	0.339	0.335	0.284	0.238	0.203	0.013	0.005
3-13	084394	3	2	7	0.383	0.391	0.381	0.367	0.332	0.317	0.263	0.224	0.192	0.014	0.004
3-13	084394	3	2	8	0.295	0.347	0.295	0.322	0.267	0.250	0.207	0.194	0.175	0.013	0.002
					0.373	0.384	0.379	0.373	0.346	0.332	0.281	0.237	0.205	0.019	0.004
					0.032	0.017	0.037	0.023	0.037	0.037	0.033	0.020	0.017	0.008	0.002
					8.5	4.3	9.8	6.2	10.6	11.1	11.7	8.5	8.2	41.2	51.1

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (μL/mL)								SLS (μg/mL)	
						2	3	4	6	8	12	16	20	110	200
3-13	084394	3	3	1	0.354	0.346	0.367	0.368	0.352	0.322	0.282	0.209	0.196	0.010	0.003
3-13	084394	3	3	2	0.350	0.338	0.365	0.349	0.338	0.318	0.276	0.234	0.215	0.010	0.006
3-13	084394	3	3	3	0.361	0.341	0.355	0.359	0.332	0.325	0.274	0.238	0.213	0.013	0.006
3-13	084394	3	3	4	0.349	0.337	0.336	0.362	0.348	0.315	0.272	0.230	0.204	0.009	0.004
3-13	084394	3	3	5	0.324	0.311	0.325	0.352	0.357	0.327	0.283	0.233	0.202	0.011	0.003
3-13	084394	3	3	6	0.294	0.298	0.301	0.336	0.328	0.302	0.263	0.228	0.198	0.008	0.004
3-13	084394	3	3	7	0.293	0.297	0.319	0.337	0.329	0.291	0.266	0.218	0.193	0.012	0.005
3-13	084394	3	3	8	0.262	0.247	0.240	0.246	0.228	0.217	0.194	0.176	0.165	0.013	0.002
	Average				0.323	0.314	0.326	0.339	0.326	0.302	0.264	0.221	0.198	0.011	0.004
	Std. Dev.				0.036	0.034	0.042	0.039	0.041	0.036	0.029	0.020	0.016	0.002	0.001
	Coeff. Var.				11.3	10.7	12.8	11.5	12.6	12.1	11.0	9.2	7.8	17.2	36.4
3-13	084394	3	4	1	0.349	0.344	0.342	0.343	0.329	0.329	0.303	0.247	0.190	0.015	0.003
3-13	084394	3	4	2	0.336	0.335	0.336	0.345	0.319	0.306	0.267	0.222	0.181	0.016	0.006
3-13	084394	3	4	3	0.340	0.307	0.336	0.358	0.326	0.302	0.269	0.218	0.189	0.015	0.006
3-13	084394	3	4	4	0.335	0.311	0.307	0.315	0.290	0.269	0.235	0.197	0.165	0.014	0.002
3-13	084394	3	4	5	0.350	0.313	0.313	0.329	0.317	0.306	0.261	0.214	0.188	0.016	0.005
3-13	084394	3	4	6	0.327	0.315	0.310	0.347	0.300	0.298	0.249	0.215	0.192	0.018	0.005
3-13	084394	3	4	7	0.300	0.328	0.327	0.327	0.310	0.289	0.242	0.215	0.176	0.020	0.005
3-13	084394	3	4	8	0.271	0.260	0.263	0.258	0.225	0.205	0.181	0.173	0.156	0.020	0.003
	Average				0.326	0.314	0.316	0.327	0.302	0.288	0.251	0.212	0.179	0.016	0.004
	Std. Dev.				0.027	0.025	0.025	0.031	0.034	0.038	0.035	0.021	0.013	0.002	0.002
	Coeff. Var.				8.4	8.1	8.0	9.6	11.2	13.1	14.0	10.0	7.3	14.1	37.6
3-9	084395	1	1	1	0.203	0.207	0.217	0.229	0.198	0.196	0.156	0.129	0.118	0.003	0.001
3-9	084395	1	1	2	0.206	0.194	0.233	0.227	0.209	0.216	0.172	0.130	0.108	0.009	0.003
3-9	084395	1	1	3	0.207	0.211	0.229	0.226	0.220	0.198	0.179	0.146	0.124	0.017	0.003
3-9	084395	1	1	4	0.209	0.208	0.219	0.217	0.206	0.196	0.154	0.145	0.108	0.023	0.002
3-9	084395	1	1	5	0.196	0.226	0.228	0.218	0.210	0.195	0.166	0.122	0.107	0.025	0.002
3-9	084395	1	1	6	0.212	0.228	0.222	0.220	0.221	0.202	0.160	0.139	0.115	0.025	0.002
3-9	084395	1	1	7	0.205	0.209	0.223	0.224	0.204	0.199	0.162	0.141	0.108	0.013	0.006
3-9	084395	1	1	8	0.162	0.189	0.190	0.193	0.177	0.179	0.127	0.122	0.104	0.009	0.001
	Average				0.200	0.209	0.221	0.220	0.206	0.198	0.160	0.135	0.112	0.016	0.003
	Std. Dev.				0.016	0.014	0.013	0.011	0.014	0.010	0.016	0.010	0.007	0.008	0.002
	Coeff. Var.				8.0	6.5	6.0	5.2	6.8	5.1	9.7	7.3	6.1	52.5	55.8
3-9	084395	1	2	1	0.233	0.255	0.231	0.232	0.206	0.189	0.166	0.130	0.117	0.006	0.002
3-9	084395	1	2	2	0.231	0.226	0.230	0.238	0.221	0.197	0.156	0.127	0.112	0.005	0.001
3-9	084395	1	2	3	0.232	0.238	0.260	0.260	0.214	0.207	0.171	0.144	0.113	0.006	0.004
3-9	084395	1	2	4	0.238	0.231	0.234	0.246	0.221	0.195	0.167	0.132	0.116	0.005	0.000
3-9	084395	1	2	5	0.262	0.265	0.266	0.231	0.266	0.218	0.186	0.155	0.127	0.005	0.002
3-9	084395	1	2	6	0.265	0.259	0.266	0.253	0.253	0.219	0.183	0.143	0.125	0.004	0.003
3-9	084395	1	2	7	0.250	0.255	0.250	0.243	0.238	0.216	0.172	0.152	0.120	0.008	0.006
3-9	084395	1	2	8	0.184	0.179	0.182	0.169	0.175	0.170	0.135	0.120	0.096	0.006	0.003
	Average				0.236	0.238	0.239	0.234	0.224	0.201	0.167	0.137	0.115	0.005	0.002
	Std. Dev.				0.025	0.028	0.028	0.028	0.028	0.017	0.016	0.012	0.010	0.001	0.002
	Coeff. Var.				10.7	11.7	11.6	12.0	12.7	8.5	9.6	9.1	8.3	23.2	86.9
3-9	084395	1	3	1	0.168	0.173	0.193	0.188	0.191	0.184	0.159	0.129	0.121	0.000	-0.002
3-9	084395	1	3	2	0.207	0.193	0.205	0.220	0.200	0.195	0.171	0.151	0.120	0.003	0.000
3-9	084395	1	3	3	0.221	0.202	0.208	0.207	0.220	0.203	0.179	0.144	0.130	0.007	0.000
3-9	084395	1	3	4	0.217	0.208	0.205	0.214	0.218	0.211	0.172	0.150	0.124	0.013	-0.002
3-9	084395	1	3	5	0.250	0.217	0.212	0.215	0.220	0.201	0.178	0.136	0.128	0.015	-0.003
3-9	084395	1	3	6	0.238	0.211	0.210	0.221	0.223	0.209	0.174	0.141	0.121	0.005	0.000
3-9	084395	1	3	7	0.251	0.234	0.243	0.222	0.215	0.196	0.181	0.145	0.116	0.004	0.002
3-9	084395	1	3	8	0.215	0.207	0.184	0.169	0.169	0.138	0.123	0.102	0.098	0.003	-0.002
	Average				0.221	0.206	0.208	0.207	0.207	0.192	0.167	0.137	0.120	0.006	-0.001
	Std. Dev.				0.027	0.018	0.017	0.019	0.019	0.023	0.019	0.016	0.010	0.005	0.002
	Coeff. Var.				12.2	8.6	8.3	9.1	9.2	12.2	11.4	11.6	8.2	83.2	-187.7

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
						Reading	2	3	4	6	8	12	16	20	110
3-9	084395	1	4	1	0.203	0.201	0.200	0.206	0.193	0.194	0.160	0.136	0.116	0.005	0.001
3-9	084395	1	4	2	0.209	0.211	0.222	0.216	0.211	0.194	0.163	0.145	0.121	0.005	0.002
3-9	084395	1	4	3	0.206	0.206	0.204	0.230	0.218	0.212	0.185	0.157	0.126	0.006	0.003
3-9	084395	1	4	4	0.210	0.199	0.207	0.208	0.200	0.196	0.172	0.149	0.122	0.004	0.003
3-9	084395	1	4	5	0.227	0.217	0.216	0.218	0.219	0.201	0.184	0.137	0.123	0.004	0.004
3-9	084395	1	4	6	0.219	0.211	0.216	0.241	0.222	0.217	0.175	0.143	0.122	0.005	0.003
3-9	084395	1	4	7	0.223	0.205	0.210	0.216	0.221	0.203	0.170	0.140	0.112	0.006	0.006
3-9	084395	1	4	8	0.198	0.207	0.212	0.226	0.201	0.196	0.161	0.151	0.113	0.007	0.003
	Average				0.212	0.207	0.211	0.220	0.211	0.202	0.172	0.145	0.120	0.006	0.003
	Std. Dev.				0.010	0.006	0.007	0.012	0.011	0.009	0.010	0.007	0.005	0.001	0.001
	Coeff. Var.				4.8	2.8	3.4	5.3	5.3	4.3	5.7	5.0	4.2	18.8	43.2
3-11	084395	2	1	1	0.180	0.181	0.179	0.170	0.153	0.147	0.140	0.117	0.111	0.010	0.001
3-11	084395	2	1	2	0.179	0.155	0.171	0.170	0.162	0.162	0.144	0.123	0.110	0.008	0.003
3-11	084395	2	1	3	0.190	0.166	0.170	0.183	0.172	0.177	0.154	0.130	0.107	0.008	0.003
3-11	084395	2	1	4	0.179	0.157	0.157	0.171	0.167	0.168	0.145	0.117	0.099	0.007	0.002
3-11	084395	2	1	5	0.195	0.171	0.180	0.177	0.181	0.176	0.162	0.132	0.117	0.009	0.001
3-11	084395	2	1	6	0.205	0.172	0.179	0.188	0.184	0.174	0.152	0.129	0.116	0.019	0.002
3-11	084395	2	1	7	0.191	0.184	0.187	0.182	0.182	0.176	0.154	0.130	0.114	0.020	0.004
3-11	084395	2	1	8	0.134	0.121	0.131	0.131	0.132	0.127	0.110	0.102	0.088	0.019	0.002
	Average				0.182	0.164	0.169	0.172	0.167	0.164	0.145	0.123	0.108	0.013	0.002
	Std. Dev.				0.021	0.020	0.018	0.018	0.018	0.018	0.016	0.010	0.010	0.006	0.001
	Coeff. Var.				11.7	12.2	10.6	10.3	10.6	10.9	10.9	8.3	9.1	45.4	43.6
3-11	084395	2	2	1	0.193	0.195	0.208	0.192	0.141	0.141	0.135	0.125	0.098	0.013	0.003
3-11	084395	2	2	2	0.173	0.162	0.183	0.191	0.170	0.158	0.143	0.129	0.101	0.013	0.003
3-11	084395	2	2	3	0.175	0.159	0.181	0.198	0.185	0.181	0.163	0.135	0.120	0.019	0.004
3-11	084395	2	2	4	0.196	0.170	0.182	0.195	0.202	0.182	0.162	0.139	0.119	0.019	0.003
3-11	084395	2	2	5	0.191	0.183	0.191	0.185	0.182	0.177	0.169	0.142	0.112	0.025	0.002
3-11	084395	2	2	6	0.193	0.188	0.195	0.193	0.185	0.164	0.162	0.134	0.109	0.022	0.004
3-11	084395	2	2	7	0.192	0.185	0.193	0.197	0.172	0.174	0.142	0.127	0.107	0.015	0.004
3-11	084395	2	2	8	0.141	0.153	0.169	0.155	0.138	0.143	0.101	0.103	0.076	0.019	0.001
	Average				0.181	0.174	0.187	0.188	0.172	0.165	0.147	0.129	0.105	0.018	0.003
	Std. Dev.				0.019	0.015	0.012	0.014	0.022	0.016	0.022	0.012	0.014	0.004	0.001
	Coeff. Var.				10.3	8.9	6.2	7.5	13.0	10.0	15.2	9.4	13.5	24.0	40.7
3-11	084395	2	3	1	0.188	0.184	0.174	0.180	0.165	0.156	0.132	0.126	0.104	0.009	0.003
3-11	084395	2	3	2	0.168	0.174	0.177	0.171	0.168	0.168	0.146	0.130	0.115	0.010	0.003
3-11	084395	2	3	3	0.181	0.185	0.185	0.183	0.175	0.185	0.164	0.138	0.111	0.007	0.002
3-11	084395	2	3	4	0.179	0.185	0.194	0.189	0.174	0.184	0.164	0.138	0.110	0.004	0.001
3-11	084395	2	3	5	0.192	0.190	0.198	0.198	0.190	0.190	0.176	0.154	0.120	0.005	0.002
3-11	084395	2	3	6	0.187	0.195	0.201	0.196	0.188	0.184	0.173	0.147	0.126	0.006	0.003
3-11	084395	2	3	7	0.185	0.193	0.197	0.199	0.190	0.178	0.162	0.142	0.121	0.010	0.003
3-11	084395	2	3	8	0.151	0.137	0.148	0.155	0.159	0.140	0.127	0.115	0.101	0.012	0.002
	Average				0.179	0.181	0.185	0.184	0.177	0.174	0.156	0.137	0.114	0.008	0.003
	Std. Dev.				0.013	0.019	0.018	0.015	0.012	0.017	0.018	0.012	0.009	0.003	0.001
	Coeff. Var.				7.5	10.3	9.6	8.2	6.8	10.0	11.8	9.0	7.6	33.9	27.1
3-11	084395	2	4	1	0.159	0.171	0.175	0.164	0.163	0.152	0.140	0.124	0.110	0.004	0.002
3-11	084395	2	4	2	0.172	0.182	0.191	0.189	0.193	0.178	0.165	0.145	0.119	0.008	0.004
3-11	084395	2	4	3	0.180	0.176	0.192	0.186	0.181	0.180	0.156	0.148	0.126	0.009	0.004
3-11	084395	2	4	4	0.184	0.182	0.199	0.190	0.183	0.187	0.170	0.142	0.147	0.007	0.002
3-11	084395	2	4	5	0.181	0.186	0.196	0.195	0.181	0.185	0.161	0.140	0.117	0.006	0.002
3-11	084395	2	4	6	0.174	0.187	0.190	0.192	0.182	0.186	0.162	0.138	0.115	0.008	0.003
3-11	084395	2	4	7	0.158	0.176	0.188	0.180	0.176	0.176	0.160	0.131	0.113	0.008	0.006
3-11	084395	2	4	8	0.150	0.155	0.188	0.178	0.178	0.174	0.161	0.142	0.125	0.010	0.005
	Average				0.170	0.177	0.190	0.184	0.180	0.177	0.160	0.139	0.122	0.008	0.004
	Std. Dev.				0.013	0.010	0.007	0.010	0.008	0.011	0.009	0.008	0.012	0.002	0.002
	Coeff. Var.				7.4	5.9	3.7	5.4	4.7	6.4	5.5	5.6	9.6	24.3	41.7

Table 2:

Neutral Red Cytotoxicity Assay Results (Blank-Corrected Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (μL/mL)								SLS (μg/mL)	
						2	3	4	6	8	12	16	20	110	200
3-15	084395	3	1	1	0.388	0.357	0.367	0.390	0.381	0.351	0.311	0.278	0.232	0.007	0.003
3-15	084395	3	1	2	0.329	0.342	0.332	0.337	0.326	0.319	0.273	0.260	0.202	0.008	0.004
3-15	084395	3	1	3	0.346	0.341	0.343	0.338	0.332	0.336	0.292	0.266	0.232	0.007	0.003
3-15	084395	3	1	4	0.318	0.327	0.324	0.320	0.321	0.317	0.279	0.260	0.216	0.005	0.002
3-15	084395	3	1	5	0.355	0.370	0.348	0.361	0.354	0.339	0.315	0.281	0.234	0.007	0.002
3-15	084395	3	1	6	0.349	0.341	0.337	0.368	0.357	0.349	0.313	0.289	0.245	0.010	0.003
3-15	084395	3	1	7	0.369	0.340	0.341	0.354	0.343	0.328	0.300	0.276	0.236	0.014	0.003
3-15	084395	3	1	8	0.387	0.371	0.352	0.352	0.342	0.330	0.291	0.267	0.228	0.015	0.001
	Average				0.355	0.348	0.343	0.352	0.344	0.333	0.296	0.272	0.228	0.009	0.002
	Std. Dev.				0.025	0.016	0.013	0.021	0.019	0.013	0.016	0.010	0.013	0.004	0.001
	Coeff. Var.				7.1	4.5	3.8	6.1	5.6	3.8	5.3	3.9	5.8	41.8	43.1
3-15	084395	3	2	1	0.285	0.284	0.326	0.339	0.352	0.336	0.300	0.260	0.225	0.006	0.001
3-15	084395	3	2	2	0.276	0.278	0.283	0.297	0.302	0.290	0.258	0.233	0.195	0.009	0.003
3-15	084395	3	2	3	0.301	0.294	0.280	0.296	0.301	0.302	0.269	0.243	0.215	0.008	0.003
3-15	084395	3	2	4	0.304	0.285	0.292	0.289	0.295	0.308	0.276	0.268	0.222	0.006	0.001
3-15	084395	3	2	5	0.325	0.327	0.313	0.342	0.353	0.356	0.310	0.281	0.226	0.008	0.001
3-15	084395	3	2	6	0.311	0.313	0.307	0.329	0.345	0.347	0.296	0.275	0.235	0.006	0.003
3-15	084395	3	2	7	0.318	0.322	0.317	0.312	0.300	0.294	0.260	0.264	0.230	0.013	0.003
3-15	084395	3	2	8	0.316	0.318	0.303	0.298	0.302	0.257	0.236	0.221	0.177	0.009	0.002
	Average				0.304	0.302	0.302	0.313	0.319	0.311	0.275	0.255	0.215	0.008	0.002
	Std. Dev.				0.017	0.019	0.016	0.021	0.026	0.033	0.025	0.021	0.020	0.002	0.001
	Coeff. Var.				5.5	6.4	5.4	6.8	8.2	10.7	9.1	8.3	9.2	29.9	52.9
3-15	084395	3	3	1	0.340	0.324	0.353	0.353	0.360	0.357	0.316	0.284	0.216	0.005	0.002
3-15	084395	3	3	2	0.311	0.323	0.330	0.325	0.323	0.315	0.279	0.243	0.204	0.007	0.003
3-15	084395	3	3	3	0.319	0.296	0.319	0.329	0.317	0.320	0.282	0.265	0.216	0.006	0.003
3-15	084395	3	3	4	0.317	0.314	0.321	0.315	0.327	0.324	0.281	0.271	0.214	0.004	0.002
3-15	084395	3	3	5	0.328	0.320	0.315	0.328	0.348	0.332	0.300	0.278	0.226	0.007	0.001
3-15	084395	3	3	6	0.331	0.306	0.317	0.324	0.343	0.336	0.304	0.267	0.229	0.004	0.002
3-15	084395	3	3	7	0.320	0.314	0.306	0.310	0.304	0.303	0.276	0.229	0.208	0.012	0.003
3-15	084395	3	3	8	0.318	0.309	0.236	0.236	0.228	0.278	0.190	0.170	0.188	0.008	0.000
	Average				0.323	0.313	0.312	0.315	0.319	0.321	0.279	0.251	0.213	0.007	0.002
	Std. Dev.				0.009	0.009	0.034	0.034	0.041	0.023	0.039	0.037	0.013	0.003	0.001
	Coeff. Var.				2.9	3.0	10.8	10.9	12.8	7.3	13.8	14.9	6.1	39.5	53.5
3-15	084395	3	4	1	0.318	0.325	0.383	0.377	0.356	0.329	0.293	0.260	0.212	0.005	0.003
3-15	084395	3	4	2	0.299	0.324	0.339	0.344	0.339	0.337	0.291	0.266	0.223	0.007	0.005
3-15	084395	3	4	3	0.301	0.320	0.339	0.350	0.339	0.337	0.293	0.263	0.225	0.007	0.004
3-15	084395	3	4	4	0.267	0.285	0.302	0.312	0.324	0.300	0.266	0.250	0.199	0.004	0.002
3-15	084395	3	4	5	0.300	0.322	0.325	0.330	0.327	0.319	0.290	0.263	0.226	0.008	0.003
3-15	084395	3	4	6	0.304	0.311	0.326	0.329	0.318	0.327	0.292	0.270	0.214	0.005	0.004
3-15	084395	3	4	7	0.319	0.306	0.315	0.319	0.320	0.328	0.293	0.261	0.198	0.013	0.005
3-15	084395	3	4	8	0.297	0.285	0.289	0.278	0.282	0.288	0.256	0.222	0.180	0.007	0.002
	Average				0.300	0.309	0.327	0.330	0.325	0.320	0.284	0.257	0.209	0.007	0.003
	Std. Dev.				0.016	0.017	0.028	0.029	0.022	0.018	0.015	0.015	0.016	0.003	0.001
	Coeff. Var.				5.3	5.4	8.7	8.9	6.7	5.5	5.2	5.9	7.7	41.9	38.2
3-2	084454	1	1	1	0.286	0.275	0.293	0.287	0.270	0.279	0.273	0.267	0.249	0.002	0.003
3-2	084454	1	1	2	0.260	0.273	0.287	0.284	0.275	0.291	0.269	0.259	0.249	0.004	0.001
3-2	084454	1	1	3	0.281	0.290	0.311	0.303	0.295	0.296	0.301	0.287	0.263	0.003	0.002
3-2	084454	1	1	4	0.286	0.324	0.323	0.310	0.292	0.288	0.276	0.246	0.233	0.005	0.002
3-2	084454	1	1	5	0.292	0.317	0.326	0.324	0.290	0.290	0.273	0.240	0.253	0.009	-0.001
3-2	084454	1	1	6	0.314	0.317	0.335	0.338	0.304	0.304	0.300	0.288	0.255	0.008	0.001
3-2	084454	1	1	7	0.282	0.285	0.335	0.327	0.328	0.305	0.302	0.282	0.274	0.004	0.001
3-2	084454	1	1	8	0.271	0.288	0.285	0.301	0.282	0.294	0.288	0.278	0.236	0.010	0.002
	Average				0.284	0.297	0.312	0.310	0.292	0.294	0.286	0.269	0.252	0.006	0.002
	Std. Dev.				0.016	0.020	0.021	0.019	0.018	0.009	0.014	0.019	0.013	0.003	0.001
	Coeff. Var.				5.5	6.8	6.7	6.2	6.2	2.9	5.0	6.9	5.3	49.6	67.9

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (μL/mL)								SLS (μg/mL)	
						2	3	4	6	8	12	16	20	110	200
3-2	084454	1	2	1	0.265	0.259	0.277	0.265	0.251	0.271	0.250	0.259	0.243	0.011	0.002
3-2	084454	1	2	2	0.273	0.253	0.277	0.289	0.274	0.297	0.289	0.274	0.272	0.009	0.001
3-2	084454	1	2	3	0.273	0.238	0.268	0.278	0.280	0.308	0.338	0.319	0.292	0.007	-0.001
3-2	084454	1	2	4	0.296	0.287	0.282	0.281	0.326	0.320	0.312	0.289	0.277	0.005	0.001
3-2	084454	1	2	5	0.290	0.277	0.285	0.251	0.283	0.306	0.291	0.300	0.276	0.005	0.000
3-2	084454	1	2	6	0.291	0.278	0.267	0.298	0.319	0.325	0.316	0.310	0.273	0.005	0.001
3-2	084454	1	2	7	0.282	0.270	0.290	0.339	0.350	0.335	0.334	0.312	0.300	0.007	0.001
3-2	084454	1	2	8	0.238	0.243	0.287	0.294	0.315	0.333	0.303	0.296	0.281	0.005	0.001
	Average				0.276	0.263	0.279	0.287	0.299	0.312	0.304	0.295	0.276	0.006	0.000
	Std. Dev.				0.019	0.018	0.008	0.026	0.033	0.021	0.028	0.020	0.017	0.002	0.001
	Coeff. Var.				6.8	6.7	3.0	9.1	11.0	6.8	9.3	6.9	6.1	35.3	236.4
3-2	084454	1	3	1	0.294	0.288	0.298	0.307	0.283	0.300	0.268	0.274	0.257	0.008	0.001
3-2	084454	1	3	2	0.295	0.286	0.294	0.295	0.319	0.313	0.287	0.278	0.264	0.007	0.001
3-2	084454	1	3	3	0.275	0.281	0.281	0.307	0.330	0.341	0.309	0.275	0.301	0.006	0.000
3-2	084454	1	3	4	0.295	0.296	0.294	0.323	0.333	0.346	0.319	0.294	0.289	0.005	0.002
3-2	084454	1	3	5	0.274	0.281	0.288	0.313	0.309	0.319	0.299	0.301	0.278	0.005	0.000
3-2	084454	1	3	6	0.287	0.265	0.265	0.299	0.312	0.325	0.316	0.289	0.289	0.006	-0.001
3-2	084454	1	3	7	0.289	0.268	0.291	0.301	0.321	0.316	0.328	0.321	0.298	0.009	0.002
3-2	084454	1	3	8	0.285	0.291	0.318	0.316	0.309	0.336	0.317	0.245	0.257	0.007	0.002
	Average				0.287	0.282	0.291	0.308	0.315	0.325	0.306	0.285	0.279	0.007	0.001
	Std. Dev.				0.008	0.011	0.015	0.009	0.016	0.016	0.020	0.022	0.018	0.001	0.001
	Coeff. Var.				2.9	3.8	5.2	3.0	5.0	4.8	6.5	7.9	6.4	20.9	112.6
3-2	084454	1	4	1	0.236	0.247	0.257	0.262	0.260	0.263	0.264	0.275	0.266	0.007	0.000
3-2	084454	1	4	2	0.238	0.248	0.307	0.289	0.273	0.280	0.267	0.260	0.277	0.006	0.003
3-2	084454	1	4	3	0.270	0.277	0.276	0.296	0.328	0.335	0.294	0.301	0.271	0.007	0.002
3-2	084454	1	4	4	0.265	0.272	0.329	0.319	0.302	0.315	0.301	0.290	0.286	0.004	0.003
3-2	084454	1	4	5	0.259	0.265	0.306	0.315	0.312	0.310	0.301	0.278	0.278	0.005	0.002
3-2	084454	1	4	6	0.266	0.297	0.357	0.320	0.337	0.326	0.319	0.298	0.293	0.005	0.002
3-2	084454	1	4	7	0.275	0.302	0.309	0.357	0.328	0.340	0.330	0.317	0.305	0.008	0.004
3-2	084454	1	4	8	0.262	0.261	0.294	0.328	0.299	0.314	0.299	0.281	0.263	0.005	0.003
	Average				0.259	0.272	0.305	0.311	0.305	0.311	0.297	0.288	0.280	0.006	0.003
	Std. Dev.				0.014	0.020	0.031	0.028	0.027	0.027	0.023	0.018	0.014	0.001	0.001
	Coeff. Var.				5.5	7.5	10.0	9.2	9.0	8.5	7.6	6.2	5.1	21.7	43.2
3-10	084454	2	1	1	0.232	0.228	0.223	0.234	0.237	0.242	0.225	0.226	0.223	0.005	0.000
3-10	084454	2	1	2	0.249	0.272	0.261	0.269	0.269	0.272	0.252	0.251	0.235	0.006	0.002
3-10	084454	2	1	3	0.256	0.287	0.272	0.291	0.284	0.277	0.277	0.253	0.242	0.006	0.003
3-10	084454	2	1	4	0.238	0.261	0.255	0.258	0.256	0.263	0.237	0.248	0.240	0.004	0.001
3-10	084454	2	1	5	0.251	0.267	0.265	0.261	0.263	0.275	0.256	0.244	0.252	0.005	0.001
3-10	084454	2	1	6	0.259	0.265	0.269	0.278	0.258	0.264	0.256	0.240	0.181	0.005	0.003
3-10	084454	2	1	7	0.261	0.272	0.270	0.269	0.264	0.248	0.254	0.188	0.173	0.007	0.005
3-10	084454	2	1	8	0.225	0.256	0.246	0.268	0.215	0.210	0.191	0.187	0.186	0.007	0.003
	Average				0.247	0.264	0.258	0.266	0.256	0.257	0.244	0.230	0.217	0.006	0.002
	Std. Dev.				0.013	0.017	0.016	0.016	0.021	0.023	0.026	0.027	0.031	0.001	0.002
	Coeff. Var.				5.4	6.5	6.4	6.2	8.2	8.8	10.7	11.9	14.5	18.4	66.6
3-10	084454	2	2	1	0.197	0.190	0.194	0.201	0.201	0.200	0.197	0.183	0.190	0.009	0.003
3-10	084454	2	2	2	0.235	0.233	0.217	0.244	0.233	0.250	0.239	0.224	0.221	0.011	0.006
3-10	084454	2	2	3	0.231	0.236	0.221	0.241	0.248	0.250	0.252	0.249	0.236	0.010	0.005
3-10	084454	2	2	4	0.237	0.235	0.242	0.257	0.267	0.262	0.272	0.251	0.232	0.010	0.004
3-10	084454	2	2	5	0.217	0.234	0.228	0.240	0.265	0.268	0.256	0.234	0.222	0.009	0.003
3-10	084454	2	2	6	0.226	0.234	0.227	0.242	0.236	0.246	0.242	0.240	0.181	0.009	0.005
3-10	084454	2	2	7	0.218	0.245	0.220	0.236	0.217	0.218	0.234	0.194	0.183	0.011	0.007
3-10	084454	2	2	8	0.167	0.164	0.167	0.173	0.182	0.180	0.170	0.160	0.155	0.012	0.004
	Average				0.216	0.221	0.214	0.229	0.231	0.234	0.232	0.217	0.202	0.010	0.004
	Std. Dev.				0.024	0.029	0.023	0.028	0.030	0.031	0.033	0.034	0.029	0.001	0.001
	Coeff. Var.				10.9	12.9	11.0	12.1	13.0	13.4	14.4	15.6	14.4	11.5	33.1

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
						Reading	2	3	4	6	8	12	16	20	110
3-10	084454	2	3	1	0.229	0.214	0.231	0.234	0.231	0.241	0.226	0.238	0.235	0.007	0.002
3-10	084454	2	3	2	0.236	0.246	0.263	0.248	0.246	0.237	0.237	0.228	0.203	0.008	0.005
3-10	084454	2	3	3	0.242	0.219	0.240	0.245	0.243	0.262	0.253	0.237	0.220	0.009	0.004
3-10	084454	2	3	4	0.243	0.228	0.238	0.254	0.255	0.266	0.269	0.256	0.220	0.009	0.003
3-10	084454	2	3	5	0.238	0.237	0.242	0.263	0.268	0.275	0.273	0.250	0.224	0.008	0.001
3-10	084454	2	3	6	0.230	0.233	0.245	0.274	0.262	0.273	0.260	0.247	0.232	0.007	0.003
3-10	084454	2	3	7	0.219	0.239	0.236	0.247	0.250	0.252	0.237	0.219	0.189	0.012	0.005
3-10	084454	2	3	8	0.180	0.178	0.200	0.199	0.208	0.202	0.195	0.195	0.184	0.010	0.002
	Average				0.227	0.224	0.237	0.245	0.245	0.251	0.244	0.234	0.213	0.009	0.003
	Std. Dev.				0.021	0.021	0.018	0.022	0.019	0.024	0.026	0.020	0.019	0.002	0.001
	Coeff. Var.				9.1	9.6	7.5	9.1	7.7	9.7	10.6	8.4	9.0	19.6	50.7
3-10	084454	2	4	1	0.255	0.227	0.217	0.241	0.238	0.268	0.229	0.229	0.233	0.007	0.001
3-10	084454	2	4	2	0.252	0.263	0.271	0.269	0.273	0.266	0.251	0.242	0.227	0.007	0.003
3-10	084454	2	4	3	0.260	0.264	0.295	0.290	0.278	0.281	0.275	0.267	0.235	0.007	0.002
3-10	084454	2	4	4	0.273	0.265	0.279	0.283	0.285	0.276	0.263	0.263	0.251	0.007	0.002
3-10	084454	2	4	5	0.260	0.267	0.278	0.280	0.280	0.273	0.265	0.264	0.258	0.006	0.002
3-10	084454	2	4	6	0.266	0.264	0.286	0.289	0.299	0.285	0.282	0.282	0.256	0.006	0.003
3-10	084454	2	4	7	0.219	0.228	0.223	0.220	0.232	0.246	0.247	0.221	0.191	0.009	0.005
3-10	084454	2	4	8	0.195	0.188	0.189	0.198	0.216	0.215	0.214	0.210	0.190	0.009	0.003
	Average				0.247	0.246	0.255	0.259	0.262	0.264	0.253	0.247	0.230	0.007	0.002
	Std. Dev.				0.027	0.029	0.039	0.035	0.030	0.023	0.023	0.026	0.027	0.001	0.001
	Coeff. Var.				10.8	11.7	15.4	13.5	11.3	8.7	9.1	10.3	11.7	16.6	50.0
3-12	084454	3	1	1	0.280	0.279	0.284	0.297	0.297	0.313	0.313	0.297	0.287	0.007	0.006
3-12	084454	3	1	2	0.279	0.297	0.287	0.287	0.305	0.298	0.300	0.286	0.273	0.010	0.008
3-12	084454	3	1	3	0.282	0.298	0.333	0.312	0.310	0.308	0.322	0.310	0.293	0.008	0.005
3-12	084454	3	1	4	0.284	0.296	0.287	0.283	0.309	0.330	0.320	0.305	0.286	0.005	0.005
3-12	084454	3	1	5	0.297	0.283	0.295	0.311	0.309	0.330	0.326	0.306	0.290	0.006	0.003
3-12	084454	3	1	6	0.291	0.288	0.292	0.303	0.301	0.313	0.298	0.292	0.278	0.006	0.005
3-12	084454	3	1	7	0.280	0.297	0.296	0.305	0.311	0.318	0.335	0.287	0.265	0.006	0.005
3-12	084454	3	1	8	0.262	0.277	0.320	0.308	0.295	0.295	0.314	0.302	0.283	0.005	0.002
	Average				0.282	0.290	0.299	0.301	0.305	0.313	0.316	0.298	0.282	0.007	0.005
	Std. Dev.				0.010	0.009	0.018	0.011	0.006	0.013	0.013	0.009	0.009	0.002	0.002
	Coeff. Var.				3.6	3.0	5.9	3.6	2.0	4.1	4.0	3.0	3.3	25.0	36.2
3-12	084454	3	2	1	0.283	0.282	0.279	0.282	0.291	0.301	0.271	0.279	0.234	0.007	0.004
3-12	084454	3	2	2	0.309	0.307	0.281	0.286	0.287	0.295	0.279	0.273	0.269	0.007	0.005
3-12	084454	3	2	3	0.278	0.272	0.293	0.290	0.286	0.290	0.284	0.275	0.241	0.007	0.005
3-12	084454	3	2	4	0.301	0.292	0.295	0.292	0.280	0.269	0.268	0.286	0.244	0.005	0.004
3-12	084454	3	2	5	0.261	0.300	0.301	0.307	0.293	0.293	0.272	0.297	0.248	0.006	0.004
3-12	084454	3	2	6	0.319	0.284	0.310	0.311	0.304	0.330	0.301	0.305	0.259	0.007	0.005
3-12	084454	3	2	7	0.306	0.294	0.280	0.290	0.282	0.293	0.258	0.278	0.260	0.008	0.006
3-12	084454	3	2	8	0.298	0.290	0.288	0.309	0.289	0.304	0.295	0.269	0.257	0.006	0.003
	Average				0.294	0.290	0.291	0.296	0.289	0.297	0.278	0.283	0.251	0.006	0.004
	Std. Dev.				0.019	0.011	0.011	0.011	0.007	0.017	0.014	0.012	0.012	0.001	0.001
	Coeff. Var.				6.5	3.8	3.8	3.8	2.6	5.7	5.2	4.4	4.6	14.4	21.8
3-12	084454	3	3	1	0.331	0.294	0.288	0.282	0.301	0.293	0.279	0.293	0.263	0.005	0.000
3-12	084454	3	3	2	0.266	0.292	0.277	0.265	0.272	0.270	0.272	0.271	0.254	0.005	0.003
3-12	084454	3	3	3	0.290	0.281	0.286	0.280	0.283	0.293	0.282	0.288	0.277	0.006	0.002
3-12	084454	3	3	4	0.266	0.282	0.268	0.276	0.281	0.290	0.283	0.283	0.273	0.003	0.001
3-12	084454	3	3	5	0.254	0.275	0.275	0.290	0.286	0.299	0.285	0.289	0.284	0.005	0.001
3-12	084454	3	3	6	0.263	0.277	0.282	0.276	0.289	0.302	0.294	0.282	0.273	0.006	0.002
3-12	084454	3	3	7	0.276	0.290	0.279	0.294	0.283	0.291	0.292	0.268	0.258	0.003	0.003
3-12	084454	3	3	8	0.259	0.264	0.265	0.272	0.279	0.298	0.277	0.279	0.256	0.005	0.000
	Average				0.276	0.282	0.277	0.279	0.284	0.292	0.283	0.282	0.267	0.005	0.001
	Std. Dev.				0.025	0.010	0.008	0.009	0.008	0.010	0.007	0.009	0.011	0.001	0.001
	Coeff. Var.				9.1	3.6	2.9	3.4	3.0	3.4	2.6	3.1	4.1	25.2	86.9

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (μL/mL)								SLS (μg/mL)	
						2	3	4	6	8	12	16	20	110	200
3-12	084454	3	4	1	0.263	0.254	0.286	0.279	0.308	0.314	0.303	0.277	0.266	0.008	0.004
3-12	084454	3	4	2	0.248	0.291	0.293	0.267	0.282	0.273	0.261	0.253	0.240	0.007	0.006
3-12	084454	3	4	3	0.247	0.259	0.289	0.286	0.294	0.292	0.271	0.262	0.256	0.006	0.004
3-12	084454	3	4	4	0.232	0.239	0.263	0.273	0.275	0.271	0.251	0.247	0.233	0.003	0.003
3-12	084454	3	4	5	0.240	0.248	0.273	0.304	0.302	0.301	0.282	0.273	0.245	0.005	0.003
3-12	084454	3	4	6	0.256	0.256	0.281	0.289	0.282	0.296	0.277	0.270	0.246	0.006	0.003
3-12	084454	3	4	7	0.264	0.257	0.280	0.263	0.256	0.295	0.277	0.271	0.264	0.006	0.004
3-12	084454	3	4	8	0.255	0.274	0.277	0.272	0.267	0.267	0.250	0.256	0.237	0.004	0.002
	Average				0.251	0.260	0.280	0.279	0.283	0.289	0.272	0.264	0.249	0.006	0.004
	Std. Dev.				0.011	0.016	0.010	0.013	0.018	0.017	0.018	0.011	0.012	0.002	0.001
	Coeff. Var.				4.4	6.2	3.4	4.8	6.2	5.7	6.5	4.1	5.0	27.8	31.7
3-1	084455	1	1	1	0.279	0.287	0.302	0.285	0.290	0.293	0.274	0.244	0.243	0.007	0.005
3-1	084455	1	1	2	0.267	0.274	0.274	0.294	0.293	0.311	0.289	0.264	0.239	0.008	0.004
3-1	084455	1	1	3	0.267	0.272	0.291	0.303	0.314	0.310	0.302	0.286	0.260	0.008	0.004
3-1	084455	1	1	4	0.264	0.274	0.298	0.294	0.304	0.278	0.286	0.273	0.255	0.005	0.004
3-1	084455	1	1	5	0.278	0.318	0.334	0.327	0.324	0.344	0.305	0.294	0.298	0.007	0.004
3-1	084455	1	1	6	0.272	0.301	0.338	0.334	0.331	0.332	0.309	0.279	0.262	0.007	0.004
3-1	084455	1	1	7	0.271	0.269	0.286	0.316	0.311	0.323	0.297	0.269	0.225	0.007	0.003
3-1	084455	1	1	8	0.295	0.274	0.273	0.287	0.269	0.276	0.256	0.257	0.237	0.006	0.002
	Average				0.274	0.283	0.299	0.305	0.304	0.308	0.289	0.270	0.252	0.007	0.003
	Std. Dev.				0.010	0.017	0.025	0.019	0.020	0.025	0.018	0.016	0.022	0.001	0.001
	Coeff. Var.				3.6	6.1	8.3	6.1	6.6	8.0	6.1	5.9	8.9	15.2	26.3
3-1	084455	1	2	1	0.247	0.241	0.260	0.283	0.276	0.289	0.271	0.246	0.232	0.003	0.002
3-1	084455	1	2	2	0.267	0.244	0.258	0.264	0.268	0.280	0.259	0.240	0.226	0.004	0.002
3-1	084455	1	2	3	0.271	0.248	0.259	0.282	0.280	0.306	0.272	0.255	0.227	0.005	0.003
3-1	084455	1	2	4	0.286	0.268	0.258	0.270	0.292	0.296	0.271	0.267	0.234	0.003	0.001
3-1	084455	1	2	5	0.275	0.280	0.271	0.287	0.304	0.328	0.289	0.266	0.243	0.004	0.000
3-1	084455	1	2	6	0.278	0.263	0.275	0.300	0.310	0.322	0.292	0.263	0.225	0.005	0.002
3-1	084455	1	2	7	0.283	0.266	0.276	0.287	0.289	0.293	0.274	0.240	0.217	0.006	0.004
3-1	084455	1	2	8	0.286	0.266	0.293	0.292	0.302	0.295	0.280	0.271	0.246	0.003	0.002
	Average				0.274	0.259	0.268	0.283	0.290	0.301	0.276	0.256	0.231	0.004	0.002
	Std. Dev.				0.013	0.014	0.012	0.012	0.015	0.016	0.011	0.013	0.010	0.001	0.001
	Coeff. Var.				4.7	5.3	4.6	4.1	5.1	5.5	3.9	4.9	4.2	30.0	73.6
3-1	084455	1	3	1	0.242	0.260	0.306	0.290	0.270	0.301	0.282	0.256	0.239	0.007	0.004
3-1	084455	1	3	2	0.270	0.264	0.278	0.275	0.287	0.298	0.280	0.261	0.238	0.007	0.006
3-1	084455	1	3	3	0.281	0.264	0.272	0.306	0.319	0.338	0.311	0.275	0.244	0.005	0.005
3-1	084455	1	3	4	0.303	0.289	0.278	0.319	0.316	0.326	0.299	0.285	0.258	0.005	0.004
3-1	084455	1	3	5	0.291	0.288	0.302	0.278	0.292	0.314	0.298	0.259	0.238	0.007	0.004
3-1	084455	1	3	6	0.269	0.262	0.267	0.286	0.301	0.319	0.297	0.264	0.234	0.007	0.004
3-1	084455	1	3	7	0.283	0.277	0.264	0.281	0.288	0.295	0.280	0.256	0.233	0.010	0.006
3-1	084455	1	3	8	0.288	0.276	0.286	0.294	0.286	0.277	0.268	0.259	0.230	0.006	0.003
	Average				0.278	0.272	0.282	0.291	0.295	0.308	0.289	0.264	0.239	0.007	0.004
	Std. Dev.				0.018	0.012	0.015	0.015	0.016	0.019	0.014	0.010	0.009	0.002	0.001
	Coeff. Var.				6.6	4.3	5.5	5.1	5.6	6.3	4.9	3.9	3.6	23.9	24.4
3-1	084455	1	4	1	0.274	0.301	0.309	0.306	0.298	0.306	0.293	0.269	0.265	0.005	0.003
3-1	084455	1	4	2	0.284	0.281	0.305	0.299	0.316	0.319	0.297	0.278	0.259	0.006	0.004
3-1	084455	1	4	3	0.308	0.302	0.303	0.322	0.322	0.325	0.330	0.288	0.287	0.006	0.005
3-1	084455	1	4	4	0.302	0.317	0.324	0.307	0.325	0.312	0.323	0.295	0.268	0.005	0.004
3-1	084455	1	4	5	0.311	0.341	0.342	0.329	0.329	0.334	0.313	0.294	0.285	0.006	0.004
3-1	084455	1	4	6	0.322	0.324	0.350	0.347	0.345	0.328	0.303	0.315	0.289	0.005	0.004
3-1	084455	1	4	7	0.286	0.302	0.317	0.329	0.323	0.314	0.298	0.277	0.262	0.007	0.005
3-1	084455	1	4	8	0.267	0.280	0.303	0.310	0.313	0.322	0.299	0.254	0.227	0.005	0.002
	Average				0.295	0.306	0.319	0.319	0.322	0.320	0.307	0.284	0.268	0.006	0.004
	Std. Dev.				0.019	0.021	0.018	0.016	0.014	0.009	0.014	0.019	0.020	0.001	0.001
	Coeff. Var.				6.6	6.8	5.7	5.0	4.2	2.9	4.4	6.5	7.6	12.7	24.0

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
						Reading	2	3	4	6	8	12	16	20	110
3-3	084455	2	1	1	0.284	0.237	0.217	0.213	0.220	0.243	0.218	0.201	0.191	0.014	0.002
3-3	084455	2	1	2	0.232	0.228	0.247	0.255	0.261	0.245	0.241	0.225	0.212	0.012	0.000
3-3	084455	2	1	3	0.227	0.218	0.270	0.298	0.289	0.305	0.265	0.271	0.234	0.010	0.001
3-3	084455	2	1	4	0.272	0.284	0.287	0.303	0.288	0.286	0.280	0.268	0.234	0.007	-0.002
3-3	084455	2	1	5	0.286	0.281	0.291	0.309	0.302	0.310	0.291	0.279	0.235	0.018	0.003
3-3	084455	2	1	6	0.286	0.290	0.284	0.312	0.319	0.309	0.294	0.280	0.239	0.018	0.006
3-3	084455	2	1	7	0.268	0.292	0.306	0.294	0.287	0.286	0.285	0.266	0.238	0.016	0.005
3-3	084455	2	1	8	0.253	0.266	0.259	0.222	0.249	0.254	0.268	0.145	0.232	0.011	0.005
	Average				0.263	0.262	0.270	0.276	0.277	0.280	0.268	0.242	0.227	0.013	0.002
	Std. Dev.				0.024	0.030	0.028	0.040	0.032	0.029	0.026	0.048	0.017	0.004	0.003
	Coeff. Var.				9.0	11.4	10.6	14.5	11.5	10.2	9.9	20.0	7.4	30.1	116.9
3-3	084455	2	2	1	0.220	0.215	0.219	0.220	0.223	0.227	0.202	0.199	0.197	0.008	0.006
3-3	084455	2	2	2	0.222	0.209	0.205	0.214	0.213	0.221	0.228	0.206	0.183	0.009	0.004
3-3	084455	2	2	3	0.222	0.192	0.216	0.227	0.247	0.254	0.241	0.215	0.182	0.004	0.001
3-3	084455	2	2	4	0.231	0.220	0.244	0.252	0.265	0.271	0.257	0.242	0.203	0.011	0.007
3-3	084455	2	2	5	0.216	0.216	0.215	0.242	0.277	0.275	0.270	0.256	0.230	0.005	0.002
3-3	084455	2	2	6	0.222	0.204	0.223	0.251	0.268	0.257	0.281	0.229	0.202	0.015	0.008
3-3	084455	2	2	7	0.236	0.229	0.241	0.258	0.250	0.259	0.263	0.259	0.236	0.018	0.010
3-3	084455	2	2	8	0.242	0.250	0.243	0.267	0.255	0.250	0.246	0.207	0.171	0.015	0.004
	Average				0.226	0.217	0.226	0.241	0.250	0.252	0.248	0.227	0.200	0.011	0.005
	Std. Dev.				0.009	0.017	0.015	0.019	0.022	0.019	0.025	0.023	0.023	0.005	0.003
	Coeff. Var.				4.0	8.0	6.6	7.9	8.8	7.6	10.1	10.4	11.4	48.0	59.7
3-3	084455	2	3	1	0.233	0.212	0.209	0.210	0.213	0.202	0.199	0.208	0.192	0.013	0.004
3-3	084455	2	3	2	0.204	0.195	0.206	0.202	0.218	0.214	0.222	0.220	0.187	0.007	0.005
3-3	084455	2	3	3	0.215	0.210	0.197	0.233	0.231	0.247	0.229	0.224	0.200	0.010	0.008
3-3	084455	2	3	4	0.207	0.200	0.212	0.223	0.245	0.259	0.247	0.228	0.205	0.011	0.007
3-3	084455	2	3	5	0.215	0.192	0.209	0.212	0.239	0.242	0.258	0.229	0.193	0.007	0.015
3-3	084455	2	3	6	0.198	0.194	0.197	0.225	0.258	0.254	0.251	0.240	0.210	0.011	0.010
3-3	084455	2	3	7	0.194	0.204	0.219	0.228	0.240	0.242	0.221	0.215	0.181	0.011	0.013
3-3	084455	2	3	8	0.199	0.190	0.185	0.215	0.202	0.214	0.184	0.185	0.184	0.010	0.005
	Average				0.208	0.200	0.204	0.218	0.231	0.234	0.226	0.219	0.194	0.010	0.008
	Std. Dev.				0.013	0.008	0.011	0.010	0.019	0.021	0.026	0.017	0.010	0.002	0.004
	Coeff. Var.				6.1	4.2	5.2	4.8	8.0	9.1	11.4	7.6	5.3	21.0	48.5
3-3	084455	2	4	1	0.254	0.242	0.264	0.261	0.256	0.260	0.232	0.218	0.217	0.004	-0.007
3-3	084455	2	4	2	0.270	0.265	0.279	0.289	0.265	0.273	0.265	0.234	0.226	0.014	0.000
3-3	084455	2	4	3	0.287	0.267	0.295	0.289	0.290	0.288	0.264	0.247	0.230	0.006	-0.002
3-3	084455	2	4	4	0.292	0.286	0.301	0.293	0.289	0.295	0.264	0.248	0.233	0.011	-0.002
3-3	084455	2	4	5	0.274	0.256	0.264	0.266	0.266	0.262	0.246	0.259	0.214	0.013	0.006
3-3	084455	2	4	6	0.254	0.241	0.247	0.261	0.280	0.242	0.249	0.223	0.200	0.018	0.006
3-3	084455	2	4	7	0.257	0.248	0.269	0.254	0.246	0.251	0.242	0.216	0.195	0.015	0.013
3-3	084455	2	4	8	0.238	0.265	0.273	0.256	0.238	0.232	0.210	0.193	0.187	0.014	-0.002
	Average				0.265	0.258	0.274	0.271	0.266	0.263	0.246	0.229	0.212	0.012	0.001
	Std. Dev.				0.018	0.015	0.018	0.016	0.019	0.022	0.019	0.021	0.017	0.005	0.006
	Coeff. Var.				6.9	5.9	6.4	6.0	7.2	8.3	7.7	9.4	8.0	40.9	566.2
3-7	084455	3	1	1	0.304	0.305	0.310	0.330	0.330	0.311	0.307	0.286	0.280	0.024	0.002
3-7	084455	3	1	2	0.311	0.312	0.336	0.336	0.336	0.331	0.320	0.298	0.278	0.033	0.005
3-7	084455	3	1	3	0.352	0.335	0.344	0.362	0.343	0.335	0.320	0.317	0.289	0.024	0.006
3-7	084455	3	1	4	0.328	0.318	0.328	0.342	0.320	0.327	0.315	0.308	0.296	0.027	0.001
3-7	084455	3	1	5	0.350	0.326	0.335	0.331	0.327	0.333	0.325	0.318	0.299	0.033	0.000
3-7	084455	3	1	6	0.314	0.313	0.338	0.332	0.322	0.313	0.314	0.294	0.288	0.032	0.001
3-7	084455	3	1	7	0.301	0.303	0.327	0.316	0.311	0.304	0.292	0.266	0.247	0.025	0.002
3-7	084455	3	1	8	0.307	0.294	0.278	0.276	0.278	0.298	0.304	0.260	0.226	0.025	0.001
	Average				0.321	0.314	0.325	0.328	0.321	0.319	0.312	0.294	0.276	0.028	0.003
	Std. Dev.				0.020	0.013	0.021	0.025	0.020	0.014	0.011	0.022	0.026	0.004	0.002
	Coeff. Var.				6.3	4.2	6.6	7.5	6.2	4.5	3.4	7.4	9.3	14.5	84.9

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
						Reading	2	3	4	6	8	12	16	20	110
3-7	084455	3	2	1	0.260	0.266	0.283	0.282	0.292	0.284	0.296	0.280	0.240	0.029	0.003
3-7	084455	3	2	2	0.248	0.255	0.276	0.290	0.305	0.281	0.294	0.275	0.246	0.037	0.006
3-7	084455	3	2	3	0.294	0.289	0.301	0.329	0.320	0.304	0.293	0.295	0.280	0.053	0.004
3-7	084455	3	2	4	0.243	0.233	0.258	0.251	0.276	0.257	0.265	0.252	0.253	0.039	0.002
3-7	084455	3	2	5	0.273	0.253	0.262	0.287	0.284	0.280	0.301	0.291	0.274	0.037	0.003
3-7	084455	3	2	6	0.272	0.263	0.274	0.301	0.302	0.299	0.293	0.269	0.278	0.033	0.004
3-7	084455	3	2	7	0.272	0.285	0.275	0.294	0.286	0.280	0.288	0.280	0.267	0.046	0.006
3-7	084455	3	2	8	0.224	0.200	0.208	0.219	0.207	0.244	0.228	0.208	0.208	0.036	0.013
	Average				0.261	0.255	0.267	0.281	0.284	0.278	0.282	0.269	0.256	0.039	0.005
	Std. Dev.				0.022	0.029	0.027	0.033	0.034	0.020	0.024	0.028	0.024	0.008	0.003
	Coeff. Var.				8.4	11.2	10.2	11.8	12.0	7.1	8.7	10.4	9.6	19.6	71.4
3-7	084455	3	3	1	0.248	0.248	0.250	0.264	0.272	0.266	0.260	0.250	0.229	0.039	0.002
3-7	084455	3	3	2	0.251	0.256	0.274	0.284	0.286	0.279	0.275	0.263	0.230	0.037	0.005
3-7	084455	3	3	3	0.268	0.257	0.267	0.299	0.291	0.282	0.281	0.267	0.255	0.035	0.004
3-7	084455	3	3	4	0.281	0.251	0.269	0.292	0.289	0.278	0.276	0.271	0.250	0.029	0.003
3-7	084455	3	3	5	0.272	0.248	0.279	0.306	0.314	0.307	0.302	0.290	0.260	0.037	0.003
3-7	084455	3	3	6	0.269	0.246	0.269	0.289	0.301	0.313	0.296	0.280	0.252	0.038	0.003
3-7	084455	3	3	7	0.277	0.271	0.272	0.286	0.285	0.276	0.269	0.255	0.237	0.034	0.004
3-7	084455	3	3	8	0.247	0.218	0.223	0.243	0.224	0.211	0.214	0.194	0.192	0.041	0.002
	Average				0.264	0.249	0.263	0.283	0.283	0.277	0.272	0.259	0.238	0.036	0.003
	Std. Dev.				0.014	0.015	0.018	0.020	0.027	0.031	0.027	0.029	0.022	0.004	0.001
	Coeff. Var.				5.1	6.0	6.9	7.2	9.5	11.2	9.9	11.3	9.2	10.1	31.8
3-7	084455	3	4	1	0.279	0.311	0.318	0.330	0.313	0.314	0.292	0.277	0.251	0.028	0.002
3-7	084455	3	4	2	0.299	0.292	0.314	0.333	0.316	0.330	0.306	0.289	0.271	0.039	0.004
3-7	084455	3	4	3	0.309	0.302	0.326	0.345	0.331	0.321	0.303	0.286	0.278	0.036	0.004
3-7	084455	3	4	4	0.292	0.287	0.308	0.305	0.311	0.316	0.307	0.287	0.274	0.029	0.002
3-7	084455	3	4	5	0.319	0.290	0.319	0.313	0.296	0.298	0.301	0.287	0.271	0.026	0.002
3-7	084455	3	4	6	0.311	0.323	0.327	0.306	0.304	0.300	0.298	0.293	0.281	0.040	0.002
3-7	084455	3	4	7	0.323	0.306	0.324	0.318	0.317	0.314	0.310	0.292	0.278	0.035	0.003
3-7	084455	3	4	8	0.293	0.286	0.290	0.283	0.281	0.269	0.287	0.278	0.236	0.038	0.001
	Average				0.303	0.300	0.316	0.317	0.309	0.308	0.301	0.286	0.268	0.034	0.003
	Std. Dev.				0.015	0.013	0.012	0.019	0.015	0.019	0.008	0.006	0.016	0.005	0.001
	Coeff. Var.				4.9	4.4	3.9	6.1	4.9	6.1	2.6	2.0	5.9	15.9	38.9
2-7	084456	1	1	1	0.219	0.241	0.234	0.244	0.249	0.240	0.207	0.201	0.167	0.026	-0.003
2-7	084456	1	1	2	0.238	0.236	0.290	0.302	0.300	0.286	0.261	0.243	0.212	0.042	0.006
2-7	084456	1	1	3	0.262	0.264	0.306	0.309	0.304	0.284	0.258	0.228	0.224	0.040	0.007
2-7	084456	1	1	4	0.229	0.249	0.288	0.284	0.293	0.282	0.242	0.231	0.202	0.031	0.003
2-7	084456	1	1	5	0.255	0.257	0.289	0.294	0.312	0.292	0.258	0.235	0.209	0.030	0.004
2-7	084456	1	1	6	0.267	0.273	0.308	0.300	0.293	0.295	0.263	0.248	0.214	0.033	0.006
2-7	084456	1	1	7	0.243	0.247	0.273	0.300	0.304	0.293	0.274	0.246	0.224	0.031	0.004
2-7	084456	1	1	8	0.234	0.258	0.283	0.273	0.278	0.264	0.236	0.228	0.207	0.035	0.003
	Average				0.243	0.253	0.283	0.288	0.291	0.279	0.249	0.232	0.207	0.033	0.003
	Std. Dev.				0.017	0.012	0.023	0.021	0.020	0.019	0.021	0.015	0.018	0.005	0.003
	Coeff. Var.				6.9	4.8	8.2	7.4	6.9	6.7	8.4	6.5	8.7	16.1	95.5
2-7	084456	1	2	1	0.220	0.210	0.225	0.252	0.261	0.252	0.249	0.219	0.201	0.039	0.004
2-7	084456	1	2	2	0.180	0.198	0.233	0.257	0.271	0.280	0.256	0.240	0.201	0.040	0.006
2-7	084456	1	2	3	0.210	0.210	0.239	0.255	0.275	0.277	0.264	0.237	0.221	0.039	0.006
2-7	084456	1	2	4	0.230	0.244	0.244	0.244	0.278	0.288	0.249	0.229	0.200	0.038	0.004
2-7	084456	1	2	5	0.234	0.233	0.230	0.240	0.274	0.261	0.252	0.228	0.207	0.038	0.004
2-7	084456	1	2	6	0.218	0.226	0.236	0.278	0.278	0.288	0.253	0.226	0.212	0.038	0.005
2-7	084456	1	2	7	0.199	0.218	0.233	0.254	0.269	0.267	0.255	0.238	0.207	0.031	0.004
2-7	084456	1	2	8	0.176	0.189	0.217	0.224	0.208	0.205	0.198	0.191	0.162	0.028	0.004
	Average				0.208	0.216	0.232	0.250	0.264	0.264	0.247	0.226	0.201	0.036	0.004
	Std. Dev.				0.022	0.018	0.008	0.016	0.023	0.027	0.020	0.016	0.017	0.004	0.001
	Coeff. Var.				10.4	8.4	3.6	6.2	8.9	10.3	8.3	7.0	8.7	12.2	22.2

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
						Reading	2	3	4	6	8	12	16	20	110
2-7	084456	1	3	1	0.250	0.253	0.262	0.273	0.260	0.256	0.230	0.201	0.175	0.036	0.005
2-7	084456	1	3	2	0.237	0.252	0.265	0.280	0.276	0.262	0.246	0.227	0.202	0.042	0.007
2-7	084456	1	3	3	0.265	0.274	0.277	0.287	0.266	0.270	0.260	0.232	0.202	0.042	0.007
2-7	084456	1	3	4	0.300	0.281	0.264	0.279	0.269	0.275	0.254	0.233	0.213	0.037	0.006
2-7	084456	1	3	5	0.293	0.291	0.284	0.287	0.264	0.341	0.263	0.227	0.203	0.040	0.006
2-7	084456	1	3	6	0.276	0.268	0.281	0.299	0.295	0.296	0.262	0.236	0.216	0.035	0.007
2-7	084456	1	3	7	0.260	0.278	0.302	0.306	0.300	0.277	0.259	0.242	0.208	0.038	0.007
2-7	084456	1	3	8	0.267	0.288	0.289	0.287	0.259	0.270	0.232	0.225	0.206	0.031	0.006
	Average				0.268	0.273	0.278	0.287	0.274	0.281	0.251	0.228	0.203	0.038	0.006
	Std. Dev.				0.021	0.015	0.014	0.011	0.016	0.027	0.013	0.012	0.012	0.004	0.001
	Coeff. Var.				7.8	5.4	5.0	3.8	5.7	9.6	5.3	5.4	6.1	10.0	11.9
2-7	084456	1	4	1	0.220	0.242	0.237	0.247	0.252	0.243	0.208	0.201	0.171	0.030	0.004
2-7	084456	1	4	2	0.241	0.239	0.295	0.306	0.302	0.289	0.264	0.246	0.212	0.039	0.004
2-7	084456	1	4	3	0.265	0.268	0.310	0.312	0.308	0.288	0.263	0.231	0.226	0.032	0.004
2-7	084456	1	4	4	0.233	0.254	0.291	0.287	0.297	0.283	0.244	0.235	0.204	0.031	0.003
2-7	084456	1	4	5	0.261	0.260	0.293	0.298	0.315	0.294	0.262	0.237	0.211	0.030	0.003
2-7	084456	1	4	6	0.270	0.276	0.312	0.304	0.298	0.299	0.267	0.249	0.216	0.033	0.006
2-7	084456	1	4	7	0.245	0.250	0.276	0.303	0.309	0.297	0.278	0.248	0.228	0.031	0.004
2-7	084456	1	4	8	0.236	0.260	0.283	0.274	0.279	0.266	0.239	0.230	0.208	0.034	0.003
	Average				0.247	0.256	0.287	0.292	0.295	0.283	0.253	0.235	0.210	0.033	0.004
	Std. Dev.				0.017	0.013	0.024	0.022	0.020	0.019	0.022	0.016	0.018	0.003	0.001
	Coeff. Var.				7.1	4.9	8.2	7.4	6.9	6.7	8.7	6.6	8.4	9.1	24.8
2-9	084456	2	1	1	0.249	0.268	0.262	0.262	0.251	0.245	0.229	0.205	0.186	0.035	0.005
2-9	084456	2	1	2	0.273	0.263	0.293	0.280	0.254	0.246	0.245	0.220	0.183	0.035	0.005
2-9	084456	2	1	3	0.255	0.251	0.294	0.288	0.284	0.272	0.244	0.239	0.212	0.034	0.006
2-9	084456	2	1	4	0.247	0.273	0.294	0.301	0.301	0.296	0.266	0.240	0.203	0.031	0.004
2-9	084456	2	1	5	0.258	0.254	0.267	0.272	0.314	0.310	0.283	0.250	0.217	0.030	0.003
2-9	084456	2	1	6	0.267	0.268	0.278	0.297	0.288	0.294	0.270	0.250	0.217	0.033	0.004
2-9	084456	2	1	7	0.272	0.270	0.292	0.289	0.310	0.271	0.285	0.254	0.219	0.034	0.005
2-9	084456	2	1	8	0.254	0.267	0.261	0.256	0.239	0.218	0.222	0.195	0.186	0.024	0.005
	Average				0.259	0.264	0.280	0.280	0.280	0.269	0.255	0.231	0.202	0.032	0.004
	Std. Dev.				0.010	0.008	0.015	0.016	0.029	0.031	0.024	0.022	0.016	0.004	0.001
	Coeff. Var.				3.9	3.0	5.3	5.8	10.3	11.6	9.4	9.7	7.7	11.8	22.2
2-9	084456	2	2	1	0.278	0.283	0.293	0.310	0.276	0.290	0.261	0.244	0.215	0.028	0.003
2-9	084456	2	2	2	0.256	0.285	0.293	0.295	0.293	0.259	0.255	0.237	0.214	0.030	0.008
2-9	084456	2	2	3	0.295	0.299	0.320	0.322	0.313	0.303	0.293	0.264	0.230	0.031	0.010
2-9	084456	2	2	4	0.282	0.313	0.322	0.331	0.313	0.285	0.286	0.274	0.240	0.026	0.005
2-9	084456	2	2	5	0.284	0.282	0.325	0.318	0.314	0.313	0.286	0.251	0.221	0.023	0.005
2-9	084456	2	2	6	0.273	0.290	0.310	0.321	0.304	0.290	0.255	0.246	0.210	0.027	0.007
2-9	084456	2	2	7	0.280	0.311	0.296	0.296	0.295	0.273	0.226	0.223	0.191	0.023	0.009
2-9	084456	2	2	8	0.243	0.279	0.288	0.281	0.271	0.297	0.252	0.244	0.217	0.026	0.003
	Average				0.273	0.292	0.305	0.309	0.297	0.288	0.264	0.247	0.217	0.026	0.006
	Std. Dev.				0.017	0.013	0.015	0.017	0.017	0.017	0.023	0.016	0.014	0.003	0.003
	Coeff. Var.				6.1	4.6	4.9	5.5	5.7	5.9	8.6	6.3	6.6	11.1	46.2
2-9	084456	2	3	1	0.275	0.265	0.280	0.266	0.265	0.271	0.234	0.226	0.190	0.024	0.001
2-9	084456	2	3	2	0.276	0.276	0.302	0.296	0.284	0.253	0.258	0.224	0.205	0.022	0.003
2-9	084456	2	3	3	0.295	0.308	0.326	0.349	0.308	0.292	0.282	0.240	0.212	0.019	0.003
2-9	084456	2	3	4	0.284	0.256	0.294	0.300	0.283	0.265	0.241	0.236	0.218	0.014	0.002
2-9	084456	2	3	5	0.279	0.291	0.311	0.316	0.320	0.311	0.288	0.263	0.240	0.026	0.001
2-9	084456	2	3	6	0.283	0.308	0.307	0.327	0.333	0.307	0.290	0.274	0.232	0.019	0.003
2-9	084456	2	3	7	0.289	0.295	0.315	0.321	0.311	0.286	0.274	0.253	0.230	0.026	0.005
2-9	084456	2	3	8	0.289	0.310	0.294	0.303	0.286	0.261	0.256	0.231	0.219	0.020	0.001
	Average				0.284	0.289	0.304	0.310	0.299	0.281	0.266	0.244	0.219	0.022	0.003
	Std. Dev.				0.007	0.021	0.014	0.025	0.023	0.022	0.021	0.018	0.016	0.004	0.001
	Coeff. Var.				2.5	7.2	4.7	7.9	7.6	7.7	8.0	7.5	7.4	19.1	53.6

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
						Reading	2	3	4	6	8	12	16	20	110
2-9	084456	2	4	1	0.221	0.231	0.239	0.230	0.236	0.211	0.194	0.181	0.160	0.031	0.002
2-9	084456	2	4	2	0.214	0.229	0.237	0.240	0.246	0.241	0.200	0.196	0.187	0.035	0.004
2-9	084456	2	4	3	0.211	0.215	0.233	0.249	0.245	0.246	0.226	0.200	0.173	0.028	0.003
2-9	084456	2	4	4	0.226	0.234	0.251	0.263	0.242	0.240	0.212	0.194	0.186	0.027	0.001
2-9	084456	2	4	5	0.211	0.207	0.223	0.250	0.246	0.254	0.234	0.212	0.186	0.025	0.002
2-9	084456	2	4	6	0.212	0.218	0.224	0.243	0.241	0.242	0.230	0.219	0.191	0.020	0.003
2-9	084456	2	4	7	0.227	0.241	0.265	0.264	0.247	0.248	0.250	0.232	0.207	0.021	0.005
2-9	084456	2	4	8	0.199	0.277	0.252	0.252	0.256	0.242	0.229	0.222	0.202	0.028	0.003
	Average				0.215	0.231	0.240	0.249	0.245	0.240	0.222	0.207	0.186	0.027	0.003
	Std. Dev.				0.009	0.021	0.015	0.011	0.006	0.013	0.019	0.017	0.015	0.005	0.001
	Coeff. Var.				4.3	9.3	6.1	4.6	2.4	5.3	8.4	8.2	8.0	18.6	47.5
2-10	084456	3	1	1	0.376	0.378	0.399	0.393	0.373	0.372	0.355	0.323	0.304	0.007	0.002
2-10	084456	3	1	2	0.346	0.381	0.382	0.378	0.370	0.357	0.332	0.319	0.296	0.007	0.004
2-10	084456	3	1	3	0.311	0.372	0.391	0.384	0.382	0.362	0.339	0.316	0.317	0.008	0.006
2-10	084456	3	1	4	0.317	0.362	0.365	0.384	0.362	0.344	0.316	0.292	0.284	0.005	0.003
2-10	084456	3	1	5	0.338	0.380	0.385	0.405	0.395	0.373	0.348	0.313	0.298	0.008	0.004
2-10	084456	3	1	6	0.325	0.345	0.388	0.378	0.383	0.372	0.343	0.311	0.286	0.008	0.003
2-10	084456	3	1	7	0.335	0.375	0.384	0.384	0.364	0.358	0.337	0.309	0.295	0.007	0.004
2-10	084456	3	1	8	0.330	0.347	0.327	0.348	0.357	0.338	0.303	0.271	0.243	0.008	0.002
	Average				0.335	0.368	0.378	0.382	0.373	0.360	0.334	0.307	0.290	0.007	0.004
	Std. Dev.				0.020	0.015	0.023	0.016	0.013	0.013	0.017	0.017	0.022	0.001	0.001
	Coeff. Var.				6.0	4.0	6.0	4.3	3.4	3.7	5.1	5.6	7.5	14.3	37.4
2-10	084456	3	2	1	0.300	0.280	0.298	0.333	0.322	0.303	0.288	0.279	0.249	0.007	0.003
2-10	084456	3	2	2	0.304	0.329	0.316	0.299	0.271	0.291	0.259	0.258	0.241	0.008	0.005
2-10	084456	3	2	3	0.318	0.329	0.315	0.300	0.280	0.293	0.280	0.272	0.269	0.006	0.006
2-10	084456	3	2	4	0.327	0.317	0.311	0.291	0.307	0.301	0.277	0.272	0.251	0.007	0.003
2-10	084456	3	2	5	0.284	0.353	0.299	0.314	0.297	0.333	0.286	0.300	0.257	0.007	0.003
2-10	084456	3	2	6	0.312	0.341	0.338	0.339	0.318	0.301	0.293	0.280	0.267	0.006	0.004
2-10	084456	3	2	7	0.228	0.333	0.264	0.292	0.307	0.287	0.281	0.257	0.243	0.008	0.003
2-10	084456	3	2	8	0.226	0.209	0.189	0.231	0.220	0.213	0.194	0.185	0.161	0.005	0.001
	Average				0.287	0.311	0.291	0.300	0.290	0.290	0.270	0.263	0.242	0.007	0.004
	Std. Dev.				0.039	0.047	0.046	0.033	0.033	0.034	0.032	0.034	0.034	0.001	0.002
	Coeff. Var.				13.7	15.0	15.9	11.1	11.5	11.8	12.0	13.0	14.2	15.3	43.2
2-10	084456	3	3	1	0.347	0.338	0.349	0.351	0.350	0.341	0.326	0.305	0.273	0.010	0.007
2-10	084456	3	3	2	0.331	0.354	0.338	0.328	0.333	0.309	0.330	0.264	0.249	0.009	0.004
2-10	084456	3	3	3	0.331	0.329	0.349	0.352	0.322	0.314	0.301	0.259	0.246	0.009	0.006
2-10	084456	3	3	4	0.349	0.351	0.340	0.344	0.327	0.325	0.302	0.272	0.249	0.007	0.006
2-10	084456	3	3	5	0.346	0.349	0.326	0.359	0.329	0.327	0.307	0.281	0.276	0.008	0.004
2-10	084456	3	3	6	0.329	0.327	0.324	0.339	0.324	0.318	0.288	0.280	0.262	0.008	0.005
2-10	084456	3	3	7	0.331	0.339	0.329	0.323	0.319	0.306	0.295	0.271	0.263	0.008	0.006
2-10	084456	3	3	8	0.262	0.252	0.245	0.252	0.264	0.230	0.202	0.196	0.195	0.007	0.003
	Average				0.328	0.330	0.325	0.331	0.321	0.309	0.294	0.266	0.252	0.008	0.005
	Std. Dev.				0.028	0.033	0.034	0.034	0.025	0.034	0.040	0.032	0.025	0.001	0.001
	Coeff. Var.				8.5	10.0	10.4	10.3	7.8	10.9	13.6	11.9	10.1	12.5	26.5
2-10	084456	3	4	1	0.306	0.332	0.335	0.339	0.342	0.342	0.309	0.291	0.266	0.008	0.003
2-10	084456	3	4	2	0.286	0.332	0.346	0.320	0.349	0.316	0.291	0.279	0.249	0.007	0.005
2-10	084456	3	4	3	0.311	0.329	0.342	0.343	0.331	0.318	0.298	0.278	0.256	0.007	0.004
2-10	084456	3	4	4	0.288	0.318	0.341	0.353	0.302	0.291	0.267	0.254	0.235	0.005	0.002
2-10	084456	3	4	5	0.320	0.361	0.371	0.359	0.340	0.322	0.299	0.285	0.269	0.007	0.003
2-10	084456	3	4	6	0.342	0.356	0.362	0.361	0.339	0.320	0.288	0.275	0.268	0.006	0.003
2-10	084456	3	4	7	0.336	0.345	0.358	0.359	0.321	0.310	0.304	0.266	0.296	0.007	0.004
2-10	084456	3	4	8	0.330	0.345	0.341	0.336	0.332	0.318	0.300	0.267	0.253	0.007	0.002
	Average				0.315	0.340	0.350	0.346	0.332	0.317	0.295	0.275	0.262	0.007	0.003
	Std. Dev.				0.021	0.015	0.013	0.014	0.015	0.014	0.013	0.012	0.018	0.001	0.001
	Coeff. Var.				6.7	4.3	3.6	4.1	4.4	4.4	4.4	4.3	6.9	12.9	30.7

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
						2	3	4	6	8	12	16	20	110	200
2-3	084457	1	1	1	0.241	0.236	0.232	0.230	0.219	0.216	0.165	0.144	0.140	0.008	0.000
2-3	084457	1	1	2	0.228	0.220	0.226	0.218	0.213	0.195	0.164	0.149	0.140	0.013	0.003
2-3	084457	1	1	3	0.240	0.236	0.251	0.248	0.245	0.222	0.186	0.159	0.145	0.010	0.003
2-3	084457	1	1	4	0.219	0.224	0.233	0.227	0.235	0.207	0.164	0.136	0.129	0.007	0.001
2-3	084457	1	1	5	0.238	0.248	0.253	0.246	0.225	0.214	0.179	0.153	0.137	0.008	0.002
2-3	084457	1	1	6	0.258	0.247	0.258	0.251	0.223	0.199	0.176	0.162	0.145	0.007	0.003
2-3	084457	1	1	7	0.231	0.231	0.239	0.236	0.209	0.204	0.186	0.168	0.152	0.011	0.003
2-3	084457	1	1	8	0.213	0.221	0.224	0.227	0.210	0.199	0.172	0.155	0.132	0.007	0.002
	Average				0.233	0.233	0.239	0.235	0.222	0.207	0.174	0.153	0.140	0.009	0.002
	Std. Dev.				0.014	0.011	0.013	0.012	0.013	0.010	0.009	0.010	0.007	0.002	0.001
	Coeff. Var.				6.0	4.7	5.4	5.0	5.7	4.6	5.3	6.7	5.3	25.5	56.3
2-3	084457	1	2	1	0.252	0.243	0.243	0.246	0.236	0.236	0.192	0.161	0.141	0.010	0.002
2-3	084457	1	2	2	0.250	0.219	0.214	0.219	0.199	0.206	0.193	0.155	0.130	0.012	0.004
2-3	084457	1	2	3	0.256	0.238	0.219	0.209	0.213	0.208	0.194	0.149	0.139	0.011	0.004
2-3	084457	1	2	4	0.258	0.236	0.232	0.234	0.220	0.214	0.180	0.147	0.142	0.007	0.002
2-3	084457	1	2	5	0.259	0.246	0.238	0.240	0.251	0.221	0.198	0.161	0.151	0.007	0.003
2-3	084457	1	2	6	0.268	0.242	0.229	0.239	0.245	0.231	0.191	0.170	0.150	0.008	0.003
2-3	084457	1	2	7	0.270	0.236	0.232	0.240	0.235	0.225	0.203	0.170	0.140	0.010	0.003
2-3	084457	1	2	8	0.232	0.220	0.237	0.245	0.226	0.224	0.199	0.177	0.149	0.007	0.002
	Average				0.256	0.235	0.230	0.234	0.228	0.221	0.194	0.161	0.143	0.009	0.003
	Std. Dev.				0.012	0.010	0.010	0.013	0.017	0.011	0.007	0.011	0.007	0.002	0.001
	Coeff. Var.				4.6	4.3	4.2	5.6	7.5	4.8	3.6	6.6	4.9	22.5	30.3
2-3	084457	1	3	1	0.219	0.224	0.231	0.257	0.233	0.223	0.193	0.170	0.155	0.007	0.003
2-3	084457	1	3	2	0.260	0.256	0.244	0.231	0.224	0.215	0.182	0.156	0.149	0.012	0.006
2-3	084457	1	3	3	0.229	0.258	0.245	0.238	0.212	0.216	0.182	0.153	0.148	0.010	0.005
2-3	084457	1	3	4	0.225	0.256	0.248	0.249	0.223	0.206	0.189	0.155	0.151	0.008	0.004
2-3	084457	1	3	5	0.245	0.249	0.249	0.256	0.231	0.219	0.187	0.169	0.154	0.008	0.003
2-3	084457	1	3	6	0.246	0.244	0.256	0.244	0.233	0.232	0.189	0.167	0.152	0.009	0.005
2-3	084457	1	3	7	0.256	0.260	0.260	0.254	0.235	0.227	0.201	0.175	0.160	0.011	0.005
2-3	084457	1	3	8	0.252	0.240	0.243	0.234	0.229	0.218	0.188	0.167	0.152	0.008	0.004
	Average				0.241	0.248	0.247	0.245	0.227	0.219	0.189	0.164	0.152	0.009	0.004
	Std. Dev.				0.015	0.012	0.009	0.010	0.008	0.008	0.006	0.008	0.004	0.002	0.001
	Coeff. Var.				6.3	4.9	3.6	4.2	3.3	3.6	3.3	5.0	2.5	19.7	26.5
2-3	084457	1	4	1	0.249	0.229	0.254	0.239	0.221	0.216	0.175	0.164	0.140	0.009	0.003
2-3	084457	1	4	2	0.227	0.218	0.224	0.222	0.242	0.201	0.170	0.156	0.139	0.012	0.003
2-3	084457	1	4	3	0.243	0.201	0.204	0.209	0.195	0.196	0.168	0.152	0.131	0.013	0.005
2-3	084457	1	4	4	0.227	0.211	0.220	0.215	0.220	0.184	0.170	0.148	0.143	0.009	0.002
2-3	084457	1	4	5	0.222	0.212	0.215	0.224	0.215	0.196	0.172	0.146	0.141	0.008	0.004
2-3	084457	1	4	6	0.217	0.206	0.194	0.217	0.211	0.196	0.170	0.143	0.131	0.009	0.004
2-3	084457	1	4	7	0.228	0.202	0.205	0.205	0.198	0.180	0.156	0.135	0.124	0.009	0.004
2-3	084457	1	4	8	0.208	0.189	0.196	0.193	0.182	0.173	0.152	0.130	0.120	0.007	0.004
	Average				0.228	0.208	0.214	0.215	0.210	0.193	0.167	0.147	0.134	0.009	0.004
	Std. Dev.				0.013	0.012	0.019	0.014	0.019	0.013	0.008	0.011	0.008	0.002	0.001
	Coeff. Var.				5.8	5.8	9.1	6.4	8.8	7.0	4.9	7.5	6.4	21.3	26.2
2-5	084457	2	1	1	0.160	0.151	0.148	0.139	0.131	0.123	0.107	0.091	0.075	0.004	0.001
2-5	084457	2	1	2	0.172	0.145	0.143	0.150	0.127	0.121	0.108	0.086	0.073	0.004	0.003
2-5	084457	2	1	3	0.166	0.149	0.150	0.149	0.127	0.121	0.106	0.090	0.075	0.004	0.003
2-5	084457	2	1	4	0.167	0.181	0.161	0.155	0.136	0.137	0.176	0.092	0.077	0.002	0.002
2-5	084457	2	1	5	0.164	0.152	0.145	0.148	0.151	0.141	0.113	0.091	0.076	0.003	0.001
2-5	084457	2	1	6	0.170	0.147	0.154	0.166	0.151	0.143	0.114	0.099	0.081	0.002	0.002
2-5	084457	2	1	7	0.166	0.159	0.154	0.161	0.155	0.132	0.111	0.097	0.080	0.003	0.003
2-5	084457	2	1	8	0.156	0.175	0.172	0.161	0.144	0.133	0.105	0.090	0.080	0.003	0.002
	Average				0.166	0.158	0.154	0.154	0.141	0.132	0.118	0.092	0.078	0.004	0.003
	Std. Dev.				0.005	0.013	0.009	0.009	0.011	0.009	0.024	0.004	0.003	0.001	0.001
	Coeff. Var.				3.1	8.5	6.1	5.7	8.1	6.7	20.2	4.5	3.7	23.8	33.4

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
						Reading	2	3	4	6	8	12	16	20	110
2-5	084457	2	2	1	0.160	0.142	0.137	0.131	0.125	0.128	0.102	0.086	0.073	0.004	0.000
2-5	084457	2	2	2	0.147	0.137	0.135	0.148	0.128	0.126	0.105	0.084	0.077	0.006	0.002
2-5	084457	2	2	3	0.148	0.129	0.137	0.132	0.123	0.125	0.110	0.092	0.074	0.006	0.002
2-5	084457	2	2	4	0.153	0.166	0.143	0.132	0.135	0.129	0.104	0.085	0.074	0.005	0.002
2-5	084457	2	2	5	0.154	0.155	0.145	0.150	0.153	0.146	0.119	0.095	0.080	0.008	0.001
2-5	084457	2	2	6	0.162	0.149	0.158	0.171	0.154	0.145	0.119	0.096	0.080	0.007	0.002
2-5	084457	2	2	7	0.163	0.144	0.149	0.146	0.141	0.131	0.116	0.095	0.080	0.007	0.001
2-5	084457	2	2	8	0.163	0.174	0.151	0.153	0.140	0.124	0.112	0.091	0.093	0.008	0.001
	Average				0.157	0.150	0.145	0.146	0.138	0.132	0.111	0.091	0.079	0.007	0.002
	Std. Dev.				0.007	0.015	0.008	0.014	0.012	0.009	0.007	0.005	0.006	0.001	0.001
	Coeff. Var.				4.2	10.0	5.5	9.4	8.7	6.7	6.1	5.4	8.1	21.3	45.8
2-5	084457	2	3	1	0.175	0.153	0.145	0.146	0.140	0.140	0.119	0.092	0.080	0.003	0.001
2-5	084457	2	3	2	0.185	0.169	0.160	0.159	0.147	0.139	0.129	0.098	0.083	0.004	0.003
2-5	084457	2	3	3	0.183	0.169	0.168	0.173	0.142	0.138	0.127	0.099	0.076	0.004	0.003
2-5	084457	2	3	4	0.172	0.163	0.154	0.165	0.148	0.132	0.122	0.101	0.074	0.002	0.002
2-5	084457	2	3	5	0.200	0.177	0.169	0.174	0.156	0.168	0.134	0.103	0.081	0.003	0.002
2-5	084457	2	3	6	0.194	0.174	0.175	0.178	0.173	0.161	0.125	0.105	0.082	0.003	0.003
2-5	084457	2	3	7	0.162	0.175	0.169	0.167	0.153	0.146	0.128	0.093	0.083	0.005	0.004
2-5	084457	2	3	8	0.129	0.130	0.139	0.153	0.141	0.132	0.111	0.102	0.090	0.003	0.003
	Average				0.175	0.164	0.160	0.164	0.150	0.145	0.124	0.099	0.081	0.003	0.003
	Std. Dev.				0.022	0.016	0.013	0.011	0.011	0.013	0.007	0.005	0.005	0.001	0.001
	Coeff. Var.				12.7	9.6	8.0	6.7	7.3	9.2	5.7	4.7	6.0	27.1	34.9
2-5	084457	2	4	1	0.184	0.163	0.148	0.150	0.130	0.137	0.111	0.097	0.081	0.002	0.001
2-5	084457	2	4	2	0.172	0.158	0.150	0.155	0.140	0.131	0.109	0.097	0.078	0.007	0.003
2-5	084457	2	4	3	0.179	0.149	0.159	0.172	0.143	0.144	0.124	0.106	0.076	0.003	0.003
2-5	084457	2	4	4	0.186	0.162	0.159	0.166	0.158	0.136	0.118	0.097	0.077	0.001	0.002
2-5	084457	2	4	5	0.176	0.158	0.149	0.161	0.144	0.138	0.118	0.092	0.072	0.005	0.001
2-5	084457	2	4	6	0.189	0.167	0.157	0.172	0.157	0.149	0.120	0.098	0.082	0.002	0.002
2-5	084457	2	4	7	0.174	0.156	0.154	0.158	0.145	0.133	0.116	0.105	0.085	0.003	0.003
2-5	084457	2	4	8	0.176	0.157	0.153	0.150	0.142	0.131	0.113	0.100	0.086	0.003	0.001
	Average				0.179	0.159	0.153	0.160	0.145	0.137	0.116	0.099	0.079	0.003	0.002
	Std. Dev.				0.006	0.005	0.004	0.009	0.009	0.006	0.005	0.005	0.005	0.002	0.001
	Coeff. Var.				3.4	3.4	2.9	5.5	6.3	4.6	4.3	4.7	6.0	63.6	52.9
2-6	084457	3	1	1	0.303	0.284	0.269	0.262	0.228	0.229	0.205	0.180	0.162	0.021	0.003
2-6	084457	3	1	2	0.288	0.294	0.303	0.288	0.247	0.255	0.217	0.197	0.163	0.027	0.005
2-6	084457	3	1	3	0.303	0.296	0.311	0.299	0.259	0.266	0.221	0.204	0.175	0.028	0.004
2-6	084457	3	1	4	0.292	0.301	0.296	0.277	0.238	0.249	0.197	0.179	0.148	0.021	0.002
2-6	084457	3	1	5	0.340	0.323	0.320	0.304	0.274	0.250	0.222	0.191	0.167	0.017	0.003
2-6	084457	3	1	6	0.322	0.305	0.300	0.288	0.261	0.246	0.209	0.181	0.147	0.015	0.004
2-6	084457	3	1	7	0.323	0.336	0.319	0.312	0.272	0.245	0.209	0.186	0.152	0.019	0.003
2-6	084457	3	1	8	0.267	0.287	0.280	0.244	0.189	0.175	0.179	0.131	0.107	0.023	0.001
	Average				0.305	0.303	0.300	0.284	0.246	0.240	0.208	0.181	0.153	0.022	0.003
	Std. Dev.				0.023	0.018	0.018	0.023	0.028	0.028	0.014	0.022	0.021	0.005	0.001
	Coeff. Var.				7.6	5.9	6.0	7.9	11.4	11.7	6.9	12.2	13.6	21.1	38.4
2-6	084457	3	2	1	0.277	0.262	0.247	0.242	0.221	0.218	0.201	0.180	0.139	0.014	0.001
2-6	084457	3	2	2	0.285	0.280	0.263	0.234	0.243	0.210	0.185	0.147	0.127	0.018	0.002
2-6	084457	3	2	3	0.296	0.268	0.257	0.251	0.221	0.210	0.183	0.169	0.138	0.016	0.002
2-6	084457	3	2	4	0.285	0.261	0.269	0.278	0.255	0.242	0.200	0.181	0.144	0.012	0.001
2-6	084457	3	2	5	0.277	0.252	0.236	0.253	0.256	0.243	0.210	0.174	0.129	0.016	0.001
2-6	084457	3	2	6	0.251	0.243	0.254	0.258	0.247	0.237	0.192	0.163	0.135	0.016	0.001
2-6	084457	3	2	7	0.239	0.253	0.250	0.257	0.256	0.226	0.193	0.153	0.116	0.023	0.002
2-6	084457	3	2	8	0.236	0.216	0.220	0.239	0.209	0.211	0.175	0.125	0.118	0.019	0.001
	Average				0.269	0.255	0.250	0.252	0.239	0.225	0.193	0.162	0.131	0.017	0.002
	Std. Dev.				0.023	0.019	0.016	0.014	0.019	0.014	0.011	0.019	0.010	0.003	0.001
	Coeff. Var.				8.5	7.5	6.2	5.5	7.8	6.4	5.8	11.8	7.7	19.4	29.6

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
						Reading	2	3	4	6	8	12	16	20	110
2-6	084457	3	3	1	0.243	0.251	0.265	0.253	0.254	0.239	0.182	0.174	0.161	0.027	0.005
2-6	084457	3	3	2	0.313	0.272	0.286	0.255	0.236	0.206	0.168	0.168	0.136	0.023	0.005
2-6	084457	3	3	3	0.273	0.250	0.277	0.247	0.225	0.207	0.199	0.156	0.132	0.021	0.005
2-6	084457	3	3	4	0.339	0.242	0.234	0.239	0.223	0.228	0.199	0.172	0.133	0.018	0.004
2-6	084457	3	3	5	0.253	0.259	0.262	0.266	0.242	0.248	0.234	0.191	0.129	0.017	0.003
2-6	084457	3	3	6	0.239	0.259	0.246	0.307	0.279	0.254	0.234	0.176	0.130	0.021	0.006
2-6	084457	3	3	7	0.234	0.208	0.254	0.266	0.252	0.247	0.175	0.135	0.115	0.016	0.004
2-6	084457	3	3	8	0.247	0.227	0.217	0.231	0.215	0.184	0.139	0.137	0.121	0.018	0.004
	Average				0.267	0.246	0.255	0.258	0.241	0.226	0.191	0.163	0.132	0.020	0.004
	Std. Dev.				0.039	0.020	0.023	0.023	0.021	0.025	0.033	0.020	0.014	0.004	0.001
	Coeff. Var.				14.4	8.2	8.8	9.0	8.6	11.1	17.0	12.0	10.3	18.3	21.8
2-6	084457	3	4	1	0.334	0.308	0.319	0.292	0.271	0.231	0.224	0.208	0.174	0.019	0.002
2-6	084457	3	4	2	0.305	0.319	0.311	0.279	0.269	0.235	0.219	0.184	0.169	0.018	0.004
2-6	084457	3	4	3	0.315	0.300	0.303	0.292	0.257	0.235	0.212	0.184	0.165	0.018	0.003
2-6	084457	3	4	4	0.300	0.308	0.300	0.281	0.247	0.247	0.202	0.187	0.158	0.016	0.001
2-6	084457	3	4	5	0.304	0.293	0.279	0.299	0.273	0.252	0.229	0.200	0.176	0.014	0.002
2-6	084457	3	4	6	0.274	0.285	0.307	0.286	0.265	0.257	0.219	0.198	0.166	0.013	0.002
2-6	084457	3	4	7	0.252	0.276	0.279	0.285	0.257	0.245	0.207	0.170	0.154	0.017	0.005
2-6	084457	3	4	8	0.239	0.229	0.280	0.234	0.208	0.211	0.147	0.120	0.114	0.015	0.002
	Average				0.290	0.289	0.297	0.281	0.255	0.239	0.207	0.181	0.159	0.016	0.002
	Std. Dev.				0.032	0.028	0.016	0.020	0.021	0.015	0.026	0.027	0.020	0.002	0.001
	Coeff. Var.				11.2	9.7	5.3	7.2	8.3	6.1	12.5	15.2	12.5	13.5	61.3
2-2	084458	1	1	1	0.267	0.271	0.287	0.278	0.263	0.269	0.237	0.217	0.204	0.011	0.006
2-2	084458	1	1	2	0.275	0.266	0.277	0.278	0.283	0.266	0.239	0.233	0.204	0.011	0.005
2-2	084458	1	1	3	0.271	0.268	0.279	0.282	0.265	0.266	0.240	0.210	0.190	0.011	0.007
2-2	084458	1	1	4	0.266	0.277	0.287	0.287	0.275	0.259	0.261	0.239	0.208	0.009	0.008
2-2	084458	1	1	5	0.263	0.271	0.286	0.269	0.268	0.264	0.244	0.234	0.202	0.009	0.005
2-2	084458	1	1	6	0.277	0.253	0.280	0.279	0.262	0.254	0.227	0.218	0.209	0.010	0.006
2-2	084458	1	1	7	0.265	0.254	0.257	0.259	0.259	0.248	0.235	0.215	0.189	0.014	0.009
2-2	084458	1	1	8	0.228	0.236	0.248	0.262	0.242	0.229	0.219	0.202	0.180	0.009	0.007
	Average				0.264	0.262	0.275	0.274	0.265	0.257	0.238	0.221	0.198	0.010	0.007
	Std. Dev.				0.015	0.013	0.015	0.010	0.012	0.013	0.012	0.013	0.011	0.002	0.001
	Coeff. Var.				5.8	5.1	5.3	3.6	4.5	5.2	5.2	5.9	5.3	16.3	21.7
2-2	084458	1	2	1	0.233	0.225	0.249	0.254	0.253	0.252	0.226	0.226	0.197	0.008	0.005
2-2	084458	1	2	2	0.258	0.230	0.255	0.262	0.275	0.260	0.240	0.211	0.205	0.010	0.008
2-2	084458	1	2	3	0.260	0.231	0.230	0.259	0.266	0.254	0.243	0.228	0.188	0.010	0.006
2-2	084458	1	2	4	0.262	0.244	0.244	0.285	0.240	0.256	0.230	0.229	0.209	0.010	0.007
2-2	084458	1	2	5	0.265	0.249	0.243	0.257	0.257	0.271	0.257	0.231	0.202	0.011	0.006
2-2	084458	1	2	6	0.267	0.233	0.248	0.268	0.267	0.276	0.256	0.242	0.204	0.013	0.006
2-2	084458	1	2	7	0.287	0.256	0.267	0.257	0.257	0.241	0.240	0.215	0.193	0.014	0.007
2-2	084458	1	2	8	0.267	0.244	0.260	0.249	0.245	0.217	0.223	0.212	0.191	0.015	0.007
	Average				0.263	0.239	0.250	0.262	0.258	0.254	0.240	0.224	0.199	0.012	0.007
	Std. Dev.				0.015	0.011	0.011	0.011	0.012	0.018	0.013	0.011	0.008	0.002	0.001
	Coeff. Var.				5.7	4.5	4.5	4.2	4.5	7.2	5.3	4.8	3.8	20.8	14.0
2-2	084458	1	3	1	0.224	0.219	0.245	0.241	0.242	0.228	0.207	0.200	0.174	0.010	0.007
2-2	084458	1	3	2	0.256	0.233	0.248	0.239	0.250	0.239	0.223	0.201	0.174	0.011	0.008
2-2	084458	1	3	3	0.254	0.215	0.221	0.256	0.238	0.251	0.204	0.209	0.172	0.009	0.007
2-2	084458	1	3	4	0.271	0.243	0.239	0.234	0.236	0.216	0.225	0.200	0.186	0.008	0.007
2-2	084458	1	3	5	0.280	0.256	0.241	0.251	0.254	0.262	0.241	0.210	0.208	0.010	0.008
2-2	084458	1	3	6	0.258	0.229	0.231	0.233	0.225	0.232	0.218	0.193	0.179	0.007	0.006
2-2	084458	1	3	7	0.266	0.228	0.228	0.232	0.225	0.211	0.205	0.203	0.170	0.009	0.009
2-2	084458	1	3	8	0.242	0.216	0.217	0.212	0.204	0.190	0.183	0.186	0.159	0.007	0.007
	Average				0.256	0.229	0.233	0.237	0.234	0.228	0.213	0.200	0.177	0.008	0.007
	Std. Dev.				0.017	0.014	0.011	0.013	0.016	0.023	0.017	0.008	0.014	0.001	0.001
	Coeff. Var.				6.8	6.2	4.8	5.6	6.9	10.1	8.2	3.9	8.1	17.4	13.3

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control * Reading	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
						2	3	4	6	8	12	16	20	110	200
2-2	084458	1	4	1	0.228	0.250	0.256	0.259	0.231	0.236	0.209	0.198	0.173	0.008	0.005
2-2	084458	1	4	2	0.261	0.240	0.257	0.250	0.254	0.246	0.212	0.194	0.180	0.008	0.005
2-2	084458	1	4	3	0.251	0.239	0.252	0.268	0.250	0.222	0.216	0.211	0.188	0.006	0.004
2-2	084458	1	4	4	0.249	0.237	0.246	0.233	0.245	0.226	0.202	0.200	0.183	0.004	0.004
2-2	084458	1	4	5	0.240	0.247	0.244	0.236	0.241	0.231	0.209	0.195	0.189	0.008	0.004
2-2	084458	1	4	6	0.247	0.243	0.257	0.274	0.265	0.258	0.239	0.222	0.181	0.013	0.006
2-2	084458	1	4	7	0.247	0.251	0.267	0.290	0.264	0.258	0.242	0.219	0.177	0.008	0.006
2-2	084458	1	4	8	0.256	0.242	0.256	0.260	0.238	0.235	0.214	0.208	0.180	0.008	0.006
	Average				0.247	0.243	0.254	0.259	0.248	0.239	0.218	0.206	0.181	0.008	0.005
	Std. Dev.				0.010	0.005	0.007	0.019	0.012	0.014	0.015	0.011	0.005	0.003	0.001
	Coeff. Var.				4.1	2.1	2.8	7.4	4.9	5.7	6.7	5.3	2.9	33.2	19.5
2-4	084458	2	1	1	0.223	0.218	0.208	0.212	0.206	0.196	0.189	0.158	0.148	0.035	0.002
2-4	084458	2	1	2	0.229	0.230	0.244	0.217	0.230	0.211	0.190	0.160	0.154	0.033	0.003
2-4	084458	2	1	3	0.237	0.225	0.238	0.228	0.243	0.231	0.212	0.190	0.172	0.027	0.004
2-4	084458	2	1	4	0.223	0.232	0.246	0.244	0.247	0.221	0.212	0.198	0.173	0.030	0.003
2-4	084458	2	1	5	0.231	0.227	0.228	0.235	0.249	0.236	0.212	0.194	0.167	0.027	0.004
2-4	084458	2	1	6	0.241	0.230	0.230	0.244	0.246	0.233	0.216	0.191	0.184	0.027	0.006
2-4	084458	2	1	7	0.224	0.222	0.221	0.225	0.234	0.213	0.197	0.186	0.174	0.037	0.005
2-4	084458	2	1	8	0.244	0.228	0.229	0.232	0.233	0.198	0.187	0.162	0.144	0.027	0.004
	Average				0.232	0.227	0.231	0.230	0.236	0.218	0.202	0.180	0.165	0.031	0.004
	Std. Dev.				0.008	0.005	0.012	0.012	0.014	0.016	0.012	0.017	0.014	0.004	0.001
	Coeff. Var.				3.6	2.1	5.4	5.0	6.0	7.1	6.1	9.4	8.6	13.5	31.2
2-4	084458	2	2	1	0.229	0.212	0.217	0.226	0.211	0.210	0.192	0.177	0.164	0.050	0.001
2-4	084458	2	2	2	0.237	0.217	0.226	0.218	0.213	0.212	0.198	0.175	0.155	0.058	0.002
2-4	084458	2	2	3	0.248	0.213	0.253	0.233	0.235	0.228	0.211	0.190	0.164	0.046	0.004
2-4	084458	2	2	4	0.237	0.233	0.236	0.249	0.242	0.231	0.215	0.201	0.170	0.034	0.003
2-4	084458	2	2	5	0.231	0.226	0.228	0.248	0.244	0.239	0.218	0.195	0.164	0.038	0.005
2-4	084458	2	2	6	0.239	0.236	0.232	0.238	0.227	0.225	0.194	0.186	0.176	0.026	0.008
2-4	084458	2	2	7	0.232	0.227	0.222	0.226	0.225	0.200	0.185	0.172	0.153	0.031	0.006
2-4	084458	2	2	8	0.256	0.233	0.222	0.225	0.213	0.201	0.187	0.172	0.156	0.035	0.002
	Average				0.239	0.225	0.230	0.233	0.227	0.219	0.200	0.184	0.163	0.040	0.004
	Std. Dev.				0.009	0.009	0.011	0.011	0.013	0.014	0.013	0.011	0.008	0.011	0.002
	Coeff. Var.				3.8	4.2	4.9	4.8	5.8	6.6	6.5	6.1	4.8	26.8	57.1
2-4	084458	2	3	1	0.238	0.234	0.229	0.238	0.227	0.215	0.211	0.191	0.173	0.050	0.002
2-4	084458	2	3	2	0.251	0.234	0.240	0.247	0.241	0.236	0.204	0.192	0.191	0.045	0.004
2-4	084458	2	3	3	0.257	0.236	0.248	0.264	0.269	0.250	0.220	0.203	0.188	0.042	0.004
2-4	084458	2	3	4	0.253	0.240	0.270	0.269	0.274	0.259	0.231	0.208	0.184	0.040	0.005
2-4	084458	2	3	5	0.251	0.242	0.272	0.284	0.288	0.261	0.243	0.210	0.196	0.039	0.002
2-4	084458	2	3	6	0.272	0.252	0.279	0.284	0.270	0.265	0.242	0.212	0.189	0.041	0.006
2-4	084458	2	3	7	0.248	0.233	0.248	0.259	0.257	0.250	0.220	0.206	0.188	0.041	0.005
2-4	084458	2	3	8	0.254	0.245	0.254	0.255	0.253	0.238	0.206	0.209	0.195	0.045	0.009
	Average				0.253	0.239	0.255	0.262	0.260	0.246	0.222	0.204	0.188	0.043	0.004
	Std. Dev.				0.010	0.007	0.017	0.016	0.020	0.017	0.015	0.008	0.007	0.004	0.002
	Coeff. Var.				3.8	2.8	6.8	6.2	7.5	6.7	6.9	4.0	3.8	8.5	53.3
2-4	084458	2	4	1	0.233	0.211	0.216	0.231	0.220	0.220	0.197	0.185	0.176	0.054	0.003
2-4	084458	2	4	2	0.249	0.225	0.223	0.213	0.216	0.217	0.196	0.191	0.172	0.044	0.004
2-4	084458	2	4	3	0.224	0.206	0.221	0.227	0.226	0.223	0.211	0.185	0.173	0.042	0.005
2-4	084458	2	4	4	0.228	0.210	0.216	0.217	0.225	0.220	0.196	0.170	0.160	0.040	0.003
2-4	084458	2	4	5	0.225	0.216	0.214	0.228	0.244	0.248	0.215	0.188	0.174	0.037	0.003
2-4	084458	2	4	6	0.235	0.208	0.222	0.231	0.225	0.233	0.198	0.194	0.167	0.042	0.005
2-4	084458	2	4	7	0.228	0.219	0.223	0.227	0.222	0.218	0.188	0.181	0.168	0.033	0.009
2-4	084458	2	4	8	0.266	0.252	0.217	0.224	0.221	0.217	0.188	0.201	0.172	0.034	0.006
	Average				0.236	0.218	0.219	0.225	0.225	0.225	0.199	0.187	0.170	0.041	0.005
	Std. Dev.				0.015	0.015	0.004	0.007	0.008	0.011	0.010	0.009	0.005	0.007	0.002
	Coeff. Var.				6.1	6.8	1.7	2.9	3.7	4.8	4.9	4.9	3.0	16.3	43.2

Table 2:

**Neutral Red Cytotoxicity Assay Results
(Blank-Corrected Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Blank-Corrected Assay Plate Absorbance Readings										
					Control *	Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
						Reading	2	3	4	6	8	12	16	20	110
2-8	084458	3	1	1	0.372	0.329	0.357	0.347	0.334	0.312	0.293	0.279	0.260	0.009	0.004
2-8	084458	3	1	2	0.336	0.347	0.388	0.342	0.333	0.323	0.303	0.291	0.276	0.015	0.003
2-8	084458	3	1	3	0.352	0.372	0.388	0.360	0.341	0.344	0.318	0.312	0.269	0.015	0.004
2-8	084458	3	1	4	0.358	0.366	0.375	0.370	0.356	0.340	0.319	0.299	0.257	0.011	0.004
2-8	084458	3	1	5	0.365	0.379	0.388	0.378	0.351	0.353	0.308	0.303	0.265	0.009	0.003
2-8	084458	3	1	6	0.361	0.364	0.383	0.378	0.364	0.352	0.331	0.303	0.271	0.009	0.003
2-8	084458	3	1	7	0.346	0.385	0.387	0.369	0.358	0.340	0.333	0.307	0.259	0.010	0.004
2-8	084458	3	1	8	0.346	0.343	0.349	0.344	0.323	0.319	0.288	0.268	0.259	0.009	0.002
	Average				0.354	0.360	0.377	0.361	0.345	0.335	0.311	0.295	0.264	0.011	0.003
	Std. Dev.				0.012	0.019	0.016	0.015	0.014	0.015	0.017	0.015	0.007	0.003	0.001
	Coeff. Var.				3.3	5.3	4.1	4.2	4.2	4.6	5.3	5.1	2.6	24.9	23.8
2-8	084458	3	2	1	0.336	0.309	0.312	0.303	0.290	0.299	0.276	0.258	0.244	0.015	0.003
2-8	084458	3	2	2	0.322	0.335	0.275	0.296	0.255	0.273	0.280	0.258	0.243	0.017	0.006
2-8	084458	3	2	3	0.321	0.310	0.327	0.323	0.298	0.311	0.279	0.281	0.252	0.016	0.005
2-8	084458	3	2	4	0.303	0.288	0.327	0.319	0.324	0.305	0.291	0.254	0.233	0.010	0.003
2-8	084458	3	2	5	0.327	0.331	0.346	0.352	0.342	0.341	0.322	0.286	0.272	0.012	0.005
2-8	084458	3	2	6	0.324	0.307	0.306	0.337	0.343	0.312	0.297	0.271	0.251	0.012	0.004
2-8	084458	3	2	7	0.326	0.317	0.305	0.321	0.308	0.284	0.276	0.253	0.243	0.012	0.004
2-8	084458	3	2	8	0.292	0.287	0.296	0.322	0.316	0.297	0.287	0.273	0.240	0.012	0.002
	Average				0.319	0.310	0.312	0.322	0.309	0.303	0.288	0.267	0.247	0.013	0.004
	Std. Dev.				0.014	0.017	0.022	0.018	0.029	0.020	0.015	0.013	0.012	0.002	0.001
	Coeff. Var.				4.5	5.6	7.0	5.5	9.4	6.7	5.4	4.8	4.7	18.6	33.8
2-8	084458	3	3	1	0.304	0.291	0.299	0.302	0.288	0.263	0.301	0.285	0.251	0.024	0.004
2-8	084458	3	3	2	0.294	0.308	0.302	0.287	0.295	0.288	0.278	0.288	0.251	0.022	0.006
2-8	084458	3	3	3	0.289	0.293	0.299	0.310	0.301	0.308	0.281	0.276	0.236	0.020	0.005
2-8	084458	3	3	4	0.286	0.279	0.284	0.279	0.308	0.276	0.288	0.278	0.240	0.013	0.003
2-8	084458	3	3	5	0.286	0.279	0.292	0.318	0.308	0.314	0.276	0.261	0.225	0.015	0.005
2-8	084458	3	3	6	0.278	0.276	0.291	0.299	0.294	0.290	0.266	0.260	0.214	0.017	0.003
2-8	084458	3	3	7	0.283	0.286	0.280	0.271	0.269	0.253	0.233	0.238	0.179	0.019	0.005
2-8	084458	3	3	8	0.271	0.283	0.277	0.245	0.275	0.258	0.253	0.265	0.211	0.021	0.003
	Average				0.286	0.286	0.290	0.288	0.292	0.281	0.272	0.268	0.225	0.018	0.004
	Std. Dev.				0.010	0.010	0.009	0.024	0.014	0.023	0.021	0.016	0.024	0.004	0.001
	Coeff. Var.				3.5	3.6	3.2	8.2	4.9	8.1	7.8	6.1	10.8	20.0	31.1
2-8	084458	3	4	1	0.325	0.295	0.305	0.305	0.267	0.278	0.264	0.276	0.236	0.013	0.004
2-8	084458	3	4	2	0.299	0.322	0.323	0.304	0.307	0.313	0.294	0.310	0.270	0.011	0.006
2-8	084458	3	4	3	0.293	0.327	0.341	0.306	0.313	0.313	0.280	0.292	0.255	0.011	0.003
2-8	084458	3	4	4	0.293	0.315	0.330	0.288	0.303	0.273	0.260	0.273	0.235	0.009	0.002
2-8	084458	3	4	5	0.334	0.341	0.350	0.329	0.325	0.306	0.294	0.304	0.266	0.012	0.003
2-8	084458	3	4	6	0.315	0.337	0.344	0.325	0.321	0.318	0.281	0.286	0.253	0.009	0.004
2-8	084458	3	4	7	0.312	0.295	0.306	0.308	0.296	0.291	0.267	0.269	0.231	0.013	0.005
2-8	084458	3	4	8	0.267	0.273	0.288	0.278	0.249	0.255	0.235	0.232	0.213	0.011	0.003
	Average				0.305	0.313	0.324	0.306	0.298	0.294	0.272	0.281	0.245	0.011	0.004
	Std. Dev.				0.021	0.024	0.022	0.017	0.027	0.023	0.020	0.024	0.019	0.002	0.001
	Coeff. Var.				7.0	7.5	6.8	5.5	8.9	7.8	7.2	8.7	7.9	13.6	32.0

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
3-4	084394	1	1	1	93.7	92.8	93.7	85.6	80.1	72.5	64.8	58.5	2.02	0
3-4	084394	1	1	2	92.8	104	100	91.1	88.6	78.0	66.9	60.2	2.02	1.59
3-4	084394	1	1	3	86.9	98.8	96.2	92.0	92.0	81.4	68.2	57.6	2.02	0.743
3-4	084394	1	1	4	89.4	95.4	102	105	94.1	83.5	69.9	61.4	1.59	0.743
3-4	084394	1	1	5	102	103	114	107	102	89.0	72.0	66.9	1.59	0.743
3-4	084394	1	1	6	94.5	100	105	106	98.8	87.7	67.8	62.3	1.59	0.743
3-4	084394	1	1	7	97.9	102	102	99.6	101	84.4	70.8	63.1	2.44	1.17
3-4	084394	1	1	8	107	102	99.2	87.3	90.3	66.9	57.6	53.4	1.59	0.743
	Average				95.5	99.9	101	96.7	93.4	80.4	67.3	60.4	1.86	0.809
	Std. Dev.				6.5	4.0	6	8.7	7.4	7.6	4.5	4.1	0.32	0.450
	Coeff. Var.				6.8	4.0	5.9	9.0	7.9	9.4	6.7	6.7	17.0	55.6
3-4	084394	1	2	1	93.9	99.7	97.4	91.7	86.3	77.9	67.2	58.8	1.83	0.500
3-4	084394	1	2	2	93.4	106	98.8	89.9	79.7	68.1	61.9	58.3	0.945	0.945
3-4	084394	1	2	3	94.3	118	109	96.1	87.2	75.7	64.5	62.3	1.83	1.39
3-4	084394	1	2	4	93.9	121	108	93.4	89.4	74.3	69.4	61.4	0.500	0.500
3-4	084394	1	2	5	108	118	115	102	95.2	80.1	68.1	64.1	1.39	0.500
3-4	084394	1	2	6	102	113	112	109	93.0	81.9	68.5	67.2	1.39	0.500
3-4	084394	1	2	7	98.8	110	109	104	95.2	85.9	69.0	61.4	1.83	0.945
3-4	084394	1	2	8	96.6	101	102	97.9	92.6	77.0	60.5	53.0	1.39	0.056
	Average				97.6	111	106	97.9	89.8	77.6	66.1	60.8	1.39	0.667
	Std. Dev.				5.0	8	6	6.4	5.3	5.3	3.4	4.3	0.48	0.407
	Coeff. Var.				5.2	7.3	5.8	6.6	5.9	6.9	5.2	7.0	34.2	61.1
3-4	084394	1	3	1	99.3	93.9	93.9	86.9	75.3	70.8	60.1	56.8	2.32	0.258
3-4	084394	1	3	2	94.7	105	96.4	89.4	80.3	68.7	63.4	56.8	1.50	1.08
3-4	084394	1	3	3	97.2	106	106	90.2	84.4	70.0	60.5	53.1	1.91	1.08
3-4	084394	1	3	4	99.7	107	108	99.7	91.9	76.2	62.6	55.1	1.50	0.670
3-4	084394	1	3	5	97.2	105	103	87.7	85.3	71.2	57.6	53.9	1.91	0
3-4	084394	1	3	6	96.0	114	112	99.7	93.1	74.5	58.0	57.2	1.50	0.670
3-4	084394	1	3	7	99.7	103	102	97.2	91.0	75.3	63.4	40.7	2.32	1.08
3-4	084394	1	3	8	81.1	77.0	75.3	68.3	65.4	56.8	50.6	46.9	1.91	0.670
	Average				95.6	101	99.6	89.9	83.3	70.4	59.5	52.6	1.86	0.690
	Std. Dev.				6.1	11	11.5	10.2	9.4	6.1	4.2	5.8	0.34	0.401
	Coeff. Var.				6.4	11.1	11.5	11.3	11.3	8.7	7.1	11.1	18.5	58.2
3-4	084394	1	4	1	91.1	102	104	88.5	87.1	75.2	66.8	60.1	3.82	1.61
3-4	084394	1	4	2	100	102	100	96.9	88.5	74.3	66.3	60.1	3.82	1.16
3-4	084394	1	4	3	89.4	104	114	104	94.2	75.6	65.4	58.3	3.38	1.61
3-4	084394	1	4	4	86.3	96.0	102	102	95.1	77.0	62.8	55.7	1.61	0.720
3-4	084394	1	4	5	100	104	115	108	96.5	77.8	69.0	58.8	2.05	0.277
3-4	084394	1	4	6	90.7	95.6	102	100	93.4	83.6	66.3	59.2	1.61	1.16
3-4	084394	1	4	7	96.9	100	106	102	92.9	81.4	68.1	60.6	4.27	2.05
3-4	084394	1	4	8	101	104	105	97.8	92.9	80.5	65.0	57.9	5.15	0.720
	Average				94.5	101	106	99.8	92.6	78.2	66.2	58.8	3.21	1.16
	Std. Dev.				5.8	3	5	5.7	3.2	3.3	1.9	1.6	1.32	0.58
	Coeff. Var.				6.1	3.4	5.1	5.7	3.4	4.3	2.9	2.7	41.0	49.9

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
3-6	084394	2	1	1	99.3	102	104	96.5	90.7	77.8	69.6	56.0	2.10	0.927
3-6	084394	2	1	2	93.4	93.8	93.0	81.7	78.2	63.8	54.8	48.9	1.71	1.71
3-6	084394	2	1	3	91.5	92.2	90.7	84.4	80.9	69.6	55.6	47.4	2.49	1.32
3-6	084394	2	1	4	86.4	90.7	92.2	93.8	88.0	70.0	57.5	46.2	1.71	1.32
3-6	084394	2	1	5	84.0	93.0	93.0	98.5	97.3	82.9	66.5	48.9	2.10	0.927
3-6	084394	2	1	6	86.0	87.6	91.9	94.6	91.1	79.8	60.6	50.5	1.71	1.32
3-6	084394	2	1	7	91.9	93.0	93.8	91.9	83.3	70.0	63.0	51.3	4.05	1.71
3-6	084394	2	1	8	93.0	90.7	101	87.2	77.8	63.0	55.2	47.4	2.88	1.32
Average					90.7	92.9	95.0	91.1	85.9	72.1	60.3	49.6	2.34	1.32
Std. Dev.					5.0	4.2	4.9	6.0	7.0	7.3	5.6	3.1	0.81	0.29
Coeff. Var.					5.5	4.5	5.1	6.6	8.1	10.2	9.3	6.2	34.4	22.4
3-6	084394	2	2	1	110	105	102	100	94.5	76.7	66.7	57.0	1.07	0.324
3-6	084394	2	2	2	101	100	105	94.5	92.6	81.1	62.6	57.0	2.18	1.07
3-6	084394	2	2	3	100	102	98.2	89.3	90.0	79.3	60.8	57.4	2.18	0.695
3-6	084394	2	2	4	100	103	98.9	89.7	88.6	78.2	64.5	50.4	2.92	0.695
3-6	084394	2	2	5	94.1	96.7	93.0	90.0	92.3	83.4	65.6	56.7	2.18	0
3-6	084394	2	2	6	96.0	93.4	98.2	94.9	95.6	83.4	64.8	55.9	2.18	1.07
3-6	084394	2	2	7	91.5	88.9	91.5	93.7	87.4	74.8	63.0	48.1	4.03	1.07
3-6	084394	2	2	8	94.9	91.1	93.7	87.8	84.5	70.4	60.8	51.5	2.55	0.324
Average					98.6	97.6	97.5	92.5	90.7	78.4	63.6	54.3	2.41	0.655
Std. Dev.					5.9	6.0	4.6	4.0	3.8	4.4	2.2	3.7	0.84	0.407
Coeff. Var.					6.0	6.1	4.7	4.4	4.1	5.7	3.4	6.8	34.8	62.1
3-6	084394	2	3	1	106	104	102	102	91.5	83.7	75.0	69.8	2.60	1.73
3-6	084394	2	3	2	98.9	95.8	99.3	92.4	83.7	73.3	64.2	53.3	3.04	2.17
3-6	084394	2	3	3	95.8	95.0	91.5	88.0	81.1	71.5	62.4	58.5	2.17	0.867
3-6	084394	2	3	4	92.8	94.1	91.9	92.4	88.9	77.6	60.7	50.3	1.30	0.434
3-6	084394	2	3	5	92.4	95.8	94.5	103	98.4	85.4	67.2	53.8	3.47	0.867
3-6	084394	2	3	6	97.6	96.7	101	101	103	85.4	67.2	54.6	2.60	1.30
3-6	084394	2	3	7	98.4	101	108	95.8	88.0	77.2	65.5	56.4	5.20	2.17
3-6	084394	2	3	8	92.8	89.8	92.4	90.6	87.2	81.1	64.6	53.8	3.04	0.867
Average					96.9	96.6	97.6	95.6	90.2	79.4	65.9	56.3	2.93	1.30
Std. Dev.					4.6	4.5	5.9	5.7	7.3	5.4	4.3	6.0	1.13	0.66
Coeff. Var.					4.8	4.6	6.0	5.9	8.0	6.7	6.6	10.6	38.6	50.4
3-6	084394	2	4	1	101	101	91.0	90.6	81.7	67.0	51.6	43.8	1.71	1.03
3-6	084394	2	4	2	95.4	94.7	89.3	84.5	84.5	69.8	57.8	51.3	2.05	1.03
3-6	084394	2	4	3	93.7	99.2	93.4	89.3	83.1	72.9	58.8	49.3	2.05	1.03
3-6	084394	2	4	4	93.4	100	94.7	89.6	78.7	72.9	58.5	48.2	1.37	0.684
3-6	084394	2	4	5	93.4	96.1	97.5	88.9	82.8	74.9	62.6	52.0	1.71	0.342
3-6	084394	2	4	6	92.7	99.5	97.5	92.3	88.2	79.7	66.0	56.4	1.37	1.03
3-6	084394	2	4	7	92.3	91.7	94.1	92.7	90.0	74.6	60.9	43.8	3.42	1.37
3-6	084394	2	4	8	98.5	96.8	91.0	81.7	82.4	71.8	56.8	53.7	2.05	0.684
Average					95.1	97.4	93.5	88.7	83.9	72.9	59.1	49.8	1.97	0.898
Std. Dev.					3.2	3.2	3.0	3.8	3.6	3.7	4.2	4.5	0.65	0.313
Coeff. Var.					3.3	3.2	3.2	4.3	4.3	5.1	7.2	9.0	33.2	34.9

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
3-13	084394	3	1	1	96.2	99.1	97.0	101	94.1	75.3	64.0	52.2	2.97	0.941
3-13	084394	3	1	2	108	102	101	97.3	92.1	81.1	66.6	53.0	2.68	1.23
3-13	084394	3	1	3	104	103	101	94.1	92.7	78.5	67.5	55.9	2.97	1.81
3-13	084394	3	1	4	111	110	106	99.1	90.7	79.4	67.2	56.8	1.81	0.651
3-13	084394	3	1	5	97.6	99.3	99.3	94.7	83.4	74.2	67.5	60.3	2.39	1.23
3-13	084394	3	1	6	105	103	99.9	93.8	91.2	75.6	65.5	58.5	2.10	0.941
3-13	084394	3	1	7	94.1	95.3	95.0	87.5	79.7	67.8	58.2	49.9	2.10	1.23
3-13	084394	3	1	8	97.6	81.1	81.7	77.4	73.6	60.3	50.4	45.8	2.10	0.072
Average					102	99.1	97.5	93.1	87.2	74.0	63.4	54.1	2.39	1.01
Std. Dev.					6	8.4	7.1	7.6	7.4	6.9	6.1	4.8	0.44	0.51
Coeff. Var.					6.0	8.5	7.3	8.1	8.5	9.3	9.6	8.8	18.3	50.1
3-13	084394	3	2	1	107	113	105	104	97.8	82.7	68.8	52.4	3.92	0.704
3-13	084394	3	2	2	104	106	103	98.3	95.6	78.7	67.5	56.7	6.07	2.04
3-13	084394	3	2	3	105	107	105	98.0	95.9	79.0	65.9	60.2	9.55	1.51
3-13	084394	3	2	4	106	103	100	94.3	92.4	80.6	66.1	58.3	6.33	0.704
3-13	084394	3	2	5	103	104	104	95.1	89.4	79.5	64.0	58.6	4.99	0.704
3-13	084394	3	2	6	100	98.8	98.0	90.8	89.7	76.0	63.7	54.3	3.38	1.24
3-13	084394	3	2	7	105	102	98.3	88.9	84.9	70.4	60.0	51.4	3.65	0.972
3-13	084394	3	2	8	92.9	79.0	86.2	71.5	66.9	55.4	51.9	46.8	3.38	0.436
Average					103	102	99.9	92.7	89.1	75.3	63.5	54.9	5.16	1.04
Std. Dev.					4	10	6.2	9.8	9.9	8.8	5.4	4.5	2.13	0.53
Coeff. Var.					4.3	9.8	6.2	10.6	11.1	11.7	8.5	8.2	41.2	51.1
3-13	084394	3	3	1	107	113	114	109	99.6	87.2	64.6	60.6	3.05	0.889
3-13	084394	3	3	2	105	113	108	105	98.3	85.3	72.4	66.5	3.05	1.82
3-13	084394	3	3	3	105	110	111	103	101	84.7	73.6	65.9	3.98	1.82
3-13	084394	3	3	4	104	104	112	108	97.4	84.1	71.1	63.1	2.75	1.20
3-13	084394	3	3	5	96.2	101	109	110	101	87.5	72.0	62.5	3.36	0.889
3-13	084394	3	3	6	92.2	93.1	104	101	93.4	81.3	70.5	61.2	2.44	1.20
3-13	084394	3	3	7	91.8	98.6	104	102	90.0	82.3	67.4	59.7	3.67	1.51
3-13	084394	3	3	8	76.4	74.2	76.1	70.5	67.1	60.0	54.4	51.0	3.98	0.580
Average					97.2	101	105	101	93.4	81.6	68.3	61.3	3.29	1.24
Std. Dev.					10.4	13	12	13	11.3	9.0	6.3	4.8	0.57	0.45
Coeff. Var.					10.7	12.8	11.5	12.6	12.1	11.0	9.2	7.8	17.2	36.4
3-13	084394	3	4	1	106	105	105	101	101	92.9	75.7	58.2	4.49	0.806
3-13	084394	3	4	2	103	103	106	97.9	93.9	81.9	68.1	55.5	4.80	1.73
3-13	084394	3	4	3	94.2	103	110	100	92.6	82.5	66.8	57.9	4.49	1.73
3-13	084394	3	4	4	95.4	94.2	96.6	88.9	82.5	72.1	60.4	50.6	4.18	0.499
3-13	084394	3	4	5	96.0	96.0	101	97.2	93.9	80.0	65.6	57.6	4.80	1.42
3-13	084394	3	4	6	96.6	95.1	106	92.0	91.4	76.4	65.9	58.8	5.41	1.42
3-13	084394	3	4	7	101	100	100	95.1	88.6	74.2	65.9	53.9	6.03	1.42
3-13	084394	3	4	8	79.7	80.7	79.1	69.0	62.8	55.5	53.0	47.8	6.03	0.806
Average					96.4	97.2	101	92.6	88.3	76.9	65.2	55.0	5.03	1.23
Std. Dev.					7.8	7.8	10	10.4	11.5	10.8	6.5	4.0	0.71	0.46
Coeff. Var.					8.1	8.0	9.6	11.2	13.1	14.0	10.0	7.3	14.1	37.6

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
3-9	084395	1	1	1	103	108	114	99.0	98.0	78.0	64.6	59.1	1.68	0.686
3-9	084395	1	1	2	97.0	116	113	104	108	86.0	65.1	54.1	4.68	1.68
3-9	084395	1	1	3	105	114	113	110	99.0	89.5	73.1	62.1	8.67	1.68
3-9	084395	1	1	4	104	109	108	103	98.0	77.0	72.6	54.1	11.7	1.19
3-9	084395	1	1	5	113	114	109	105	97.5	83.0	61.1	53.6	12.7	1.19
3-9	084395	1	1	6	114	111	110	110	101	80.0	69.6	57.6	12.7	1.19
3-9	084395	1	1	7	104	111	112	102	99.5	81.0	70.6	54.1	6.67	3.18
3-9	084395	1	1	8	94.5	95.0	96.5	88.5	89.5	63.6	61.1	52.1	4.68	0.686
Average					104	110	110	103	98.8	79.8	67.2	55.8	7.92	1.43
Std. Dev.					7	7	6	7	5.1	7.7	4.9	3.4	4.16	0.80
Coeff. Var.					6.5	6.0	5.2	6.8	5.1	9.7	7.3	6.1	52.5	55.8
3-9	084395	1	2	1	108	97.5	97.9	86.9	79.7	70.0	54.8	49.3	2.33	0.635
3-9	084395	1	2	2	95.4	97.1	100	93.3	83.1	65.8	53.5	47.2	1.90	0.212
3-9	084395	1	2	3	100	110	110	90.3	87.4	72.1	60.7	47.6	2.33	1.48
3-9	084395	1	2	4	97.5	98.8	104	93.3	82.3	70.4	55.6	48.9	1.90	0
3-9	084395	1	2	5	112	112	97.5	112	92.0	78.5	65.4	53.5	1.90	0.635
3-9	084395	1	2	6	109	112	107	107	92.4	77.2	60.3	52.7	1.48	1.06
3-9	084395	1	2	7	108	106	103	100	91.2	72.6	64.1	50.6	3.17	2.33
3-9	084395	1	2	8	75.5	76.8	71.3	73.8	71.7	56.9	50.6	40.4	2.33	1.06
Average					101	101	98.8	94.7	85.0	70.4	58.1	48.8	2.17	0.925
Std. Dev.					12	12	11.9	12.0	7.2	6.8	5.3	4.1	0.50	0.741
Coeff. Var.					11.7	11.6	12.0	12.7	8.5	9.6	9.1	8.3	23.2	80.1
3-9	084395	1	3	1	78.3	87.4	85.1	86.5	83.3	72.0	58.4	54.8	0	0
3-9	084395	1	3	2	87.4	92.8	99.6	90.5	88.3	77.4	68.4	54.3	1.36	0
3-9	084395	1	3	3	91.5	94.2	93.7	99.6	91.9	81.0	65.2	58.9	3.17	0
3-9	084395	1	3	4	94.2	92.8	96.9	98.7	95.5	77.9	67.9	56.1	5.89	0
3-9	084395	1	3	5	98.2	96.0	97.3	99.6	91.0	80.6	61.6	58.0	6.79	0
3-9	084395	1	3	6	95.5	95.1	100	101	94.6	78.8	63.8	54.8	2.26	0
3-9	084395	1	3	7	106	110	101	97.3	88.7	81.9	65.6	52.5	1.81	0.905
3-9	084395	1	3	8	93.7	83.3	76.5	76.5	62.5	55.7	46.2	44.4	1.36	0
Average					93.1	93.9	93.7	93.7	87.0	75.7	62.1	54.2	2.83	0.113
Std. Dev.					8.0	7.8	8.6	8.6	10.6	8.6	7.2	4.5	2.36	0.320
Coeff. Var.					8.6	8.3	9.1	9.2	12.2	11.4	11.6	8.2	83.2	282.8
3-9	084395	1	4	1	94.9	94.4	97.2	91.1	91.6	75.5	64.2	54.8	2.47	0.589
3-9	084395	1	4	2	99.6	105	102	99.6	91.6	77.0	68.5	57.2	2.47	1.06
3-9	084395	1	4	3	97.2	96.3	109	103	100	87.3	74.1	59.5	2.95	1.53
3-9	084395	1	4	4	93.9	97.7	98.2	94.4	92.5	81.2	70.4	57.6	2.00	1.53
3-9	084395	1	4	5	102	102	103	103	94.9	86.9	64.7	58.1	2.00	2.00
3-9	084395	1	4	6	99.6	102	114	105	102	82.6	67.5	57.6	2.47	1.53
3-9	084395	1	4	7	96.8	99.1	102	104	95.8	80.3	66.1	52.9	2.95	2.95
3-9	084395	1	4	8	97.7	100	107	94.9	92.5	76.0	71.3	53.4	3.42	1.53
Average					97.8	99.5	104	99.4	95.2	80.8	68.4	56.4	2.59	1.59
Std. Dev.					2.7	3.4	6	5.3	4.1	4.6	3.4	2.4	0.49	0.69
Coeff. Var.					2.8	3.4	5.3	5.3	4.3	5.7	5.0	4.2	18.8	43.2

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
3-11	084395	2	1	1	99.7	98.6	93.6	84.3	80.9	77.1	64.4	61.1	5.57	0.619
3-11	084395	2	1	2	85.4	94.2	93.6	89.2	89.2	79.3	67.7	60.6	4.47	1.72
3-11	084395	2	1	3	91.4	93.6	101	94.7	97.5	84.8	71.6	58.9	4.47	1.72
3-11	084395	2	1	4	86.5	86.5	94.2	92.0	92.5	79.8	64.4	54.5	3.92	1.17
3-11	084395	2	1	5	94.2	99.1	97.5	99.7	96.9	89.2	72.7	64.4	5.02	0.619
3-11	084395	2	1	6	94.7	98.6	104	101	95.8	83.7	71.0	63.9	10.5	1.17
3-11	084395	2	1	7	101	103	100	100	96.9	84.8	71.6	62.8	11.1	2.27
3-11	084395	2	1	8	66.6	72.1	72.1	72.7	69.9	60.6	56.2	48.5	10.5	1.17
Average					90.0	93.2	94.4	91.7	90.0	79.9	67.5	59.4	6.95	1.31
Std. Dev.					11.0	9.8	9.7	9.7	9.8	8.7	5.6	5.4	3.15	0.57
Coeff. Var.					12.2	10.6	10.3	10.6	10.9	10.9	8.3	9.1	45.4	43.6
3-11	084395	2	2	1	107	114	106	77.5	77.5	74.2	68.7	53.8	6.96	1.45
3-11	084395	2	2	2	89.1	101	105	93.5	86.9	78.6	70.9	55.5	6.96	1.45
3-11	084395	2	2	3	87.5	99.6	109	102	99.6	89.7	74.2	66.0	10.3	2.00
3-11	084395	2	2	4	93.5	100	107	111	100	89.1	76.4	65.4	10.3	1.45
3-11	084395	2	2	5	101	105	102	100	97.4	93.0	78.1	61.5	13.6	0.896
3-11	084395	2	2	6	103	107	106	102	90.2	89.1	73.7	59.9	11.9	2.00
3-11	084395	2	2	7	102	106	108	94.6	95.7	78.1	69.8	58.8	8.06	2.00
3-11	084395	2	2	8	84.1	93.0	85.3	75.9	78.6	55.5	56.6	41.7	10.3	0.345
Average					95.9	103	104	94.6	90.8	80.9	71.1	57.8	9.79	1.45
Std. Dev.					8.5	6	8	12.3	9.0	12.3	6.7	7.8	2.35	0.59
Coeff. Var.					8.9	6.2	7.5	13.0	10.0	15.2	9.4	13.5	24.0	40.7
3-11	084395	2	3	1	103	97.3	101	92.3	87.2	73.8	70.5	58.2	5.23	1.88
3-11	084395	2	3	2	97.3	99.0	95.6	93.9	93.9	81.7	72.7	64.4	5.79	1.88
3-11	084395	2	3	3	103	103	102	97.8	103	91.7	77.2	62.1	4.11	1.32
3-11	084395	2	3	4	103	108	106	97.3	103	91.7	77.2	61.6	2.44	0.767
3-11	084395	2	3	5	106	111	111	106	106	98.4	86.1	67.2	3.00	1.32
3-11	084395	2	3	6	109	112	110	105	103	96.7	82.2	70.5	3.56	1.88
3-11	084395	2	3	7	108	110	111	106	99.5	90.6	79.4	67.7	5.79	1.88
3-11	084395	2	3	8	76.6	82.8	86.7	88.9	78.3	71.1	64.4	56.6	6.90	1.32
Average					101	103	103	98.5	96.8	87.0	76.2	63.5	4.60	1.53
Std. Dev.					10	10	8	6.7	9.7	10.3	6.9	4.8	1.56	0.42
Coeff. Var.					10.3	9.6	8.2	6.8	10.0	11.8	9.0	7.6	33.9	27.1
3-11	084395	2	4	1	101	103	96.6	96.0	89.6	82.5	73.1	64.8	2.43	1.25
3-11	084395	2	4	2	107	113	111	114	105	97.2	85.4	70.1	4.78	2.43
3-11	084395	2	4	3	104	113	110	107	106	91.9	87.2	74.2	5.37	2.43
3-11	084395	2	4	4	107	117	112	108	110	100	83.7	86.6	4.19	1.25
3-11	084395	2	4	5	110	115	115	107	109	94.8	82.5	68.9	3.61	1.25
3-11	084395	2	4	6	110	112	113	107	110	95.4	81.3	67.8	4.78	1.84
3-11	084395	2	4	7	104	111	106	104	104	94.3	77.2	66.6	4.78	3.61
3-11	084395	2	4	8	91.3	111	105	105	103	94.8	83.7	73.7	5.96	3.02
Average					104	112	109	106	104	93.9	81.8	71.6	4.49	2.13
Std. Dev.					6	4	6	5	7	5.2	4.6	6.9	1.09	0.89
Coeff. Var.					5.9	3.7	5.4	4.7	6.4	5.5	5.6	9.6	24.3	41.7

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
3-15	084395	3	1	1	101	103	110	107	98.8	87.6	78.3	65.3	1.83	0.705
3-15	084395	3	1	2	96.3	93.5	94.9	91.8	89.8	76.8	73.2	56.8	2.11	0.987
3-15	084395	3	1	3	96.0	96.6	95.2	93.5	94.6	82.2	74.9	65.3	1.83	0.705
3-15	084395	3	1	4	92.1	91.2	90.1	90.4	89.2	78.5	73.2	60.8	1.27	0.423
3-15	084395	3	1	5	104	98.0	102	99.7	95.5	88.7	79.1	65.8	1.83	0.423
3-15	084395	3	1	6	96.0	94.9	104	101	98.3	88.1	81.4	68.9	2.68	0.705
3-15	084395	3	1	7	95.7	96.0	99.7	96.6	92.4	84.5	77.7	66.4	3.81	0.705
3-15	084395	3	1	8	104	99.1	99.1	96.3	92.9	81.9	75.1	64.2	4.09	0.141
Average					98.2	96.6	99.3	97.0	93.9	83.5	76.6	64.2	2.43	0.599
Std. Dev.					4.4	3.7	6.1	5.5	3.5	4.5	3.0	3.8	1.02	0.258
Coeff. Var.					4.5	3.8	6.1	5.6	3.8	5.3	3.9	5.8	41.8	43.1
3-15	084395	3	2	1	93.3	107	111	116	110	98.5	85.4	73.9	1.89	0.247
3-15	084395	3	2	2	91.3	92.9	97.5	99.2	95.2	84.7	76.5	64.0	2.88	0.904
3-15	084395	3	2	3	96.5	91.9	97.2	98.8	99.2	88.3	79.8	70.6	2.55	0.904
3-15	084395	3	2	4	93.6	95.9	94.9	96.9	101	90.6	88.0	72.9	1.89	0.247
3-15	084395	3	2	5	107	103	112	116	117	102	92.3	74.2	2.55	0.247
3-15	084395	3	2	6	103	101	108	113	114	97.2	90.3	77.2	1.89	0.904
3-15	084395	3	2	7	106	104	102	98.5	96.5	85.4	86.7	75.5	4.19	0.904
3-15	084395	3	2	8	104	99.5	97.9	99.2	84.4	77.5	72.6	58.1	2.88	0.575
Average					99.4	99.4	103	105	102	90.5	83.9	70.8	2.59	0.616
Std. Dev.					6.4	5.4	7	9	11	8.2	7.0	6.5	0.77	0.326
Coeff. Var.					6.4	5.4	6.8	8.2	10.7	9.1	8.3	9.2	29.9	52.9
3-15	084395	3	3	1	100	109	109	111	111	97.8	87.9	66.9	1.55	0.619
3-15	084395	3	3	2	100	102	101	100	97.5	86.4	75.2	63.2	2.17	0.929
3-15	084395	3	3	3	91.6	98.8	102	98.1	99.1	87.3	82.0	66.9	1.86	0.929
3-15	084395	3	3	4	97.2	99.4	97.5	101	100	87.0	83.9	66.3	1.24	0.619
3-15	084395	3	3	5	99.1	97.5	102	108	103	92.9	86.1	70.0	2.17	0.310
3-15	084395	3	3	6	94.7	98.1	100	106	104	94.1	82.7	70.9	1.24	0.619
3-15	084395	3	3	7	97.2	94.7	96.0	94.1	93.8	85.4	70.9	64.4	3.72	0.929
3-15	084395	3	3	8	95.7	73.1	73.1	70.6	86.1	58.8	52.6	58.2	2.48	0
Average					97.0	96.6	97.5	98.7	99.3	86.2	77.7	65.8	2.05	0.619
Std. Dev.					2.9	10.5	10.6	12.7	7.3	11.9	11.6	4.0	0.81	0.331
Coeff. Var.					3.0	10.8	10.9	12.8	7.3	13.8	14.9	6.1	39.5	53.5
3-15	084395	3	4	1	108	127	125	118	109	97.5	86.5	70.5	1.54	0.874
3-15	084395	3	4	2	108	113	114	113	112	96.8	88.5	74.1	2.21	1.54
3-15	084395	3	4	3	106	113	116	113	112	97.5	87.5	74.8	2.21	1.21
3-15	084395	3	4	4	94.8	100	104	108	99.8	88.5	83.1	66.2	1.21	0.541
3-15	084395	3	4	5	107	108	110	109	106	96.5	87.5	75.1	2.54	0.874
3-15	084395	3	4	6	103	108	109	106	109	97.1	89.8	71.1	1.54	1.21
3-15	084395	3	4	7	102	105	106	106	109	97.5	86.8	65.8	4.20	1.54
3-15	084395	3	4	8	94.8	96.1	92.5	93.8	95.8	85.1	73.8	59.8	2.21	0.541
Average					103	109	110	108	107	94.5	85.4	69.7	2.21	1.04
Std. Dev.					6	9	10	7	6	4.9	5.1	5.4	0.93	0.40
Coeff. Var.					5.4	8.7	8.9	6.7	5.5	5.2	5.9	7.7	41.9	38.2

Table 3:

**Neutral Red Cytotoxicity Assay Results
(Relative Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
3-2	084454	1	1	1	96.8	103	101	95.1	98.2	96.1	94.0	87.7	0.835	1.19
3-2	084454	1	1	2	96.1	101	100	96.8	102	94.7	91.2	87.7	1.54	0.484
3-2	084454	1	1	3	102	109	107	104	104	106	101	92.6	1.19	0.835
3-2	084454	1	1	4	114	114	109	103	101	97.2	86.6	82.1	1.89	0.835
3-2	084454	1	1	5	112	115	114	102	102	96.1	84.5	89.1	3.30	0
3-2	084454	1	1	6	112	118	119	107	107	106	101	89.8	2.95	0.484
3-2	084454	1	1	7	100	118	115	115	107	106	99.3	96.5	1.54	0.484
3-2	084454	1	1	8	101	100	106	99.3	104	101	97.9	83.1	3.65	0.835
	Average				104	110	109	103	103	100	94.5	88.6	2.11	0.643
	Std. Dev.				7	7	7	6	3	5	6.5	4.7	1.05	0.358
	Coeff. Var.				6.8	6.7	6.2	6.2	2.9	5.0	6.9	5.3	49.6	55.7
3-2	084454	1	2	1	93.8	100	96.0	90.9	98.2	90.6	93.8	88.0	3.85	0.590
3-2	084454	1	2	2	91.7	100	105	99.3	108	105	99.3	98.5	3.13	0.227
3-2	084454	1	2	3	86.2	97.1	101	101	112	122	116	106	2.40	0
3-2	084454	1	2	4	104	102	102	118	116	113	105	100	1.68	0.227
3-2	084454	1	2	5	100	103	90.9	103	111	105	109	100	1.68	0
3-2	084454	1	2	6	101	96.7	108	116	118	115	112	98.9	1.68	0.227
3-2	084454	1	2	7	97.8	105	123	127	121	121	113	109	2.40	0.227
3-2	084454	1	2	8	88.0	104	107	114	121	110	107	102	1.68	0.227
	Average				95.3	101	104	109	113	110	107	100	2.31	0.215
	Std. Dev.				6.4	3	9	12	8	10	7	6	0.82	0.183
	Coeff. Var.				6.7	3.0	9.1	11.0	6.8	9.3	6.9	6.1	35.3	84.8
3-2	084454	1	3	1	100	104	107	98.7	105	93.5	95.6	89.6	2.83	0.392
3-2	084454	1	3	2	99.7	103	103	111	109	100	96.9	92.1	2.48	0.392
3-2	084454	1	3	3	98.0	98.0	107	115	119	108	95.9	105	2.14	0.044
3-2	084454	1	3	4	103	103	113	116	121	111	103	101	1.79	0.741
3-2	084454	1	3	5	98.0	100	109	108	111	104	105	96.9	1.79	0.044
3-2	084454	1	3	6	92.4	92.4	104	109	113	110	101	101	2.14	0
3-2	084454	1	3	7	93.5	101	105	112	110	114	112	104	3.18	0.741
3-2	084454	1	3	8	101	111	110	108	117	111	85.4	89.6	2.48	0.741
	Average				98.3	102	107	110	113	106	99.3	97.3	2.35	0.387
	Std. Dev.				3.8	5	3	5	5	7	7.8	6.2	0.49	0.330
	Coeff. Var.				3.8	5.2	3.0	5.0	4.8	6.5	7.9	6.4	20.9	85.3
3-2	084454	1	4	1	95.4	99.3	101	100	102	102	106	103	2.84	0.145
3-2	084454	1	4	2	95.8	119	112	105	108	103	100	107	2.46	1.30
3-2	084454	1	4	3	107	107	114	127	129	114	116	105	2.84	0.916
3-2	084454	1	4	4	105	127	123	117	122	116	112	110	1.69	1.30
3-2	084454	1	4	5	102	118	122	120	120	116	107	107	2.07	0.916
3-2	084454	1	4	6	115	138	124	130	126	123	115	113	2.07	0.916
3-2	084454	1	4	7	117	119	138	127	131	127	122	118	3.23	1.69
3-2	084454	1	4	8	101	114	127	115	121	115	109	102	2.07	1.30
	Average				105	118	120	118	120	115	111	108	2.41	1.06
	Std. Dev.				8	12	11	11	10	9	7	5	0.52	0.46
	Coeff. Var.				7.5	10.0	9.2	9.0	8.5	7.6	6.2	5.1	21.7	43.2

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
3-10	084454	2	1	1	92.5	90.5	95.0	96.2	98.2	91.3	91.7	90.5	2.08	0.051
3-10	084454	2	1	2	110	106	109	109	110	102	102	95.4	2.48	0.862
3-10	084454	2	1	3	116	110	118	115	112	112	103	98.2	2.48	1.27
3-10	084454	2	1	4	106	103	105	104	107	96.2	101	97.4	1.67	0.456
3-10	084454	2	1	5	108	108	106	107	112	104	99.0	102	2.08	0.456
3-10	084454	2	1	6	108	109	113	105	107	104	97.4	73.5	2.08	1.27
3-10	084454	2	1	7	110	110	109	107	101	103	76.3	70.2	2.89	2.08
3-10	084454	2	1	8	104	99.8	109	87.3	85.2	77.5	75.9	75.5	2.89	1.27
	Average				107	105	108	104	104	98.8	93.2	87.9	2.33	0.963
	Std. Dev.				7	7	7	9	9	10.6	11.1	12.8	0.43	0.641
	Coeff. Var.				6.5	6.4	6.2	8.2	8.8	10.7	11.9	14.5	18.4	66.6
3-10	084454	2	2	1	87.9	89.8	93.0	93.0	92.6	91.2	84.7	87.9	4.00	1.22
3-10	084454	2	2	2	108	100	113	108	116	111	104	102	4.93	2.61
3-10	084454	2	2	3	109	102	112	115	116	117	115	109	4.46	2.14
3-10	084454	2	2	4	109	112	119	124	121	126	116	107	4.46	1.68
3-10	084454	2	2	5	108	106	111	123	124	119	108	103	4.00	1.22
3-10	084454	2	2	6	108	105	112	109	114	112	111	83.8	4.00	2.14
3-10	084454	2	2	7	113	102	109	100	101	108	89.8	84.7	4.93	3.07
3-10	084454	2	2	8	75.9	77.3	80.1	84.2	83.3	78.7	74.0	71.7	5.39	1.68
	Average				102	99.3	106	107	108	108	100	93.7	4.52	1.97
	Std. Dev.				13	10.9	13	14	15	15	16	13.5	0.52	0.65
	Coeff. Var.				12.9	11.0	12.1	13.0	13.4	14.4	15.6	14.4	11.5	33.1
3-10	084454	2	3	1	94.2	102	103	102	106	99.5	105	103	2.98	0.771
3-10	084454	2	3	2	108	116	109	108	104	104	100	89.4	3.42	2.09
3-10	084454	2	3	3	96.4	106	108	107	115	111	104	96.9	3.86	1.65
3-10	084454	2	3	4	100	105	112	112	117	118	113	96.9	3.86	1.21
3-10	084454	2	3	5	104	107	116	118	121	120	110	98.6	3.42	0.331
3-10	084454	2	3	6	103	108	121	115	120	114	109	102	2.98	1.21
3-10	084454	2	3	7	105	104	109	110	111	104	96.4	83.2	5.18	2.09
3-10	084454	2	3	8	78.3	88.0	87.6	91.6	88.9	85.8	85.8	81.0	4.30	0.771
	Average				98.7	104	108	108	111	107	103	93.9	3.75	1.27
	Std. Dev.				9.4	8	10	8	11	11	9	8.5	0.74	0.64
	Coeff. Var.				9.6	7.5	9.1	7.7	9.7	10.6	8.4	9.0	19.6	50.7
3-10	084454	2	4	1	91.7	87.7	97.4	96.2	108	92.5	92.5	94.1	2.73	0.303
3-10	084454	2	4	2	106	110	109	110	107	101	97.8	91.7	2.73	1.11
3-10	084454	2	4	3	107	119	117	112	114	111	108	94.9	2.73	0.708
3-10	084454	2	4	4	107	113	114	115	112	106	106	101	2.73	0.708
3-10	084454	2	4	5	108	112	113	113	110	107	107	104	2.33	0.708
3-10	084454	2	4	6	107	116	117	121	115	114	114	103	2.33	1.11
3-10	084454	2	4	7	92.1	90.1	88.9	93.7	99.4	99.8	89.3	77.1	3.54	1.92
3-10	084454	2	4	8	75.9	76.3	80.0	87.3	86.9	86.5	84.8	76.7	3.54	1.11
	Average				99.3	103	105	106	107	102	99.9	93.0	2.83	0.961
	Std. Dev.				11.6	16	14	12	9	9	10.3	10.9	0.47	0.480
	Coeff. Var.				11.7	15.4	13.5	11.3	8.7	9.1	10.3	11.7	16.6	50.0

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
3-12	084454	3	1	1	99.0	101	105	105	111	111	105	102	2.53	2.17
3-12	084454	3	1	2	105	102	102	108	106	106	101	96.9	3.59	2.88
3-12	084454	3	1	3	106	118	111	110	109	114	110	104	2.88	1.82
3-12	084454	3	1	4	105	102	100	110	117	114	108	101	1.82	1.82
3-12	084454	3	1	5	100	105	110	110	117	116	109	103	2.17	1.11
3-12	084454	3	1	6	102	104	107	107	111	106	104	98.6	2.17	1.82
3-12	084454	3	1	7	105	105	108	110	113	119	102	94.0	2.17	1.82
3-12	084454	3	1	8	98.3	114	109	105	105	111	107	100	1.82	0.754
Average					103	106	107	108	111	112	106	100	2.39	1.77
Std. Dev.					3	6	4	2	5	4	3	3	0.60	0.64
Coeff. Var.					3.0	5.9	3.6	2.0	4.1	4.0	3.0	3.3	25.0	36.2
3-12	084454	3	2	1	95.8	94.8	95.8	98.9	102	92.1	94.8	79.5	2.29	1.27
3-12	084454	3	2	2	104	95.5	97.2	97.5	100	94.8	92.7	91.4	2.29	1.61
3-12	084454	3	2	3	92.4	99.5	98.5	97.2	98.5	96.5	93.4	81.9	2.29	1.61
3-12	084454	3	2	4	99.2	100	99.2	95.1	91.4	91.0	97.2	82.9	1.61	1.27
3-12	084454	3	2	5	102	102	104	99.5	99.5	92.4	101	84.2	1.95	1.27
3-12	084454	3	2	6	96.5	105	106	103	112	102	104	88.0	2.29	1.61
3-12	084454	3	2	7	99.9	95.1	98.5	95.8	99.5	87.6	94.4	88.3	2.63	1.95
3-12	084454	3	2	8	98.5	97.8	105	98.2	103	100	91.4	87.3	1.95	0.935
Average					98.6	98.8	101	98.2	101	94.6	96.0	85.4	2.17	1.44
Std. Dev.					3.7	3.8	4	2.5	6	4.9	4.2	4.0	0.31	0.31
Coeff. Var.					3.8	3.8	3.8	2.6	5.7	5.2	4.4	4.6	14.4	21.8
3-12	084454	3	3	1	107	104	102	109	106	101	106	95.4	1.77	0
3-12	084454	3	3	2	106	100	96.1	98.7	98.0	98.7	98.3	92.2	1.77	1.04
3-12	084454	3	3	3	102	104	102	103	106	102	104	100	2.13	0.681
3-12	084454	3	3	4	102	97.2	100	102	105	103	103	99.0	1.04	0.318
3-12	084454	3	3	5	99.8	99.8	105	104	108	103	105	103	1.77	0.318
3-12	084454	3	3	6	100	102	100	105	110	107	102	99.0	2.13	0.681
3-12	084454	3	3	7	105	101	107	103	106	106	97.2	93.6	1.04	1.04
3-12	084454	3	3	8	95.8	96.1	98.7	101	108	100	101	92.9	1.77	0
Average					102	101	101	103	106	103	102	97.0	1.68	0.510
Std. Dev.					4	3	3	3	4	3	3	4.0	0.42	0.418
Coeff. Var.					3.6	2.9	3.4	3.0	3.4	2.6	3.1	4.1	25.2	81.8
3-12	084454	3	4	1	101	114	111	123	125	121	111	106	3.24	1.65
3-12	084454	3	4	2	116	117	107	113	109	104	101	95.8	2.84	2.44
3-12	084454	3	4	3	103	115	114	117	117	108	105	102	2.44	1.65
3-12	084454	3	4	4	95.4	105	109	110	108	100	98.6	93.0	1.25	1.25
3-12	084454	3	4	5	99.0	109	121	120	120	113	109	97.8	2.04	1.25
3-12	084454	3	4	6	102	112	115	113	118	111	108	98.2	2.44	1.25
3-12	084454	3	4	7	103	112	105	102	118	111	108	105	2.44	1.65
3-12	084454	3	4	8	109	111	109	107	107	99.8	102	94.6	1.65	0.847
Average					104	112	111	113	115	108	105	99.1	2.29	1.50
Std. Dev.					6	4	5	7	7	7	4	4.9	0.64	0.47
Coeff. Var.					6.2	3.4	4.8	6.2	5.7	6.5	4.1	5.0	27.8	31.7

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
3-1	084455	1	1	1	105	110	104	106	107	100	89.0	88.6	2.42	1.69
3-1	084455	1	1	2	100	100	107	107	113	105	96.3	87.2	2.79	1.32
3-1	084455	1	1	3	99.2	106	111	115	113	110	104	94.8	2.79	1.32
3-1	084455	1	1	4	100	109	107	111	101	104	99.6	93.0	1.69	1.32
3-1	084455	1	1	5	116	122	119	118	126	111	107	109	2.42	1.32
3-1	084455	1	1	6	110	123	122	121	121	113	102	95.6	2.42	1.32
3-1	084455	1	1	7	98.1	104	115	113	118	108	98.1	82.1	2.42	0.959
3-1	084455	1	1	8	100	99.6	105	98.1	101	93.4	93.7	86.4	2.05	0.594
Average					103	109	111	111	113	106	98.8	92.1	2.37	1.23
Std. Dev.					6	9	7	7	9	6	5.9	8.2	0.36	0.32
Coeff. Var.					6.1	8.3	6.1	6.6	8.0	6.1	5.9	8.9	15.2	26.3
3-1	084455	1	2	1	87.9	94.8	103	101	105	98.9	89.7	84.6	0.959	0.594
3-1	084455	1	2	2	89.0	94.1	96.3	97.8	102	94.5	87.5	82.4	1.32	0.594
3-1	084455	1	2	3	90.5	94.5	103	102	112	99.2	93.0	82.8	1.69	0.959
3-1	084455	1	2	4	97.8	94.1	98.5	107	108	98.9	97.4	85.3	0.959	0.228
3-1	084455	1	2	5	102	98.9	105	111	120	105	97.0	88.6	1.32	0
3-1	084455	1	2	6	95.9	100	109	113	117	107	95.9	82.1	1.69	0.594
3-1	084455	1	2	7	97.0	101	105	105	107	100	87.5	79.1	2.05	1.32
3-1	084455	1	2	8	97.0	107	107	110	108	102	98.9	89.7	0.959	0.594
Average					94.7	98.0	103	106	110	101	93.4	84.3	1.37	0.611
Std. Dev.					5.0	4.6	4	5	6	4	4.6	3.5	0.41	0.405
Coeff. Var.					5.3	4.6	4.1	5.1	5.5	3.9	4.9	4.2	30.0	66.4
3-1	084455	1	3	1	93.4	110	104	97.0	108	101	92.0	85.8	2.47	1.39
3-1	084455	1	3	2	94.8	99.9	98.8	103	107	101	93.8	85.5	2.47	2.11
3-1	084455	1	3	3	94.8	97.7	110	115	121	112	98.8	87.6	1.75	1.75
3-1	084455	1	3	4	104	99.9	115	114	117	107	102	92.7	1.75	1.39
3-1	084455	1	3	5	103	108	99.9	105	113	107	93.0	85.5	2.47	1.39
3-1	084455	1	3	6	94.1	95.9	103	108	115	107	94.8	84.1	2.47	1.39
3-1	084455	1	3	7	99.5	94.8	101	103	106	101	92.0	83.7	3.55	2.11
3-1	084455	1	3	8	99.1	103	106	103	99.5	96.3	93.0	82.6	2.11	1.03
Average					97.9	101	105	106	111	104	95.0	85.9	2.38	1.57
Std. Dev.					4.2	6	5	6	7	5	3.7	3.1	0.57	0.38
Coeff. Var.					4.3	5.5	5.1	5.6	6.3	4.9	3.9	3.6	23.9	24.4
3-1	084455	1	4	1	102	105	104	101	104	99.6	91.4	90.1	1.78	1.10
3-1	084455	1	4	2	95.5	104	102	107	108	101	94.5	88.0	2.12	1.44
3-1	084455	1	4	3	103	103	109	109	110	112	97.9	97.5	2.12	1.78
3-1	084455	1	4	4	108	110	104	110	106	110	100	91.1	1.78	1.44
3-1	084455	1	4	5	116	116	112	112	113	106	99.9	96.9	2.12	1.44
3-1	084455	1	4	6	110	119	118	117	111	103	107	98.2	1.78	1.44
3-1	084455	1	4	7	103	108	112	110	107	101	94.1	89.0	2.46	1.78
3-1	084455	1	4	8	95.2	103	105	106	109	102	86.3	77.2	1.78	0.764
Average					104	108	108	109	109	104	96.4	91.0	1.99	1.40
Std. Dev.					7	6	5	5	3	5	6.3	6.9	0.25	0.34
Coeff. Var.					6.8	5.7	5.0	4.2	2.9	4.4	6.5	7.6	12.7	24.0

Table 3:

**Neutral Red Cytotoxicity Assay Results
(Relative Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
3-3	084455	2	1	1	89.9	82.3	80.8	83.5	92.2	82.7	76.3	72.5	5.27	0.712
3-3	084455	2	1	2	86.5	93.7	96.8	99.1	93.0	91.5	85.4	80.4	4.51	0
3-3	084455	2	1	3	82.7	102	113	110	116	101	103	88.8	3.75	0.332
3-3	084455	2	1	4	108	109	115	109	109	106	102	88.8	2.61	0
3-3	084455	2	1	5	107	110	117	115	118	110	106	89.2	6.79	1.09
3-3	084455	2	1	6	110	108	118	121	117	112	106	90.7	6.79	2.23
3-3	084455	2	1	7	111	116	112	109	109	108	101	90.3	6.03	1.85
3-3	084455	2	1	8	101	98.3	84.2	94.5	96.4	102	55.0	88.0	4.13	1.85
	Average				99.4	103	105	105	106	102	91.8	86.1	4.98	1.01
	Std. Dev.				11.4	11	15	12	11	10	18.3	6.4	1.50	0.89
	Coeff. Var.				11.4	10.6	14.5	11.5	10.2	9.9	20.0	7.4	30.1	87.9
3-3	084455	2	2	1	95.0	96.7	97.2	98.5	100	89.2	87.9	87.0	3.48	2.60
3-3	084455	2	2	2	92.3	90.6	94.5	94.1	97.6	101	91.0	80.8	3.92	1.71
3-3	084455	2	2	3	84.8	95.4	100	109	112	106	95.0	80.4	1.71	0.387
3-3	084455	2	2	4	97.2	108	111	117	120	114	107	89.7	4.81	3.04
3-3	084455	2	2	5	95.4	95.0	107	122	121	119	113	102	2.15	0.829
3-3	084455	2	2	6	90.1	98.5	111	118	114	124	101	89.2	6.57	3.48
3-3	084455	2	2	7	101	106	114	110	114	116	114	104	7.90	4.36
3-3	084455	2	2	8	110	107	118	113	110	109	91.4	75.5	6.57	1.71
	Average				95.8	99.7	107	110	111	110	100	88.6	4.64	2.27
	Std. Dev.				7.7	6.6	8	10	8	11	10	10.1	2.23	1.35
	Coeff. Var.				8.0	6.6	7.9	8.8	7.6	10.1	10.4	11.4	48.0	59.7
3-3	084455	2	3	1	102	100	101	102	97.1	95.6	99.9	92.2	6.19	1.86
3-3	084455	2	3	2	93.7	99.0	97.1	105	103	107	106	89.8	3.31	2.34
3-3	084455	2	3	3	101	94.7	112	111	119	110	108	96.1	4.75	3.79
3-3	084455	2	3	4	96.1	102	107	118	124	119	110	98.5	5.23	3.31
3-3	084455	2	3	5	92.2	100	102	115	116	124	110	92.7	3.31	7.15
3-3	084455	2	3	6	93.2	94.7	108	124	122	121	115	101	5.23	4.75
3-3	084455	2	3	7	98.0	105	110	115	116	106	103	87.0	5.23	6.19
3-3	084455	2	3	8	91.3	88.9	103	97.1	103	88.4	88.9	88.4	4.75	2.34
	Average				95.9	98.1	105	111	113	109	105	93.2	4.75	3.97
	Std. Dev.				4.0	5.1	5	9	10	12	8	4.9	1.00	1.92
	Coeff. Var.				4.2	5.2	4.8	8.0	9.1	11.4	7.6	5.3	21.0	48.5
3-3	084455	2	4	1	91.1	99.3	98.2	96.3	97.8	87.3	82.0	81.6	1.37	0
3-3	084455	2	4	2	99.7	105	109	99.7	103	99.7	88.0	85.0	5.13	0
3-3	084455	2	4	3	100	111	109	109	108	99.3	92.9	86.5	2.12	0
3-3	084455	2	4	4	108	113	110	109	111	99.3	93.3	87.7	4.00	0
3-3	084455	2	4	5	96.3	99.3	100	100	98.6	92.6	97.5	80.5	4.76	2.12
3-3	084455	2	4	6	90.7	92.9	98.2	105	91.1	93.7	83.9	75.2	6.64	2.12
3-3	084455	2	4	7	93.3	101	95.6	92.6	94.4	91.1	81.3	73.3	5.51	4.76
3-3	084455	2	4	8	99.7	103	96.3	89.5	87.3	79.0	72.6	70.3	5.13	0
	Average				97.4	103	102	100	98.9	92.7	86.4	80.0	4.33	1.12
	Std. Dev.				5.7	7	6	7	8.2	7.2	8.1	6.4	1.77	1.75
	Coeff. Var.				5.9	6.4	6.0	7.2	8.3	7.7	9.4	8.0	40.9	155.8

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
3-7	084455	3	1	1	95.1	96.6	103	103	96.9	95.7	89.1	87.3	7.55	0.701
3-7	084455	3	1	2	97.2	105	105	105	103	99.7	92.9	86.6	10.4	1.63
3-7	084455	3	1	3	104	107	113	107	104	99.7	98.8	90.1	7.55	1.95
3-7	084455	3	1	4	99.1	102	107	99.7	102	98.2	96.0	92.3	8.49	0.389
3-7	084455	3	1	5	102	104	103	102	104	101	99.1	93.2	10.4	0.078
3-7	084455	3	1	6	97.5	105	103	100	97.5	97.9	91.6	89.8	10.0	0.389
3-7	084455	3	1	7	94.4	102	98.5	96.9	94.7	91.0	82.9	77.0	7.86	0.701
3-7	084455	3	1	8	91.6	86.6	86.0	86.6	92.9	94.7	81.0	70.5	7.86	0.389
Average					97.6	101	102	100	99.4	97.3	91.4	85.8	8.76	0.779
Std. Dev.					4.1	7	8	6	4.4	3.3	6.8	8.0	1.27	0.661
Coeff. Var.					4.2	6.6	7.5	6.2	4.5	3.4	7.4	9.3	14.5	84.9
3-7	084455	3	2	1	102	109	108	112	109	114	107	92.0	11.0	1.06
3-7	084455	3	2	2	97.8	106	111	117	108	113	105	94.3	14.1	2.21
3-7	084455	3	2	3	111	115	126	123	117	112	113	107	20.2	1.44
3-7	084455	3	2	4	89.3	98.9	96.3	106	98.6	102	96.6	97.0	14.9	0.672
3-7	084455	3	2	5	97.0	100	110	109	107	115	112	105	14.1	1.06
3-7	084455	3	2	6	101	105	115	116	115	112	103	107	12.6	1.44
3-7	084455	3	2	7	109	105	113	110	107	110	107	102	17.6	2.21
3-7	084455	3	2	8	76.7	79.8	84.0	79.4	93.6	87.4	79.8	79.8	13.7	4.89
Average					98.0	102	108	109	107	108	103	98.1	14.8	1.87
Std. Dev.					11.0	10	13	13	8	9	11	9.4	2.9	1.34
Coeff. Var.					11.2	10.2	11.8	12.0	7.1	8.7	10.4	9.6	19.6	71.4
3-7	084455	3	3	1	93.9	94.7	100	103	101	98.4	94.7	86.7	14.8	0.757
3-7	084455	3	3	2	96.9	104	108	108	106	104	99.6	87.1	14.0	1.89
3-7	084455	3	3	3	97.3	101	113	110	107	106	101	96.5	13.3	1.51
3-7	084455	3	3	4	95.0	102	111	109	105	104	103	94.7	11.0	1.14
3-7	084455	3	3	5	93.9	106	116	119	116	114	110	98.4	14.0	1.14
3-7	084455	3	3	6	93.1	102	109	114	119	112	106	95.4	14.4	1.14
3-7	084455	3	3	7	103	103	108	108	104	102	96.5	89.7	12.9	1.51
3-7	084455	3	3	8	82.5	84.4	92.0	84.8	79.9	81.0	73.5	72.7	15.5	0.757
Average					94.4	99.5	107	107	105	103	98.0	90.2	13.7	1.23
Std. Dev.					5.7	6.9	8	10	12	10	11.0	8.3	1.4	0.39
Coeff. Var.					6.0	6.9	7.2	9.5	11.2	9.9	11.3	9.2	10.1	31.8
3-7	084455	3	4	1	103	105	109	103	104	96.3	91.4	82.8	9.31	0.742
3-7	084455	3	4	2	96.3	104	110	104	109	101	95.3	89.4	12.9	1.40
3-7	084455	3	4	3	99.6	108	114	109	106	100	94.4	91.7	11.9	1.40
3-7	084455	3	4	4	94.7	102	101	103	104	101	94.7	90.4	9.64	0.742
3-7	084455	3	4	5	95.7	105	103	97.7	98.3	99.3	94.7	89.4	8.65	0.742
3-7	084455	3	4	6	107	108	101	100	99.0	98.3	96.7	92.7	13.3	0.742
3-7	084455	3	4	7	101	107	105	105	104	102	96.3	91.7	11.6	1.07
3-7	084455	3	4	8	94.4	95.7	93.4	92.7	88.8	94.7	91.7	77.9	12.6	0.412
Average					98.8	104	104	102	102	99.1	94.4	88.3	11.2	0.906
Std. Dev.					4.3	4	6	5	6	2.6	1.9	5.2	1.8	0.352
Coeff. Var.					4.4	3.9	6.1	4.9	6.1	2.6	2.0	5.9	15.9	38.9

Table 3:

**Neutral Red Cytotoxicity Assay Results
(Relative Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
2-7	084456	1	1	1	99.0	96.1	100	102	98.6	85.0	82.6	68.6	10.5	0
2-7	084456	1	1	2	97.0	119	124	123	118	107	99.8	87.1	17.1	2.26
2-7	084456	1	1	3	108	126	127	125	117	106	93.7	92.0	16.3	2.68
2-7	084456	1	1	4	102	118	117	120	116	99.4	94.9	83.0	12.6	1.03
2-7	084456	1	1	5	106	119	121	128	120	106	96.6	85.8	12.1	1.44
2-7	084456	1	1	6	112	127	123	120	121	108	102	87.9	13.4	2.26
2-7	084456	1	1	7	101	112	123	125	120	113	101	92.0	12.6	1.44
2-7	084456	1	1	8	106	116	112	114	108	97.0	93.7	85.0	14.2	1.03
	Average				104	117	118	120	115	103	95.5	85.2	13.6	1.52
	Std. Dev.				5	10	9	8	8	9	6.2	7.4	2.2	0.87
	Coeff. Var.				4.8	8.2	7.4	6.9	6.7	8.4	6.5	8.7	16.1	57.0
2-7	084456	1	2	1	101	108	121	125	121	120	105	96.5	18.5	1.68
2-7	084456	1	2	2	95.0	112	123	130	134	123	115	96.5	19.0	2.65
2-7	084456	1	2	3	101	115	122	132	133	127	114	106	18.5	2.65
2-7	084456	1	2	4	117	117	117	133	138	120	110	96.0	18.0	1.68
2-7	084456	1	2	5	112	110	115	132	125	121	109	99.3	18.0	1.68
2-7	084456	1	2	6	108	113	133	133	138	121	108	102	18.0	2.16
2-7	084456	1	2	7	105	112	122	129	128	122	114	99.3	14.7	1.68
2-7	084456	1	2	8	90.7	104	108	99.8	98.4	95.0	91.6	77.7	13.2	1.68
	Average				104	111	120	127	127	119	108	96.6	17.3	1.98
	Std. Dev.				9	4	7	11	13	10	8	8.4	2.1	0.44
	Coeff. Var.				8.4	3.6	6.2	8.9	10.3	8.3	7.0	8.7	12.2	22.2
2-7	084456	1	3	1	94.2	97.6	102	96.8	95.3	85.7	74.8	65.2	13.4	1.82
2-7	084456	1	3	2	93.9	98.7	104	103	97.6	91.6	84.5	75.2	15.6	2.56
2-7	084456	1	3	3	102	103	107	99.1	101	96.8	86.4	75.2	15.6	2.56
2-7	084456	1	3	4	105	98.3	104	100	102	94.6	86.8	79.3	13.7	2.19
2-7	084456	1	3	5	108	106	107	98.3	127	98.0	84.5	75.6	14.9	2.19
2-7	084456	1	3	6	99.8	105	111	110	110	97.6	87.9	80.4	13.0	2.56
2-7	084456	1	3	7	104	112	114	112	103	96.5	90.1	77.5	14.1	2.56
2-7	084456	1	3	8	107	108	107	96.5	101	86.4	83.8	76.7	11.5	2.19
	Average				102	104	107	102	105	93.4	84.9	75.6	14.0	2.33
	Std. Dev.				5	5	4	6	10	5.0	4.5	4.6	1.4	0.28
	Coeff. Var.				5.4	5.0	3.8	5.7	9.6	5.3	5.4	6.1	10.0	11.9
2-7	084456	1	4	1	98.2	96.2	100	102	98.6	84.4	81.6	69.4	12.2	1.67
2-7	084456	1	4	2	97.0	120	124	123	117	107	99.8	86.1	15.9	1.67
2-7	084456	1	4	3	109	126	127	125	117	107	93.8	91.7	13.0	1.67
2-7	084456	1	4	4	103	118	116	121	115	99.0	95.4	82.8	12.6	1.27
2-7	084456	1	4	5	106	119	121	128	119	106	96.2	85.6	12.2	1.27
2-7	084456	1	4	6	112	127	123	121	121	108	101	87.7	13.4	2.48
2-7	084456	1	4	7	101	112	123	125	121	113	101	92.5	12.6	1.67
2-7	084456	1	4	8	106	115	111	113	108	97.0	93.4	84.4	13.8	1.27
	Average				104	117	118	120	115	103	95.2	85.0	13.2	1.62
	Std. Dev.				5	10	9	8	8	9	6.3	7.2	1.2	0.40
	Coeff. Var.				4.9	8.2	7.4	6.9	6.7	8.7	6.6	8.4	9.1	24.8

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
2-9	084456	2	1	1	103	101	101	96.8	94.4	88.3	79.0	71.7	13.3	1.74
2-9	084456	2	1	2	101	113	108	97.9	94.8	94.4	84.8	70.5	13.3	1.74
2-9	084456	2	1	3	96.8	113	111	110	105	94.1	92.1	81.7	12.9	2.12
2-9	084456	2	1	4	105	113	116	116	114	103	92.5	78.2	11.8	1.35
2-9	084456	2	1	5	97.9	103	105	121	120	109	96.4	83.6	11.4	0.966
2-9	084456	2	1	6	103	107	115	111	113	104	96.4	83.6	12.6	1.35
2-9	084456	2	1	7	104	113	111	120	104	110	97.9	84.4	12.9	1.74
2-9	084456	2	1	8	103	101	98.7	92.1	84.0	85.6	75.1	71.7	9.08	1.74
	Average				102	108	108	108	104	98.5	89.3	78.2	12.2	1.59
	Std. Dev.				3	6	6	11	12	9.3	8.6	6.0	1.4	0.35
	Coeff. Var.				3.0	5.3	5.8	10.3	11.6	9.4	9.7	7.7	11.8	22.2
2-9	084456	2	2	1	103	107	113	101	106	95.3	89.1	78.5	10.1	0.914
2-9	084456	2	2	2	104	107	108	107	94.6	93.1	86.5	78.1	10.8	2.74
2-9	084456	2	2	3	109	117	118	114	111	107	96.4	84.0	11.2	3.48
2-9	084456	2	2	4	114	118	121	114	104	104	100	87.6	9.33	1.65
2-9	084456	2	2	5	103	119	116	115	114	104	91.6	80.7	8.23	1.65
2-9	084456	2	2	6	106	113	117	111	106	93.1	89.8	76.6	9.69	2.38
2-9	084456	2	2	7	114	108	108	108	99.7	82.5	81.4	69.7	8.23	3.11
2-9	084456	2	2	8	102	105	103	98.9	108	92.0	89.1	79.2	9.33	0.914
	Average				107	112	113	109	105	96.5	90.5	79.3	9.60	2.10
	Std. Dev.				5	6	6	6	6	8.3	5.7	5.3	1.07	0.97
	Coeff. Var.				4.6	4.9	5.5	5.7	5.9	8.6	6.3	6.6	11.1	46.2
2-9	084456	2	3	1	93.4	98.7	93.8	93.4	95.5	82.5	79.7	67.0	8.54	0.440
2-9	084456	2	3	2	97.3	106	104	100	89.2	90.9	79.0	72.3	7.83	1.14
2-9	084456	2	3	3	109	115	123	109	103	99.4	84.6	74.7	6.78	1.14
2-9	084456	2	3	4	90.2	104	106	99.7	93.4	84.9	83.2	76.8	5.02	0.792
2-9	084456	2	3	5	103	110	111	113	110	101	92.7	84.6	9.24	0.440
2-9	084456	2	3	6	109	108	115	117	108	102	96.6	81.8	6.78	1.14
2-9	084456	2	3	7	104	111	113	110	101	96.6	89.2	81.1	9.24	1.85
2-9	084456	2	3	8	109	104	107	101	92.0	90.2	81.4	77.2	7.13	0.440
	Average				102	107	109	105	98.9	93.5	85.8	76.9	7.57	0.924
	Std. Dev.				7	5	9	8	7.6	7.5	6.4	5.7	1.44	0.496
	Coeff. Var.				7.2	4.7	7.9	7.6	7.7	8.0	7.5	7.4	19.1	53.6
2-9	084456	2	4	1	107	111	107	110	98.1	90.2	84.1	74.3	14.3	0.814
2-9	084456	2	4	2	106	110	112	114	112	93.0	91.1	86.9	16.2	1.75
2-9	084456	2	4	3	99.9	108	116	114	114	105	93.0	80.4	12.9	1.28
2-9	084456	2	4	4	109	117	122	113	112	98.5	90.2	86.4	12.4	0.349
2-9	084456	2	4	5	96.2	104	116	114	118	109	98.5	86.4	11.5	0.814
2-9	084456	2	4	6	101	104	113	112	113	107	102	88.8	9.19	1.28
2-9	084456	2	4	7	112	123	123	115	115	116	108	96.2	9.66	2.21
2-9	084456	2	4	8	129	117	117	119	113	106	103	93.9	12.9	1.28
	Average				108	112	116	114	112	103	96.2	86.7	12.4	1.22
	Std. Dev.				10	7	5	3	6	9	7.9	7.0	2.3	0.58
	Coeff. Var.				9.3	6.1	4.6	2.4	5.3	8.4	8.2	8.0	18.6	47.5

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
2-10	084456	3	1	1	113	119	117	111	111	106	96.5	90.8	2.09	0.597
2-10	084456	3	1	2	114	114	113	111	107	99.2	95.3	88.4	2.09	1.19
2-10	084456	3	1	3	111	117	115	114	108	101	94.4	94.7	2.39	1.79
2-10	084456	3	1	4	108	109	115	108	103	94.4	87.2	84.8	1.49	0.896
2-10	084456	3	1	5	114	115	121	118	111	104	93.5	89.0	2.39	1.19
2-10	084456	3	1	6	103	116	113	114	111	102	92.9	85.4	2.39	0.896
2-10	084456	3	1	7	112	115	115	109	107	101	92.3	88.1	2.09	1.19
2-10	084456	3	1	8	104	97.7	104	107	101	90.5	81.0	72.6	2.39	0.597
Average					110	113	114	112	107	99.8	91.6	86.7	2.17	1.05
Std. Dev.					4	7	5	4	4	5.1	5.1	6.5	0.31	0.39
Coeff. Var.					4.0	6.0	4.3	3.4	3.7	5.1	5.6	7.5	14.3	37.4
2-10	084456	3	2	1	97.4	104	116	112	105	100	97.1	86.6	2.44	1.04
2-10	084456	3	2	2	114	110	104	94.3	101	90.1	89.8	83.9	2.78	1.74
2-10	084456	3	2	3	114	110	104	97.4	102	97.4	94.6	93.6	2.09	2.09
2-10	084456	3	2	4	110	108	101	107	105	96.4	94.6	87.3	2.44	1.04
2-10	084456	3	2	5	123	104	109	103	116	99.5	104	89.4	2.44	1.04
2-10	084456	3	2	6	119	118	118	111	105	102	97.4	92.9	2.09	1.39
2-10	084456	3	2	7	116	91.9	102	107	99.9	97.8	89.4	84.6	2.78	1.04
2-10	084456	3	2	8	72.7	65.8	80.4	76.6	74.1	67.5	64.4	56.0	1.74	0.348
Average					108	101	104	101	101	93.9	91.5	84.3	2.35	1.22
Std. Dev.					16	16	12	12	12	11.2	11.9	12.0	0.36	0.53
Coeff. Var.					15.0	15.9	11.1	11.5	11.8	12.0	13.0	14.2	15.3	43.2
2-10	084456	3	3	1	103	106	107	107	104	99.3	92.9	83.2	3.05	2.13
2-10	084456	3	3	2	108	103	99.9	101	94.1	101	80.4	75.9	2.74	1.22
2-10	084456	3	3	3	100	106	107	98.1	95.7	91.7	78.9	74.9	2.74	1.83
2-10	084456	3	3	4	107	104	105	99.6	99.0	92.0	82.9	75.9	2.13	1.83
2-10	084456	3	3	5	106	99.3	109	100	99.6	93.5	85.6	84.1	2.44	1.22
2-10	084456	3	3	6	99.6	98.7	103	98.7	96.9	87.7	85.3	79.8	2.44	1.52
2-10	084456	3	3	7	103	100	98.4	97.2	93.2	89.9	82.6	80.1	2.44	1.83
2-10	084456	3	3	8	76.8	74.6	76.8	80.4	70.1	61.5	59.7	59.4	2.13	0.914
Average					100	99.0	101	97.8	94.1	89.5	81.0	76.7	2.51	1.56
Std. Dev.					10	10.3	10	7.6	10.3	12.1	9.6	7.8	0.32	0.41
Coeff. Var.					10.0	10.4	10.3	7.8	10.9	13.6	11.9	10.1	12.5	26.5
2-10	084456	3	4	1	105	106	108	109	109	98.1	92.4	84.5	2.58	0.992
2-10	084456	3	4	2	105	110	102	111	100	92.4	88.6	79.1	2.26	1.63
2-10	084456	3	4	3	104	109	109	105	101	94.6	88.3	81.3	2.26	1.31
2-10	084456	3	4	4	101	108	112	95.9	92.4	84.8	80.7	74.6	1.63	0.675
2-10	084456	3	4	5	115	118	114	108	102	95.0	90.5	85.4	2.26	0.992
2-10	084456	3	4	6	113	115	115	108	102	91.5	87.3	85.1	1.94	0.992
2-10	084456	3	4	7	110	114	114	102	98.5	96.5	84.5	94.0	2.26	1.31
2-10	084456	3	4	8	110	108	107	105	101	95.3	84.8	80.4	2.26	0.675
Average					108	111	110	105	101	93.5	87.1	83.1	2.18	1.07
Std. Dev.					5	4	5	5	4	4.1	3.7	5.7	0.28	0.33
Coeff. Var.					4.3	3.6	4.1	4.4	4.4	4.4	4.3	6.9	12.9	30.7

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
2-3	084457	1	1	1	101	99.4	98.5	93.8	92.5	70.6	61.6	59.9	3.37	0
2-3	084457	1	1	2	94.2	96.8	93.4	91.2	83.5	70.2	63.8	59.9	5.52	1.23
2-3	084457	1	1	3	101	107	106	105	95.1	79.6	68.1	62.1	4.23	1.23
2-3	084457	1	1	4	95.9	99.8	97.2	101	88.6	70.2	58.2	55.2	2.95	0.375
2-3	084457	1	1	5	106	108	105	96.4	91.6	76.6	65.5	58.7	3.37	0.803
2-3	084457	1	1	6	106	110	107	95.5	85.2	75.4	69.4	62.1	2.95	1.23
2-3	084457	1	1	7	98.9	102	101	89.5	87.4	79.6	71.9	65.1	4.66	1.23
2-3	084457	1	1	8	94.6	95.9	97.2	89.9	85.2	73.6	66.4	56.5	2.95	0.803
Average					99.7	103	101	95.2	88.6	74.5	65.6	59.9	3.75	0.864
Std. Dev.					4.7	6	5	5.4	4.1	4.0	4.4	3.2	0.96	0.468
Coeff. Var.					4.7	5.4	5.0	5.7	4.6	5.3	6.7	5.3	25.5	54.2
2-3	084457	1	2	1	95.1	95.1	96.2	92.3	92.3	75.1	63.0	55.1	3.86	0.734
2-3	084457	1	2	2	85.7	83.7	85.7	77.8	80.6	75.5	60.6	50.8	4.65	1.52
2-3	084457	1	2	3	93.1	85.7	81.8	83.3	81.4	75.9	58.3	54.4	4.26	1.52
2-3	084457	1	2	4	92.3	90.8	91.5	86.1	83.7	70.4	57.5	55.5	2.69	0.734
2-3	084457	1	2	5	96.2	93.1	93.9	98.2	86.4	77.4	63.0	59.1	2.69	1.13
2-3	084457	1	2	6	94.7	89.6	93.5	95.8	90.4	74.7	66.5	58.7	3.08	1.13
2-3	084457	1	2	7	92.3	90.8	93.9	91.9	88.0	79.4	66.5	54.7	3.86	1.13
2-3	084457	1	2	8	86.1	92.7	95.8	88.4	87.6	77.8	69.2	58.3	2.69	0.734
Average					91.9	90.2	91.5	89.2	86.3	75.8	63.1	55.8	3.47	1.08
Std. Dev.					4.0	3.8	5.2	6.7	4.2	2.7	4.2	2.8	0.78	0.33
Coeff. Var.					4.3	4.2	5.6	7.5	4.8	3.6	6.6	4.9	22.5	30.3
2-3	084457	1	3	1	92.7	95.6	106	96.5	92.3	79.9	70.3	64.1	2.75	1.09
2-3	084457	1	3	2	106	101	95.6	92.7	89.0	75.3	64.5	61.6	4.82	2.33
2-3	084457	1	3	3	107	101	98.5	87.8	89.4	75.3	63.3	61.2	3.99	1.92
2-3	084457	1	3	4	106	103	103	92.3	85.3	78.2	64.1	62.5	3.16	1.50
2-3	084457	1	3	5	103	103	106	95.6	90.7	77.4	69.9	63.7	3.16	1.09
2-3	084457	1	3	6	101	106	101	96.5	96.1	78.2	69.1	62.9	3.58	1.92
2-3	084457	1	3	7	108	108	105	97.3	94.0	83.2	72.4	66.2	4.41	1.92
2-3	084457	1	3	8	99.4	101	96.9	94.8	90.3	77.8	69.1	62.9	3.16	1.50
Average					103	102	102	94.2	90.9	78.2	67.9	63.1	3.63	1.66
Std. Dev.					5	4	4	3.2	3.3	2.5	3.4	1.6	0.72	0.44
Coeff. Var.					4.9	3.6	4.2	3.3	3.6	3.3	5.0	2.5	19.7	26.5
2-3	084457	1	4	1	101	112	105	97.1	94.9	76.9	72.0	61.5	3.90	1.26
2-3	084457	1	4	2	95.8	98.4	97.5	106	88.3	74.7	68.5	61.0	5.22	1.26
2-3	084457	1	4	3	88.3	89.6	91.8	85.7	86.1	73.8	66.8	57.5	5.66	2.14
2-3	084457	1	4	4	92.7	96.6	94.5	96.6	80.8	74.7	65.0	62.8	3.90	0.824
2-3	084457	1	4	5	93.1	94.5	98.4	94.5	86.1	75.5	64.1	61.9	3.46	1.70
2-3	084457	1	4	6	90.5	85.2	95.3	92.7	86.1	74.7	62.8	57.5	3.90	1.70
2-3	084457	1	4	7	88.7	90.1	90.1	87.0	79.1	68.5	59.3	54.5	3.90	1.70
2-3	084457	1	4	8	83.0	86.1	84.8	79.9	76.0	66.8	57.1	52.7	3.02	1.70
Average					91.6	94.0	94.7	92.5	84.7	73.2	64.5	58.7	4.12	1.54
Std. Dev.					5.3	8.5	6.1	8.2	5.9	3.6	4.8	3.7	0.88	0.40
Coeff. Var.					5.8	9.1	6.4	8.8	7.0	4.9	7.5	6.4	21.3	26.2

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
2-5	084457	2	1	1	91.5	89.7	84.2	79.4	74.5	64.9	55.2	45.5	2.64	0.831
2-5	084457	2	1	2	87.8	86.6	90.9	77.0	73.3	65.5	52.2	44.3	2.64	2.04
2-5	084457	2	1	3	90.3	90.9	90.3	77.0	73.3	64.3	54.6	45.5	2.64	2.04
2-5	084457	2	1	4	110	97.5	93.9	82.4	83.0	107	55.8	46.8	1.44	1.44
2-5	084457	2	1	5	92.1	87.8	89.7	91.5	85.4	68.5	55.2	46.1	2.04	0.831
2-5	084457	2	1	6	89.0	93.3	101	91.5	86.6	69.1	60.0	49.2	1.44	1.44
2-5	084457	2	1	7	96.3	93.3	97.5	93.9	80.0	67.3	58.8	48.6	2.04	2.04
2-5	084457	2	1	8	106	104	97.5	87.2	80.6	63.7	54.6	48.6	2.04	1.44
Average					95.3	92.9	93.1	85.0	79.6	71.2	55.8	46.8	2.11	1.51
Std. Dev.					8.1	5.7	5.3	6.9	5.3	14.4	2.5	1.8	0.50	0.50
Coeff. Var.					8.5	6.1	5.7	8.1	6.7	20.2	4.5	3.7	23.8	33.4
2-5	084457	2	2	1	90.9	87.7	83.9	80.0	81.9	65.3	55.1	46.8	2.72	0.160
2-5	084457	2	2	2	87.7	86.4	94.7	81.9	80.7	67.3	53.8	49.4	3.99	1.44
2-5	084457	2	2	3	82.6	87.7	84.5	78.8	80.0	70.4	58.9	47.4	3.99	1.44
2-5	084457	2	2	4	106	91.5	84.5	86.4	82.6	66.6	54.5	47.4	3.35	1.44
2-5	084457	2	2	5	99.2	92.8	96.0	97.9	93.5	76.2	60.9	51.3	5.27	0.799
2-5	084457	2	2	6	95.4	101	109	98.6	92.8	76.2	61.5	51.3	4.63	1.44
2-5	084457	2	2	7	92.2	95.4	93.5	90.3	83.9	74.3	60.9	51.3	4.63	0.799
2-5	084457	2	2	8	111	96.6	97.9	89.6	79.4	71.7	58.3	59.6	5.27	0.799
Average					95.7	92.4	93.1	87.9	84.3	71.0	58.0	50.6	4.23	1.04
Std. Dev.					9.6	5.1	8.7	7.6	5.6	4.3	3.1	4.1	0.90	0.48
Coeff. Var.					10.0	5.5	9.4	8.7	6.7	6.1	5.4	8.1	21.3	45.8
2-5	084457	2	3	1	87.4	82.9	83.4	80.0	80.0	68.0	52.6	45.7	1.71	0.571
2-5	084457	2	3	2	96.6	91.4	90.9	84.0	79.4	73.7	56.0	47.4	2.29	1.71
2-5	084457	2	3	3	96.6	96.0	98.9	81.1	78.9	72.6	56.6	43.4	2.29	1.71
2-5	084457	2	3	4	93.1	88.0	94.3	84.6	75.4	69.7	57.7	42.3	1.14	1.14
2-5	084457	2	3	5	101	96.6	99.4	89.1	96.0	76.6	58.9	46.3	1.71	1.14
2-5	084457	2	3	6	99.4	100	102	98.9	92.0	71.4	60.0	46.9	1.71	1.71
2-5	084457	2	3	7	100	96.6	95.4	87.4	83.4	73.1	53.1	47.4	2.86	2.29
2-5	084457	2	3	8	74.3	79.4	87.4	80.6	75.4	63.4	58.3	51.4	1.71	1.71
Average					93.6	91.4	93.9	85.7	82.6	71.1	56.6	46.4	1.93	1.50
Std. Dev.					9.0	7.3	6.3	6.2	7.6	4.0	2.7	2.8	0.52	0.52
Coeff. Var.					9.6	8.0	6.7	7.3	9.2	5.7	4.7	6.0	27.1	34.9
2-5	084457	2	4	1	90.8	82.4	83.5	72.4	76.3	61.8	54.0	45.0	0.976	0.418
2-5	084457	2	4	2	88.0	83.5	86.3	78.0	72.9	60.7	54.0	43.4	3.77	1.53
2-5	084457	2	4	3	83.0	88.6	95.8	79.6	80.2	69.0	59.0	42.3	1.53	1.53
2-5	084457	2	4	4	90.2	88.6	92.5	88.0	75.7	65.7	54.0	42.8	0.418	0.976
2-5	084457	2	4	5	88.0	83.0	89.7	80.2	76.8	65.7	51.2	40.0	2.65	0.418
2-5	084457	2	4	6	93.0	87.4	95.8	87.4	83.0	66.8	54.5	45.6	0.976	0.976
2-5	084457	2	4	7	86.9	85.8	88.0	80.8	74.1	64.6	58.4	47.3	1.53	1.53
2-5	084457	2	4	8	87.4	85.2	83.5	79.1	72.9	62.9	55.6	47.8	1.53	0.418
Average					88.4	85.6	89.4	80.7	76.5	64.6	55.1	44.3	1.67	0.976
Std. Dev.					3.0	2.5	5.0	5.1	3.5	2.8	2.6	2.6	1.06	0.516
Coeff. Var.					3.4	2.9	5.5	6.3	4.6	4.3	4.7	6.0	63.6	52.9

Table 3:

**Neutral Red Cytotoxicity Assay Results
(Relative Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
2-6	084457	3	1	1	93.2	88.3	86.0	74.8	75.2	67.3	59.1	53.2	6.93	1.03
2-6	084457	3	1	2	96.5	99.4	94.5	81.1	83.7	71.2	64.7	53.5	8.90	1.68
2-6	084457	3	1	3	97.1	102	98.1	85.0	87.3	72.5	67.0	57.4	9.23	1.35
2-6	084457	3	1	4	98.8	97.1	90.9	78.1	81.7	64.7	58.8	48.6	6.93	0.697
2-6	084457	3	1	5	106	105	99.8	89.9	82.0	72.9	62.7	54.8	5.62	1.03
2-6	084457	3	1	6	100	98.4	94.5	85.6	80.7	68.6	59.4	48.3	4.96	1.35
2-6	084457	3	1	7	110	105	102	89.3	80.4	68.6	61.0	49.9	6.27	1.03
2-6	084457	3	1	8	94.2	91.9	80.1	62.0	57.4	58.8	43.0	35.1	7.59	0.369
	Average				99.5	98.4	93.3	80.7	78.6	68.1	59.5	50.1	7.05	1.07
	Std. Dev.				5.9	5.9	7.4	9.2	9.2	4.7	7.2	6.8	1.49	0.41
	Coeff. Var.				5.9	6.0	7.9	11.4	11.7	6.9	12.2	13.6	21.1	38.4
2-6	084457	3	2	1	97.7	92.1	90.2	82.4	81.3	75.0	67.1	51.9	5.35	0.512
2-6	084457	3	2	2	104	98.0	87.2	90.6	78.3	69.0	54.9	47.4	6.84	0.884
2-6	084457	3	2	3	99.9	95.8	93.6	82.4	78.3	68.3	63.1	51.5	6.10	0.884
2-6	084457	3	2	4	97.3	100	104	95.1	90.2	74.6	67.5	53.7	4.61	0.512
2-6	084457	3	2	5	94.0	88.0	94.3	95.4	90.6	78.3	64.9	48.2	6.10	0.512
2-6	084457	3	2	6	90.6	94.7	96.2	92.1	88.4	71.6	60.8	50.4	6.10	0.512
2-6	084457	3	2	7	94.3	93.2	95.8	95.4	84.3	72.0	57.1	43.3	8.70	0.884
2-6	084457	3	2	8	80.5	82.0	89.1	77.9	78.7	65.3	46.7	44.1	7.21	0.512
	Average				94.8	93.0	93.8	88.9	83.8	71.8	60.3	48.8	6.38	0.651
	Std. Dev.				7.1	5.8	5.1	7.0	5.4	4.2	7.1	3.8	1.24	0.193
	Coeff. Var.				7.5	6.2	5.5	7.8	6.4	5.8	11.8	7.7	19.4	29.6
2-6	084457	3	3	1	93.8	99.0	94.5	94.9	89.3	68.0	65.0	60.1	10.0	1.78
2-6	084457	3	3	2	102	107	95.3	88.2	77.0	62.7	62.7	50.8	8.51	1.78
2-6	084457	3	3	3	93.4	104	92.3	84.1	77.3	74.3	58.3	49.3	7.76	1.78
2-6	084457	3	3	4	90.4	87.4	89.3	83.3	85.2	74.3	64.2	49.6	6.64	1.40
2-6	084457	3	3	5	96.8	97.9	99.4	90.4	92.7	87.4	71.3	48.2	6.26	1.03
2-6	084457	3	3	6	96.8	91.9	115	104	94.9	87.4	65.7	48.5	7.76	2.15
2-6	084457	3	3	7	77.7	94.9	99.4	94.2	92.3	65.4	50.4	42.9	5.89	1.40
2-6	084457	3	3	8	84.8	81.1	86.3	80.3	68.7	51.9	51.1	45.2	6.64	1.40
	Average				91.9	95.3	96.4	89.9	84.7	71.4	61.1	49.3	7.43	1.59
	Std. Dev.				7.6	8.4	8.7	7.8	9.4	12.2	7.3	5.1	1.36	0.35
	Coeff. Var.				8.2	8.8	9.0	8.6	11.1	17.0	12.0	10.3	18.3	21.8
2-6	084457	3	4	1	106	110	101	93.3	79.5	77.1	71.6	59.9	6.38	0.517
2-6	084457	3	4	2	110	107	96.1	92.6	80.9	75.4	63.3	58.1	6.04	1.21
2-6	084457	3	4	3	103	104	101	88.5	80.9	73.0	63.3	56.7	6.04	0.862
2-6	084457	3	4	4	106	103	96.8	85.0	85.0	69.5	64.3	54.3	5.35	0.172
2-6	084457	3	4	5	101	96.1	103	94.0	86.8	78.8	68.8	60.5	4.66	0.517
2-6	084457	3	4	6	98.1	106	98.5	91.2	88.5	75.4	68.1	57.1	4.31	0.517
2-6	084457	3	4	7	95.0	96.1	98.1	88.5	84.3	71.2	58.5	53.0	5.69	1.55
2-6	084457	3	4	8	78.8	96.4	80.6	71.6	72.6	50.5	41.2	39.2	5.00	0.517
	Average				99.8	102	96.8	88.1	82.3	71.4	62.4	54.9	5.43	0.733
	Std. Dev.				9.7	5	6.9	7.3	5.0	8.9	9.5	6.8	0.73	0.449
	Coeff. Var.				9.7	5.3	7.2	8.3	6.1	12.5	15.2	12.5	13.5	61.3

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
2-2	084458	1	1	1	103	109	105	99.6	102	89.8	82.2	77.3	4.12	2.23
2-2	084458	1	1	2	101	105	105	107	101	90.5	88.3	77.3	4.12	1.85
2-2	084458	1	1	3	102	106	107	100	101	90.9	79.5	72.0	4.12	2.61
2-2	084458	1	1	4	105	109	109	104	98.1	98.9	90.5	78.8	3.36	2.98
2-2	084458	1	1	5	103	108	102	102	100	92.4	88.6	76.5	3.36	1.85
2-2	084458	1	1	6	95.8	106	106	99.2	96.2	86.0	82.6	79.2	3.74	2.23
2-2	084458	1	1	7	96.2	97.3	98.1	98.1	93.9	89.0	81.4	71.6	5.26	3.36
2-2	084458	1	1	8	89.4	93.9	99.2	91.7	86.7	82.9	76.5	68.2	3.36	2.61
Average					99.2	104	104	100	97.3	90.1	83.7	75.1	3.93	2.46
Std. Dev.					5.1	6	4	5	5.0	4.7	4.9	4.0	0.64	0.53
Coeff. Var.					5.1	5.3	3.6	4.5	5.2	5.2	5.9	5.3	16.3	21.7
2-2	084458	1	2	1	85.8	94.9	96.8	96.4	96.0	86.1	86.1	75.1	3.10	1.95
2-2	084458	1	2	2	87.7	97.2	99.9	105	99.1	91.5	80.4	78.1	3.86	3.10
2-2	084458	1	2	3	88.0	87.7	98.7	101	96.8	92.6	86.9	71.7	3.86	2.33
2-2	084458	1	2	4	93.0	93.0	109	91.5	97.6	87.7	87.3	79.7	3.86	2.71
2-2	084458	1	2	5	94.9	92.6	98.0	98.0	103	98.0	88.0	77.0	4.24	2.33
2-2	084458	1	2	6	88.8	94.5	102	102	105	97.6	92.2	77.8	5.00	2.33
2-2	084458	1	2	7	97.6	102	98.0	98.0	91.9	91.5	82.0	73.6	5.38	2.71
2-2	084458	1	2	8	93.0	99.1	94.9	93.4	82.7	85.0	80.8	72.8	5.76	2.71
Average					91.1	95.1	99.6	98.1	96.6	91.2	85.5	75.7	4.38	2.52
Std. Dev.					4.1	4.3	4.2	4.4	7.0	4.9	4.1	2.9	0.91	0.35
Coeff. Var.					4.5	4.5	4.2	4.5	7.2	5.3	4.8	3.8	20.8	14.0
2-2	084458	1	3	1	85.4	95.6	94.0	94.4	88.9	80.7	78.0	67.8	3.71	2.54
2-2	084458	1	3	2	90.9	96.7	93.2	97.5	93.2	87.0	78.4	67.8	4.10	2.93
2-2	084458	1	3	3	83.8	86.2	99.9	92.8	97.9	79.5	81.5	67.0	3.32	2.54
2-2	084458	1	3	4	94.8	93.2	91.3	92.0	84.2	87.7	78.0	72.5	2.93	2.54
2-2	084458	1	3	5	99.9	94.0	97.9	99.1	102	94.0	81.9	81.1	3.71	2.93
2-2	084458	1	3	6	89.3	90.1	90.9	87.7	90.5	85.0	75.2	69.8	2.54	2.15
2-2	084458	1	3	7	88.9	88.9	90.5	87.7	82.3	79.9	79.1	66.2	3.32	3.32
2-2	084458	1	3	8	84.2	84.6	82.7	79.5	74.1	71.3	72.5	61.9	2.54	2.54
Average					89.6	91.2	92.5	91.4	89.2	83.1	78.1	69.3	3.27	2.69
Std. Dev.					5.5	4.4	5.2	6.3	9.0	6.8	3.1	5.6	0.57	0.36
Coeff. Var.					6.2	4.8	5.6	6.9	10.1	8.2	3.9	8.1	17.4	13.3
2-2	084458	1	4	1	101	103	105	93.4	95.4	84.5	80.0	69.9	3.14	1.92
2-2	084458	1	4	2	97.0	104	101	103	99.4	85.7	78.4	72.7	3.14	1.92
2-2	084458	1	4	3	96.6	102	108	101	89.7	87.3	85.3	76.0	2.33	1.52
2-2	084458	1	4	4	95.8	99.4	94.2	99.0	91.4	81.6	80.8	74.0	1.52	1.52
2-2	084458	1	4	5	99.8	98.6	95.4	97.4	93.4	84.5	78.8	76.4	3.14	1.52
2-2	084458	1	4	6	98.2	104	111	107	104	96.6	89.7	73.1	5.16	2.33
2-2	084458	1	4	7	101	108	117	107	104	97.8	88.5	71.5	3.14	2.33
2-2	084458	1	4	8	97.8	103	105	96.2	95.0	86.5	84.1	72.7	3.14	2.33
Average					98.5	103	105	100	96.6	88.1	83.2	73.3	3.09	1.92
Std. Dev.					2.1	3	8	5	5.6	5.9	4.4	2.2	1.02	0.37
Coeff. Var.					2.1	2.8	7.4	4.9	5.7	6.7	5.3	2.9	33.2	19.5

Table 3:

Neutral Red Cytotoxicity Assay Results (Relative Absorbance Data)

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
2-4	084458	2	1	1	94.2	89.9	91.6	89.0	84.7	81.7	68.3	64.0	15.2	0.917
2-4	084458	2	1	2	99.4	105	93.7	99.4	91.1	82.1	69.1	66.5	14.3	1.35
2-4	084458	2	1	3	97.2	103	98.5	105	99.8	91.6	82.1	74.3	11.7	1.78
2-4	084458	2	1	4	100	106	105	107	95.5	91.6	85.5	74.7	13.0	1.35
2-4	084458	2	1	5	98.1	98.5	102	108	102	91.6	83.8	72.2	11.7	1.78
2-4	084458	2	1	6	99.4	99.4	105	106	101	93.3	82.5	79.5	11.7	2.64
2-4	084458	2	1	7	95.9	95.5	97.2	101	92.0	85.1	80.4	75.2	16.0	2.21
2-4	084458	2	1	8	98.5	98.9	100	101	85.5	80.8	70.0	62.2	11.7	1.78
Average					97.8	99.6	99.2	102	93.9	87.2	77.7	71.1	13.2	1.73
Std. Dev.					2.0	5.4	5.0	6	6.7	5.3	7.3	6.1	1.8	0.54
Coeff. Var.					2.1	5.4	5.0	6.0	7.1	6.1	9.4	8.6	13.5	31.2
2-4	084458	2	2	1	88.9	90.9	94.7	88.4	88.0	80.5	74.2	68.8	21.0	0.523
2-4	084458	2	2	2	90.9	94.7	91.4	89.3	88.9	83.0	73.4	65.0	24.4	0.942
2-4	084458	2	2	3	89.3	106	97.6	98.5	95.6	88.4	79.6	68.8	19.4	1.78
2-4	084458	2	2	4	97.6	98.9	104	101	96.8	90.1	84.2	71.3	14.3	1.36
2-4	084458	2	2	5	94.7	95.6	104	102	100	91.4	81.7	68.8	16.0	2.20
2-4	084458	2	2	6	98.9	97.2	99.7	95.1	94.3	81.3	78.0	73.8	11.0	3.45
2-4	084458	2	2	7	95.1	93.0	94.7	94.3	83.8	77.6	72.1	64.2	13.1	2.62
2-4	084458	2	2	8	97.6	93.0	94.3	89.3	84.2	78.4	72.1	65.4	14.8	0.942
Average					94.1	96.2	97.6	94.8	91.5	83.8	76.9	68.2	16.7	1.73
Std. Dev.					4.0	4.7	4.7	5.5	6.1	5.4	4.7	3.3	4.5	0.99
Coeff. Var.					4.2	4.9	4.8	5.8	6.6	6.5	6.1	4.8	26.8	57.1
2-4	084458	2	3	1	92.5	90.5	94.1	89.7	85.0	83.4	75.5	68.3	19.6	0.643
2-4	084458	2	3	2	92.5	94.9	97.6	95.2	93.3	80.6	75.9	75.5	17.7	1.43
2-4	084458	2	3	3	93.3	98.0	104	106	98.8	86.9	80.2	74.3	16.5	1.43
2-4	084458	2	3	4	94.9	107	106	108	102	91.3	82.2	72.7	15.7	1.83
2-4	084458	2	3	5	95.6	108	112	114	103	96.0	83.0	77.4	15.3	0.643
2-4	084458	2	3	6	99.6	110	112	107	105	95.6	83.8	74.7	16.1	2.23
2-4	084458	2	3	7	92.1	98.0	102	102	98.8	86.9	81.4	74.3	16.1	1.83
2-4	084458	2	3	8	96.8	100	101	100	94.1	81.4	82.6	77.0	17.7	3.41
Average					94.7	101	104	103	97.5	87.8	80.6	74.3	16.8	1.68
Std. Dev.					2.6	7	6	8	6.5	6.0	3.2	2.9	1.4	0.90
Coeff. Var.					2.8	6.8	6.2	7.5	6.7	6.9	4.0	3.8	8.5	53.3
2-4	084458	2	4	1	89.4	91.5	97.9	93.2	93.2	83.5	78.4	74.6	22.9	1.27
2-4	084458	2	4	2	95.3	94.5	90.3	91.5	91.9	83.1	80.9	72.9	18.6	1.69
2-4	084458	2	4	3	87.3	93.6	96.2	95.8	94.5	89.4	78.4	73.3	17.8	2.12
2-4	084458	2	4	4	89.0	91.5	91.9	95.3	93.2	83.1	72.0	67.8	16.9	1.27
2-4	084458	2	4	5	91.5	90.7	96.6	103	105	91.1	79.7	73.7	15.7	1.27
2-4	084458	2	4	6	88.1	94.1	97.9	95.3	98.7	83.9	82.2	70.8	17.8	2.12
2-4	084458	2	4	7	92.8	94.5	96.2	94.1	92.4	79.7	76.7	71.2	14.0	3.81
2-4	084458	2	4	8	107	91.9	94.9	93.6	91.9	79.7	85.2	72.9	14.4	2.54
Average					92.5	92.8	95.2	95.3	95.1	84.2	79.2	72.1	17.3	2.01
Std. Dev.					6.3	1.5	2.8	3.6	4.6	4.1	3.9	2.2	2.8	0.87
Coeff. Var.					6.8	1.7	2.9	3.7	4.8	4.9	4.9	3.0	16.3	43.2

Table 3:

**Neutral Red Cytotoxicity Assay Results
(Relative Absorbance Data)**

Run-Port Number	Sample ID	Replicate Number	Plate Number	Well Number	Relative Assay Plate Absorbance Readings									
					Dose of Smokeless Tobacco Extract in Solvent Control (µL/mL)								SLS (µg/mL)	
					2	3	4	6	8	12	16	20	110	200
2-8	084458	3	1	1	92.8	101	97.9	94.2	88.0	82.6	78.7	73.3	2.47	1.06
2-8	084458	3	1	2	97.9	109	96.5	93.9	91.1	85.5	82.1	77.8	4.16	0.776
2-8	084458	3	1	3	105	109	102	96.2	97.0	89.7	88.0	75.9	4.16	1.06
2-8	084458	3	1	4	103	106	104	100	95.9	90.0	84.3	72.5	3.03	1.06
2-8	084458	3	1	5	107	109	107	99.0	99.6	86.9	85.5	74.7	2.47	0.776
2-8	084458	3	1	6	103	108	107	103	99.3	93.4	85.5	76.4	2.47	0.776
2-8	084458	3	1	7	109	109	104	101	95.9	93.9	86.6	73.0	2.75	1.06
2-8	084458	3	1	8	96.8	98.4	97.0	91.1	90.0	81.2	75.6	73.0	2.47	0.494
Average					102	106	102	97.3	94.6	87.9	83.3	74.6	3.00	0.882
Std. Dev.					5	4	4	4.1	4.4	4.7	4.2	1.9	0.75	0.210
Coeff. Var.					5.3	4.1	4.2	4.2	4.6	5.3	5.1	2.6	24.9	23.8
2-8	084458	3	2	1	96.9	97.8	95.0	90.9	93.8	86.5	80.9	76.5	4.67	0.902
2-8	084458	3	2	2	105	86.2	92.8	80.0	85.6	87.8	80.9	76.2	5.29	1.84
2-8	084458	3	2	3	97.2	103	101	93.5	97.5	87.5	88.1	79.0	4.98	1.53
2-8	084458	3	2	4	90.3	103	100	102	95.6	91.3	79.6	73.1	3.10	0.902
2-8	084458	3	2	5	104	109	110	107	107	101	89.7	85.3	3.73	1.53
2-8	084458	3	2	6	96.3	96.0	106	108	97.8	93.1	85.0	78.7	3.73	1.22
2-8	084458	3	2	7	99.4	95.6	101	96.6	89.1	86.5	79.3	76.2	3.73	1.22
2-8	084458	3	2	8	90.0	92.8	101	99.1	93.1	90.0	85.6	75.3	3.73	0.588
Average					97.4	97.8	101	97.1	94.9	90.5	83.6	77.5	4.12	1.22
Std. Dev.					5.5	6.8	6	9.1	6.4	4.9	4.0	3.7	0.76	0.41
Coeff. Var.					5.6	7.0	5.5	9.4	6.7	5.4	4.8	4.7	18.6	33.8
2-8	084458	3	3	1	102	104	105	101	91.8	105	99.5	87.6	8.22	1.22
2-8	084458	3	3	2	108	105	100	103	101	97.1	101	87.6	7.52	1.92
2-8	084458	3	3	3	102	104	108	105	108	98.1	96.4	82.4	6.82	1.57
2-8	084458	3	3	4	97.4	99.2	97.4	108	96.4	101	97.1	83.8	4.37	0.875
2-8	084458	3	3	5	97.4	102	111	108	110	96.4	91.1	78.5	5.07	1.57
2-8	084458	3	3	6	96.4	102	104	103	101	92.9	90.8	74.7	5.77	0.875
2-8	084458	3	3	7	99.9	97.8	94.6	93.9	88.3	81.3	83.1	62.4	6.47	1.57
2-8	084458	3	3	8	98.8	96.7	85.5	96.0	90.1	88.3	92.5	73.6	7.17	0.875
Average					100	101	101	102	98.2	95.0	93.9	78.8	6.43	1.31
Std. Dev.					4	3	8	5	7.9	7.4	5.7	8.5	1.29	0.41
Coeff. Var.					3.6	3.2	8.2	4.9	8.1	7.8	6.1	10.8	20.0	31.1
2-8	084458	3	4	1	96.8	100	100	87.6	91.2	86.6	90.6	77.5	4.34	1.39
2-8	084458	3	4	2	106	106	99.8	101	103	96.5	102	88.6	3.69	2.05
2-8	084458	3	4	3	107	112	100	103	103	91.9	95.8	83.7	3.69	1.07
2-8	084458	3	4	4	103	108	94.5	99.4	89.6	85.3	89.6	77.1	3.03	0.738
2-8	084458	3	4	5	112	115	108	107	100	96.5	99.8	87.3	4.02	1.07
2-8	084458	3	4	6	111	113	107	105	104	92.2	93.9	83.0	3.03	1.39
2-8	084458	3	4	7	96.8	100	101	97.1	95.5	87.6	88.3	75.8	4.34	1.72
2-8	084458	3	4	8	89.6	94.5	91.2	81.7	83.7	77.1	76.1	69.9	3.69	1.07
Average					103	106	100	97.7	96.3	89.2	92.0	80.4	3.73	1.31
Std. Dev.					8	7	6	8.7	7.5	6.5	8.0	6.4	0.51	0.42
Coeff. Var.					7.5	6.8	5.5	8.9	7.8	7.2	8.7	7.9	13.6	32.0

IC₅₀ (µg TPM/mL) Analysis of the NRU Assay Dose-Response Curves

		TPM IC ₅₀ (µg/mL)														
Sample ID	Sample Description	Replicate 1				Replicate 2				Replicate 3				Statistics for Replicate TPM log[IC ₅₀] Estimates		
		<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	Mean	Standard Error	95% C.I.
084396	Kentucky Reference 2R4F	-3.27	56.7	1.75	0.96	-2.57	43.6	1.64	0.99	-3.68	54.7	1.74	0.98	1.71	0.04	1.56 - 1.86

IC₅₀ (µg Nicotine/mL) Analysis of the NRU Assay Dose-Response Curves

		Nicotine IC ₅₀ (µg/mL)														
Sample ID	Sample Description	Replicate 1				Replicate 2				Replicate 3				Statistics for Replicate Nic. log[IC ₅₀] Estimates		
		<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	Mean	Standard Error	95% C.I.
084396	Kentucky Reference 2R4F	-3.27	4.92	0.692	0.96	-2.57	2.93	0.467	0.99	-3.68	3.79	0.579	0.98	0.579	0.065	0.3 - 0.859

Non-Linear Regression Model Applied to Dose-Response Data

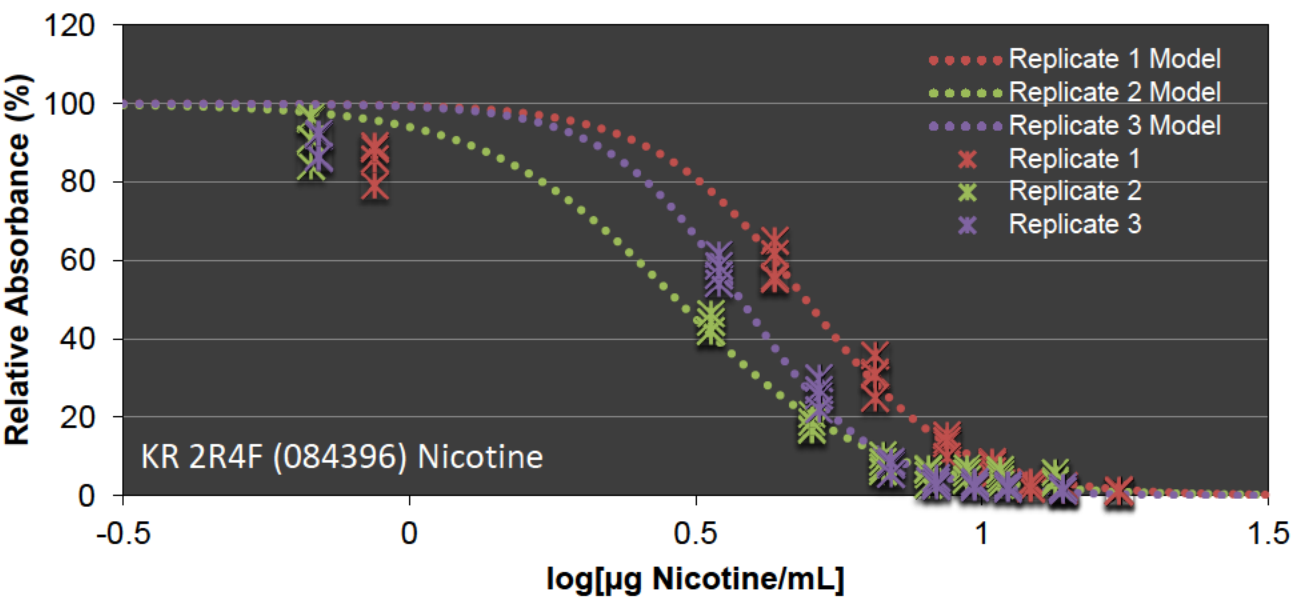
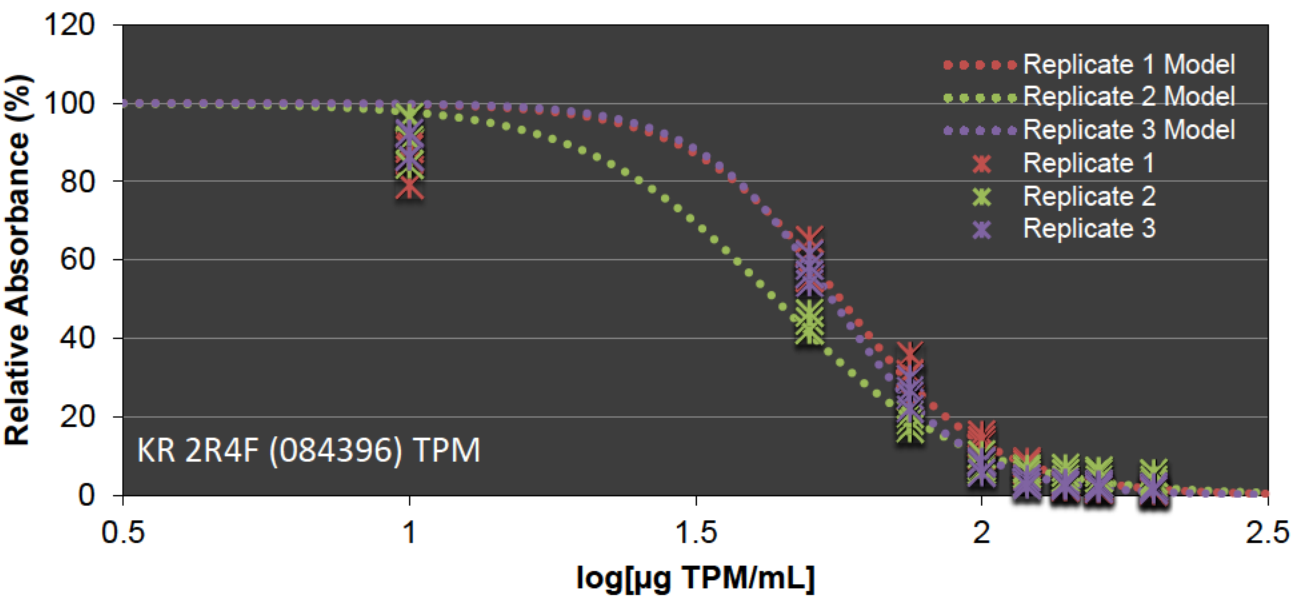
$$y = \frac{100}{1 + 10^{[\log(IC_{50}) - \log(x)] \times b}}$$

y = average assay plate absorbance relative to that of the solvent control

x = dose of Mainstream Tobacco Smoke (µg TPM/mL)

or dose of Nicotine in Mainstream Tobacco Smoke (µg Nicotine/mL)

b = constant related to the slope of the curve



IC₅₀ Analysis of the NRU Assay Dose-Response Curves for Smokeless Tobacco (µg 'Extracted Nicotine in DMSO'/mL) and Smoked Tobacco (µg 'Nicotine in CSC'/mL) Samples

		'Nicotine in CSC' (KR 2R4F) and 'Extracted Nicotine in DMSO' IC ₅₀ (µg/mL)														
Sample ID	Sample Description	Replicate 1				Replicate 2				Replicate 3				Statistics for Replicate 'Nic.' IC ₅₀ Estimates		
		<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	Mean	Standard Error	95% C.I.
084394	Camel SNUS Frost	-2.20	30.7	1.49	0.92	-1.93	30.3	1.48	0.96	-2.15	32.2	1.51	0.97	31.1	0.6	28.5 to 33.6
084395	2S3	-2.46	31.0	1.49	0.92	-2.64	35.6	1.55	0.84	-3.26	39.2	1.59	0.87	35.2	2.4	25 to 45.4
084396	KR 2R4F	-3.27	4.92	0.692	0.96	-2.57	2.93	0.467	0.99	-3.68	3.79	0.579	0.98	3.88	0.58	1.4 to 6.36
084454	Fresh Strips					-12.0	9.82	0.992	0.05	-70.7	8.00	0.903	-0.23	8.91	0.91	-2.7 to 20.5
084455	Mellow Sticks									-6.67	11.3	1.05	0.37	11.3	n/a	n/a
084456	Copenhagen Long Cut					-4.86	36.3	1.56	0.51	-3.25	42.8	1.63	0.57	39.5	3.2	-1.44 to 80.5
084457	Ariva Wintergreen	-1.73	15.0	1.18	0.94	-1.49	12.1	1.08	0.96	-1.64	12.8	1.11	0.97	13.3	0.9	9.53 to 17.1
084458	Fresh Orbs	-2.03	7.71	0.887	0.79	-1.97	8.23	0.915	0.89	-2.38	8.53	0.931	0.86	8.16	0.24	7.12 to 9.19

n/a - not applicable

minimum relative absorbance was greater than 50% for all 4 assay plates. This situation results in increased uncertainty of the IC₅₀ estimate.

No IC₅₀ estimate could be calculated due to insufficient sigmoid shape of the dose-response curve.

Cigarette smoke condensate (CSC) test sample with µg 'Nicotine in CSC'/mL dose basis

Non-Linear Regression Model Applied to Dose-Response Data	
$y = \frac{100}{1 + 10^{[\log(IC_{50}) - \log(x)] \times b}}$	
<p><i>y</i> = average assay plate absorbance relative to that of the solvent control <i>x</i> = dose of Nicotine in CSC or Smokeless Tobacco Extract (µg/mL) <i>b</i> = constant related to the slope of the curve</p>	

**One-Way ANOVA of Mean 'Extracted Nicotine' and
'Nicotine in CSC' LOG[IC₅₀] Estimates**

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
Among Samples	2.457	7	0.351	97.420	< 0.001
Within Samples	0.043	12	0.004		
Total (Corr.)	2.500	19			

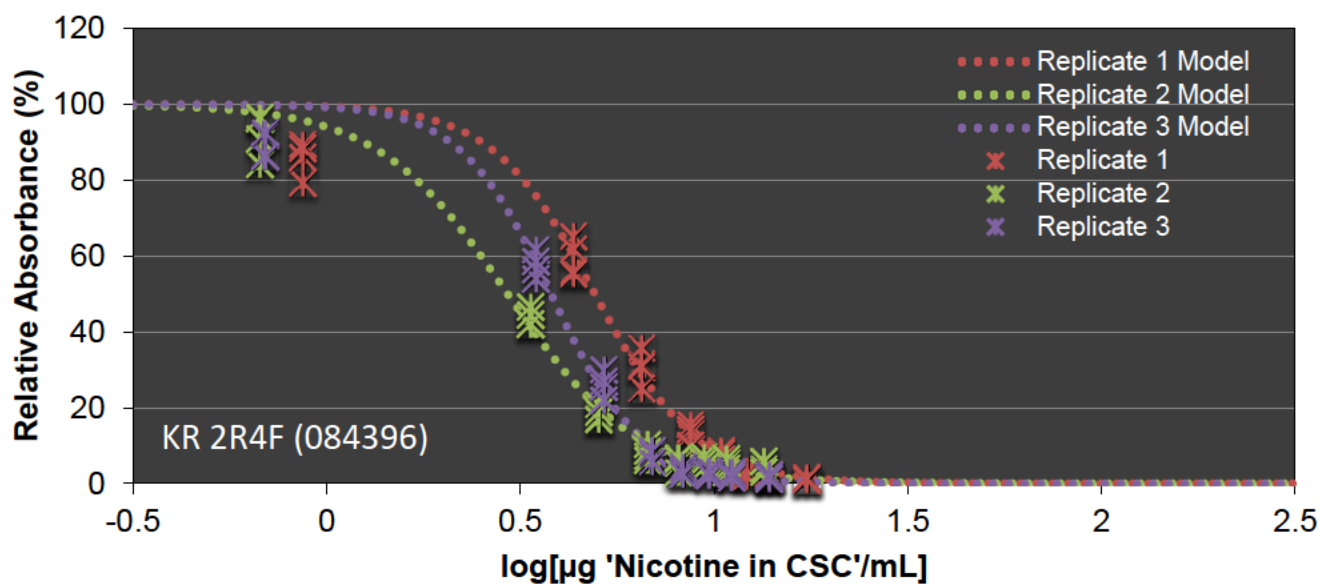
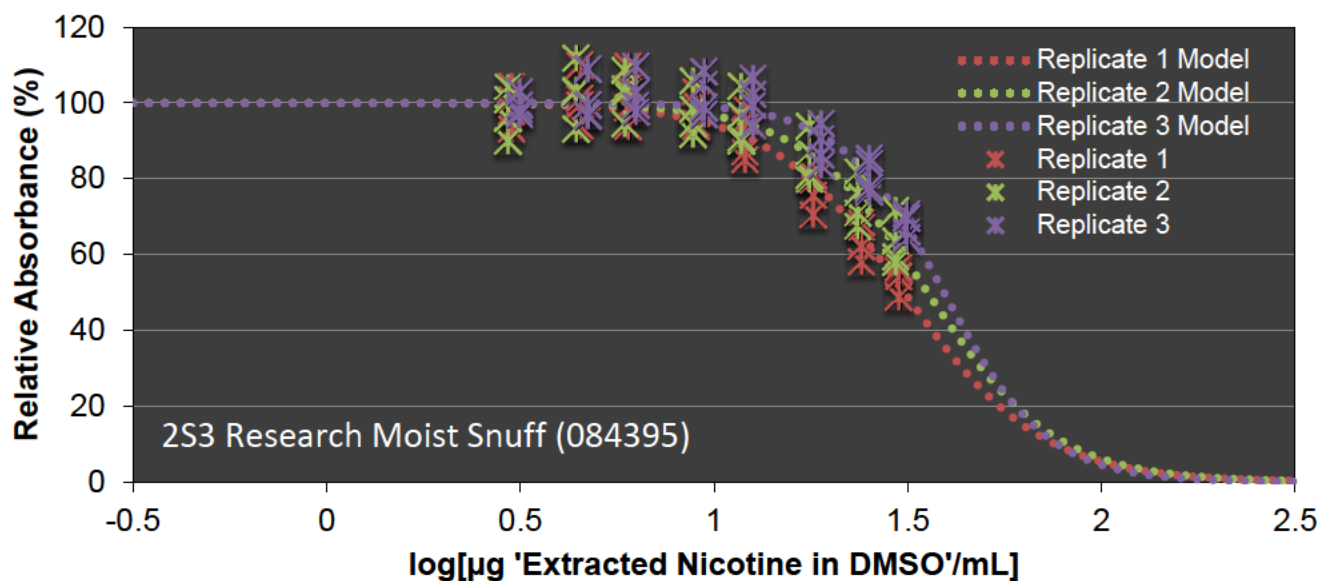
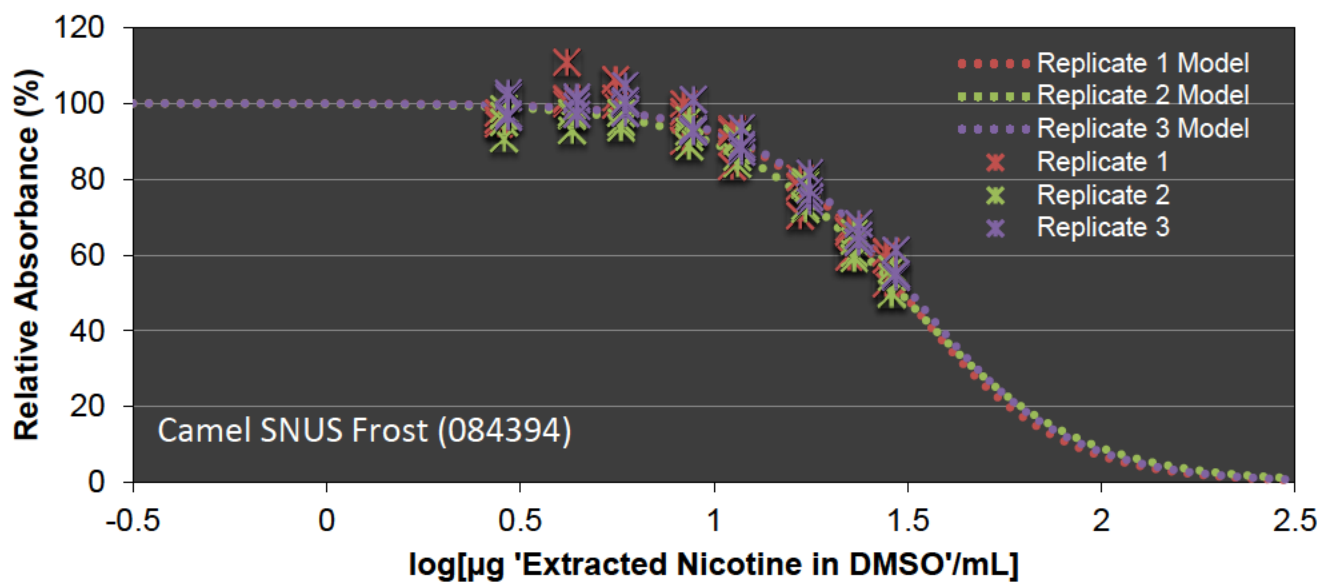
One-way ANOVA analysis indicates significant differences (at $\alpha = 0.05$) among mean 'Nicotine' dose base LOG[IC₅₀] estimates.

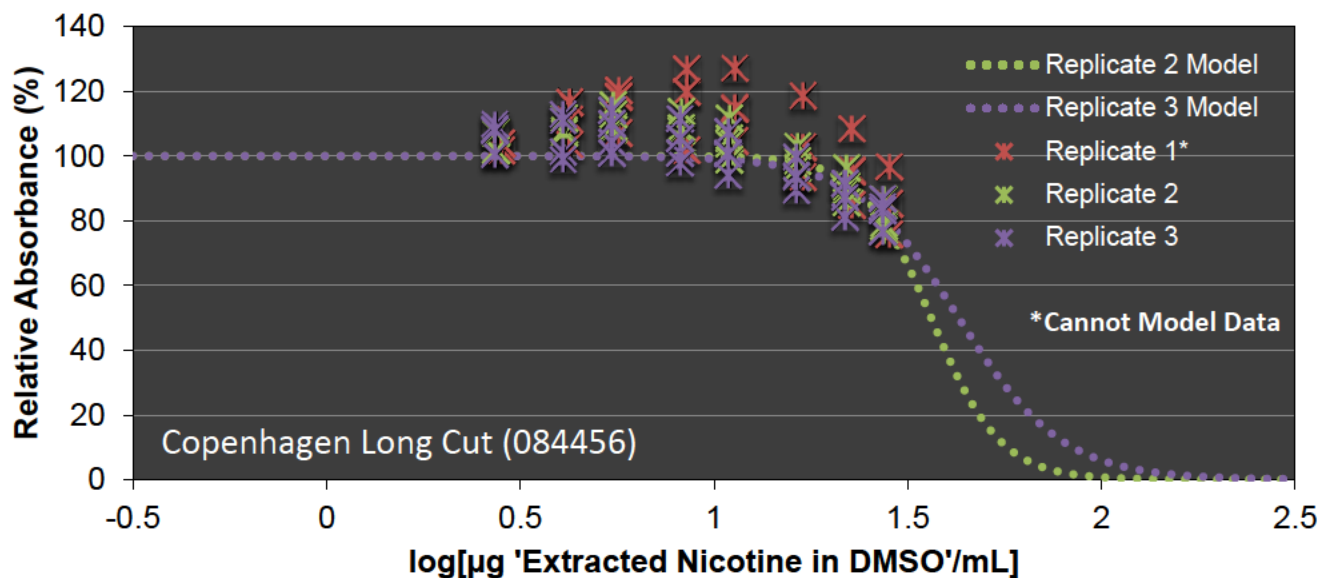
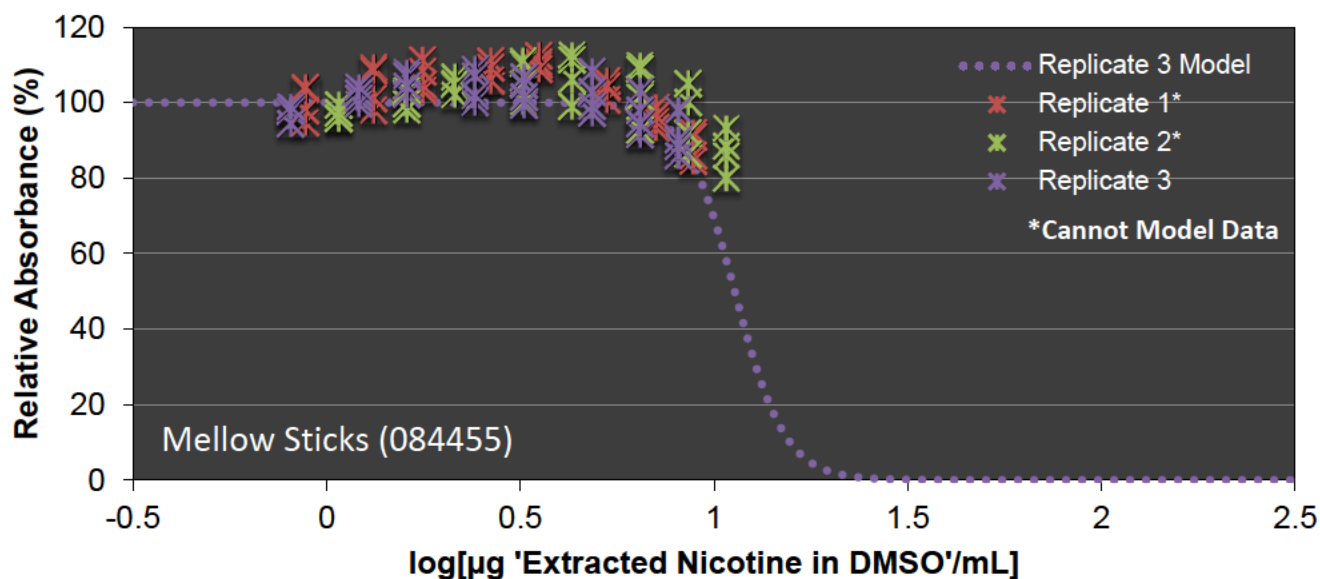
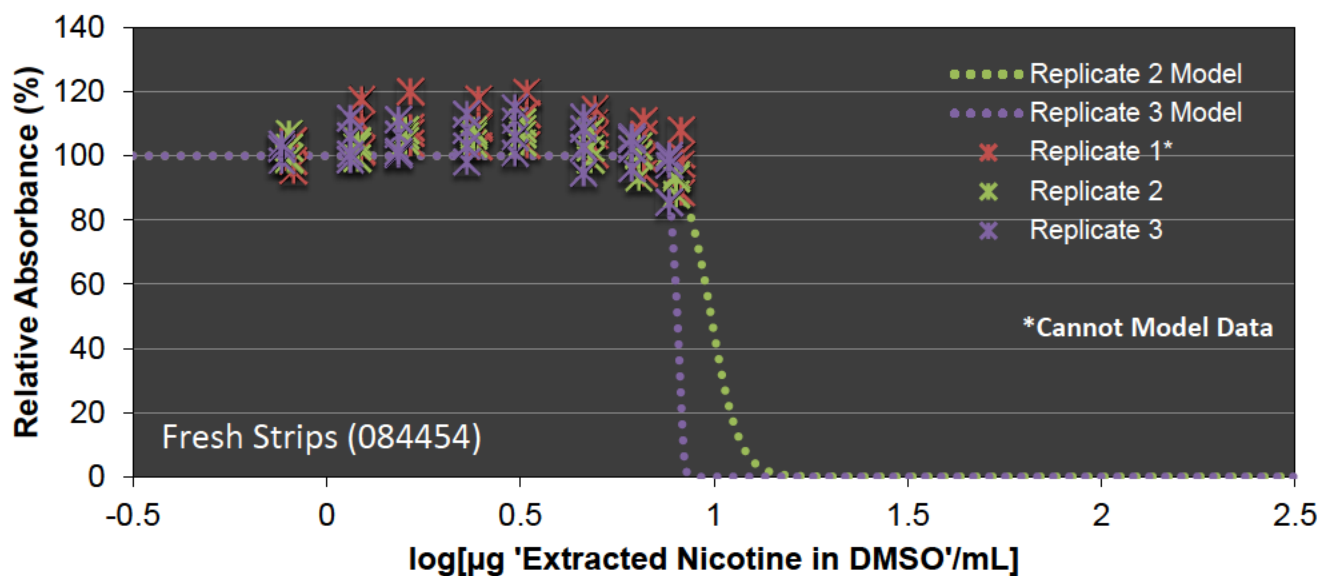
ANOVA-Based Comparisons of Smokeless Tobacco Mean 'Extracted Nicotine' LOG[IC₅₀] to Control Brand KR 2R4F (084396) Mean 'Nicotine in CSC' LOG[IC₅₀] using Bonferroni-adjusted p-values

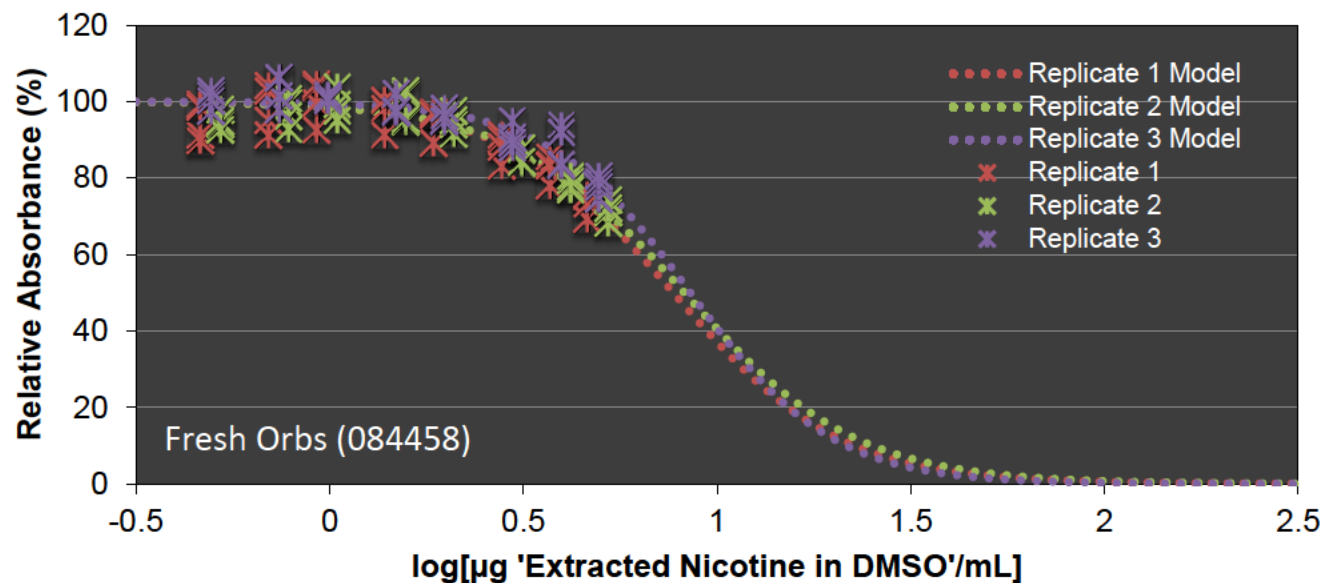
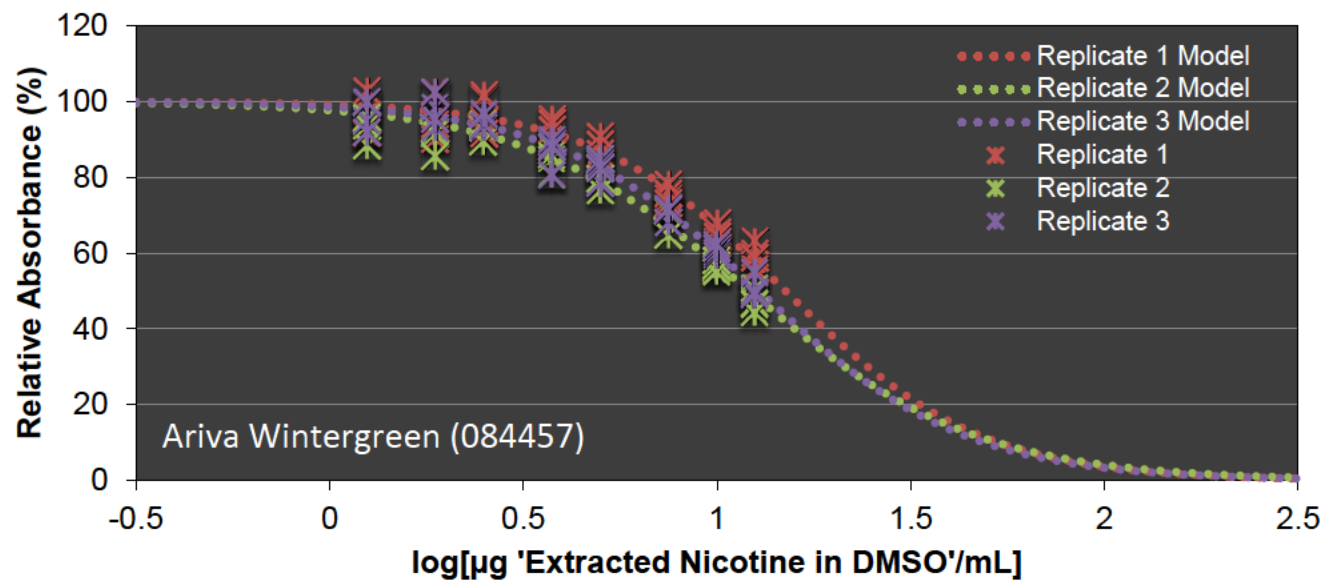
ANOVA-Based Comparison	n ₁	n ₂	t-statistic	p-value	significance at $\alpha = 0.05$
084394 vs. 084396	3	3	18.6196	3.2E-10	significant
084395 vs. 084396	3	3	19.7009	1.7E-10	significant
084454* vs. 084396	2	3	6.7192	2.1E-05	significant
084455* vs. 084396	1	3	6.8326	1.8E-05	significant
084456 vs. 084396	2	3	18.5426	3.4E-10	significant
084457 vs. 084396	3	3	11.0705	1.2E-07	significant
084458 vs. 084396	3	3	6.7669	2.0E-05	significant

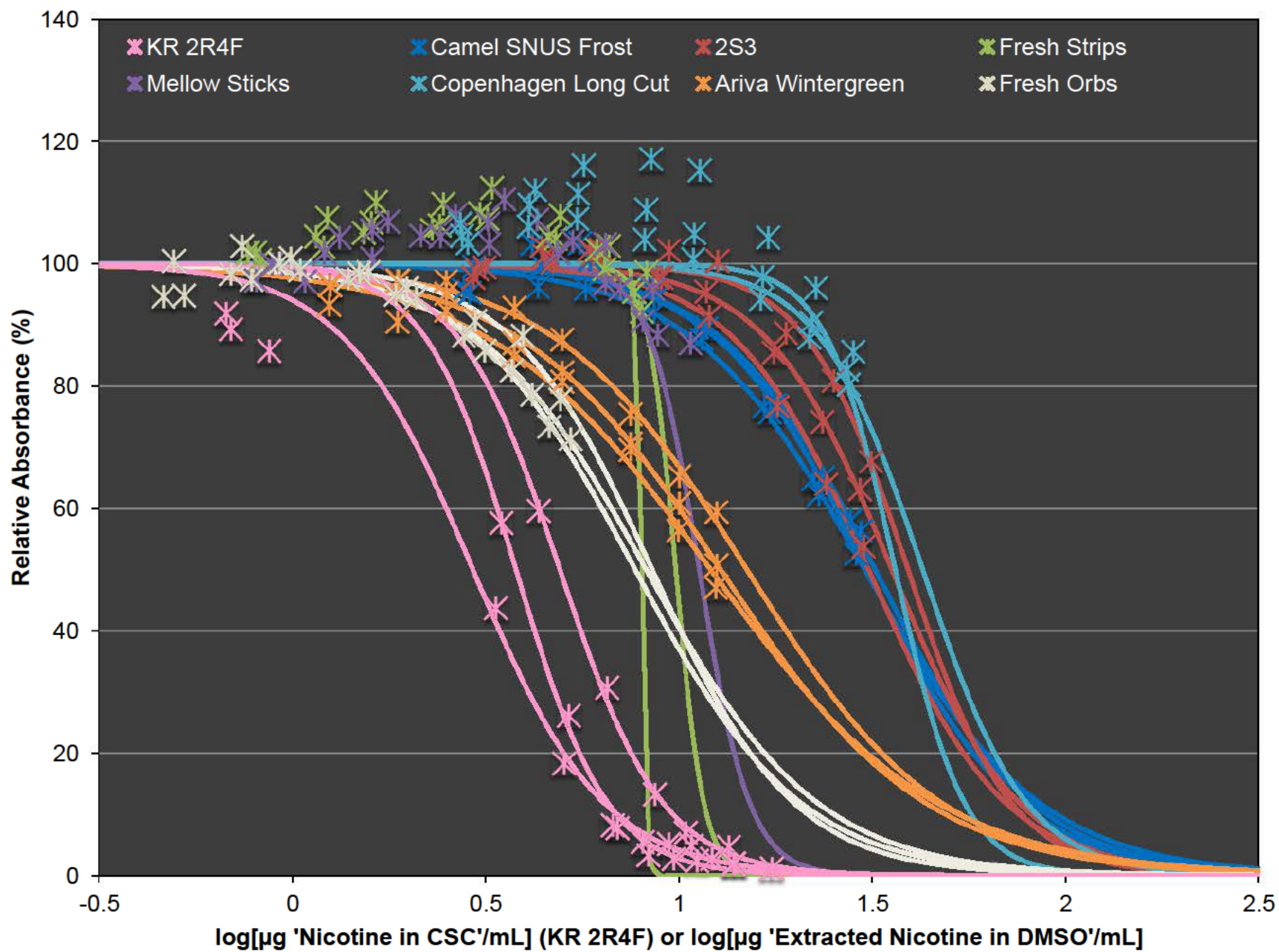
ANOVA-based comparison p-values less than the Bonferroni-adjusted $\alpha = 0.05$ indicate that significant differences were detected between the mean LOG[IC₅₀] of the KR 2R4F smoked tobacco samples (μg 'Nicotine in CSC'/mL) and that of each smokeless tobacco sample (μg 'Extracted Nicotine'/mL).

* Fresh Strips (084454) and Mellow Sticks (084455) both have relatively poor model fit (low r^2 values), which should be considered in drawing conclusions from the comparison results involving these brands.









IC₅₀ (µg 'Extracted Nicotine in DMSO'/mL) Analysis of the NRU Assay Dose-Response Curves

		'Extracted Nicotine in DMSO' IC ₅₀ (µg/mL)														
Sample ID	Sample Description	Replicate 1				Replicate 2				Replicate 3				Statistics for Replicate 'Nic.' IC ₅₀ Estimates		
		<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	Mean	Standard Error	95% C.I.
084394	Camel SNUS Frost	-2.20	30.7	1.49	0.92	-1.93	30.3	1.48	0.96	-2.15	32.2	1.51	0.97	31.1	0.6	28.5 to 33.6
084395	2S3	-2.46	31.0	1.49	0.92	-2.64	35.6	1.55	0.84	-3.26	39.2	1.59	0.87	35.2	2.4	25 to 45.4
084454	Fresh Strips					-12.0	9.82	0.992	0.05	-70.7	8.00	0.903	-0.23	8.91	0.91	-2.7 to 20.5
084455	Mellow Sticks									-6.67	11.3	1.05	0.37	11.3	n/a	n/a
084456	Copenhagen Long Cut									-4.86	36.3	1.56	0.51	-3.25	42.8	1.63
084457	Ariva Wintergreen	-1.73	15.0	1.18	0.94	-1.49	12.1	1.08	0.96	-1.64	12.8	1.11	0.97	13.3	0.9	9.53 to 17.1
084458	Fresh Orbs	-2.03	7.71	0.887	0.79	-1.97	8.23	0.915	0.89	-2.38	8.53	0.931	0.86	8.16	0.24	7.12 to 9.19

n/a - not applicable

minimum relative absorbance was greater than 50% for all 4 assay plates. This situation results in increased uncertainty of the IC₅₀ estimate.

No IC₅₀ estimate could be calculated due to insufficient sigmoid shape of the dose-response curve.

Non-Linear Regression Model Applied to Dose-Response Data

$$y = \frac{100}{1 + 10^{[\log(IC_{50}) - \log(x)] \times b}}$$

y = average assay plate absorbance relative to that of the solvent control

x = dose of Nicotine in Smokeless Tobacco Extract (µg/mL)

b = constant related to the slope of the curve

One-Way ANOVA of Mean 'Extracted Nicotine' LOG[IC₅₀] Estimates

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
Among Samples	1.290	6	0.215	120.260	< 0.001
Within Samples	0.018	10	0.002		
Total (Corr.)	1.308	16			

One-way ANOVA analysis indicates significant differences (at $\alpha = 0.05$) among mean 'Extracted Nicotine' LOG[IC₅₀] estimates.

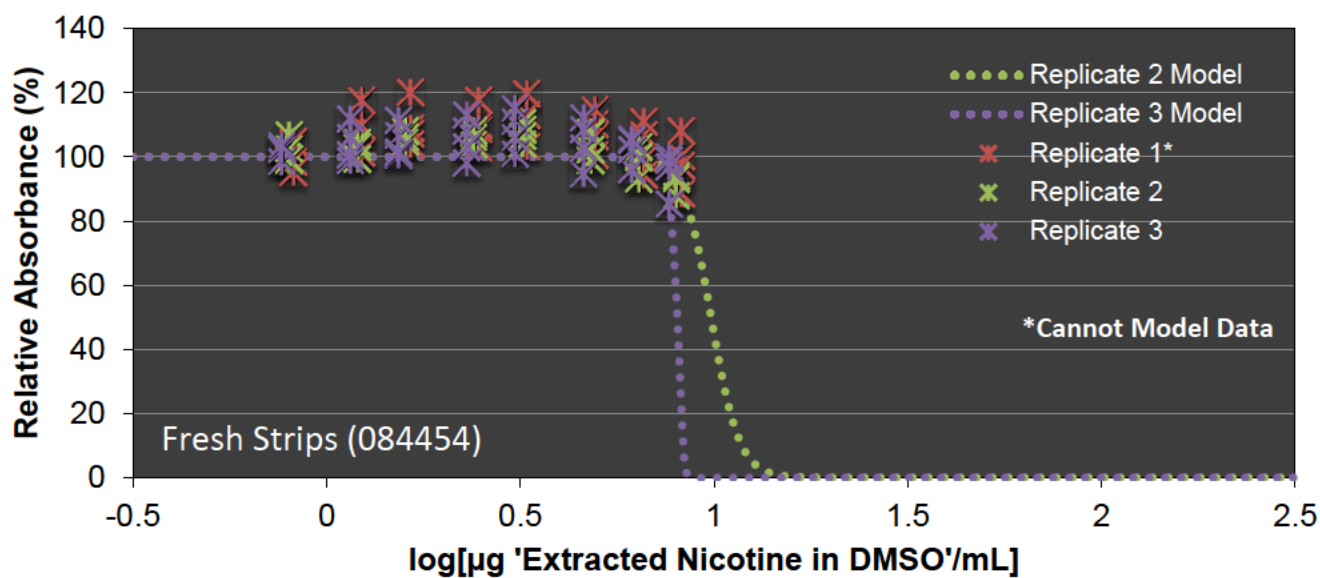
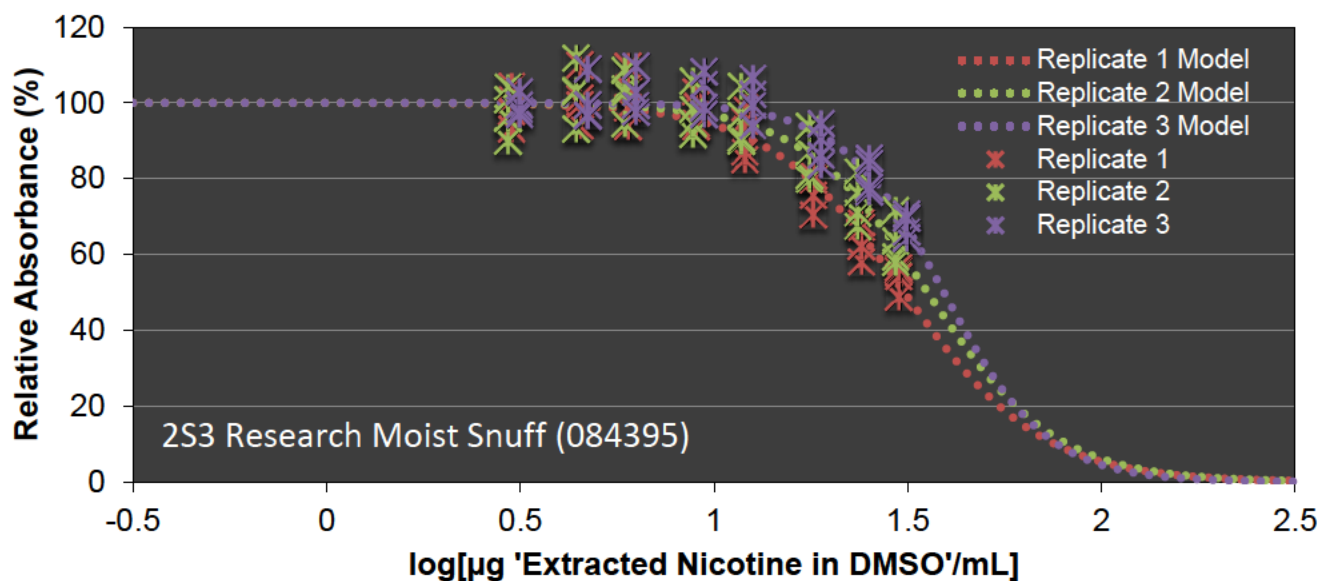
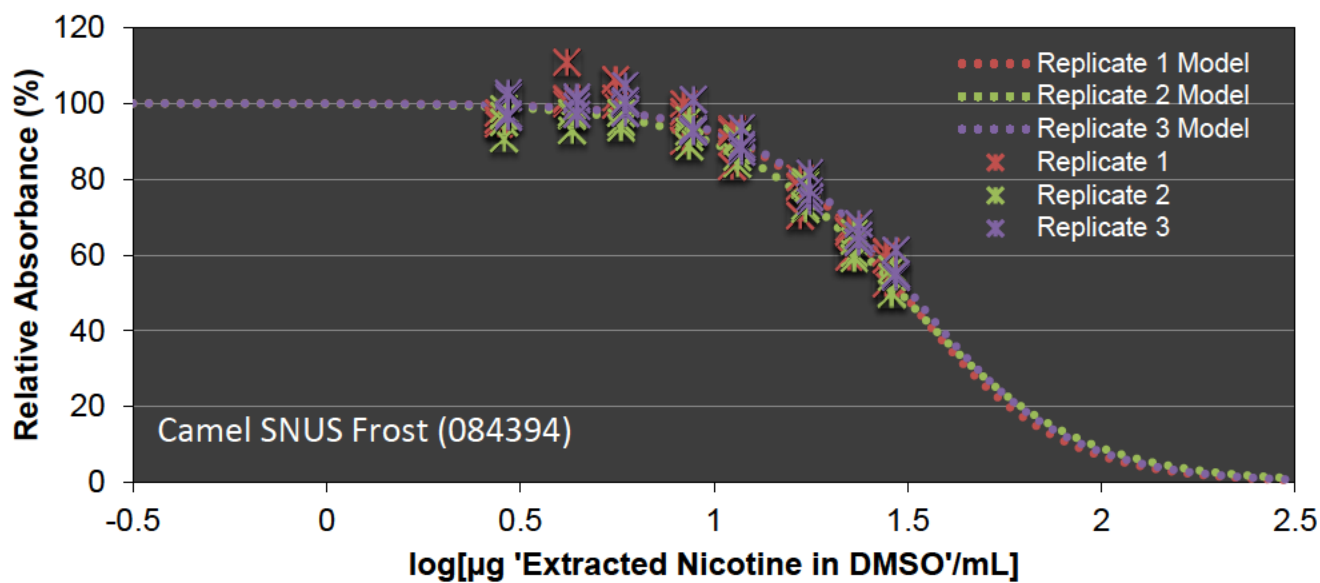
ANOVA-Based Comparisons of Mean 'Extracted Nicotine' LOG[IC₅₀] for Contrasts of Interest using Bonferroni-adjusted p-values

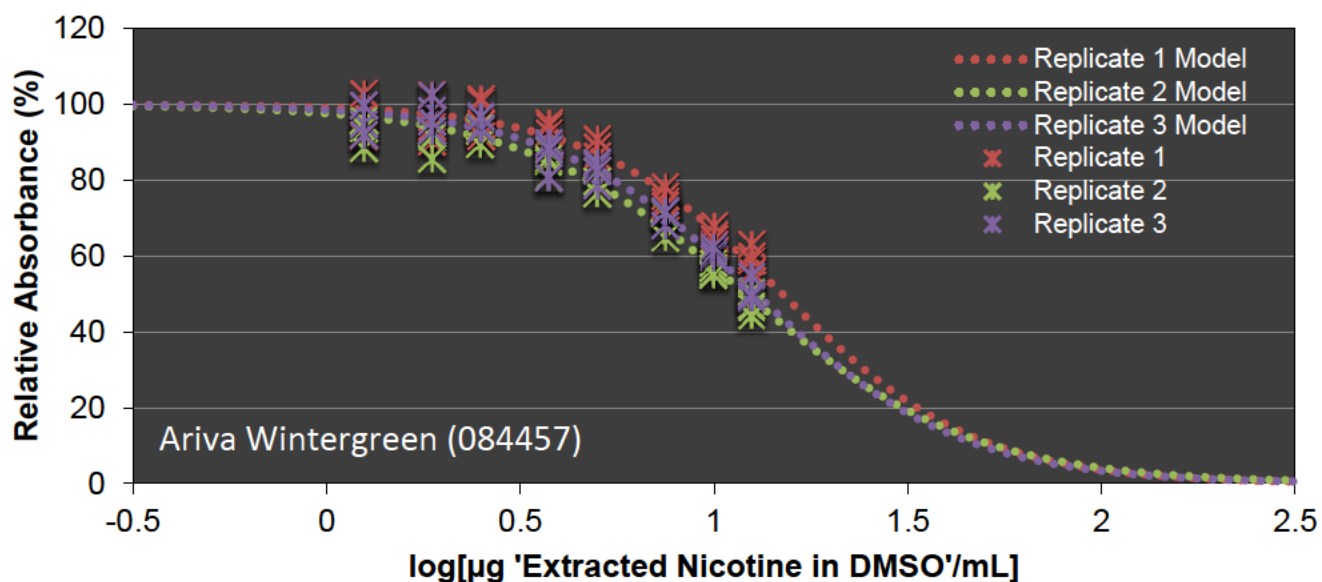
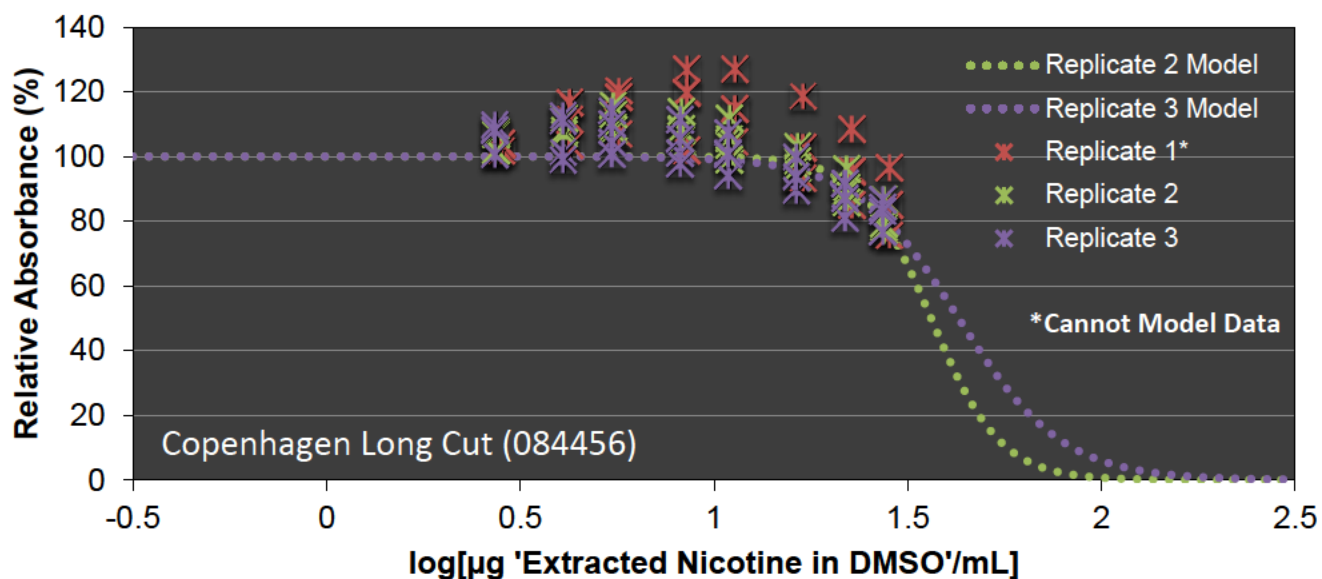
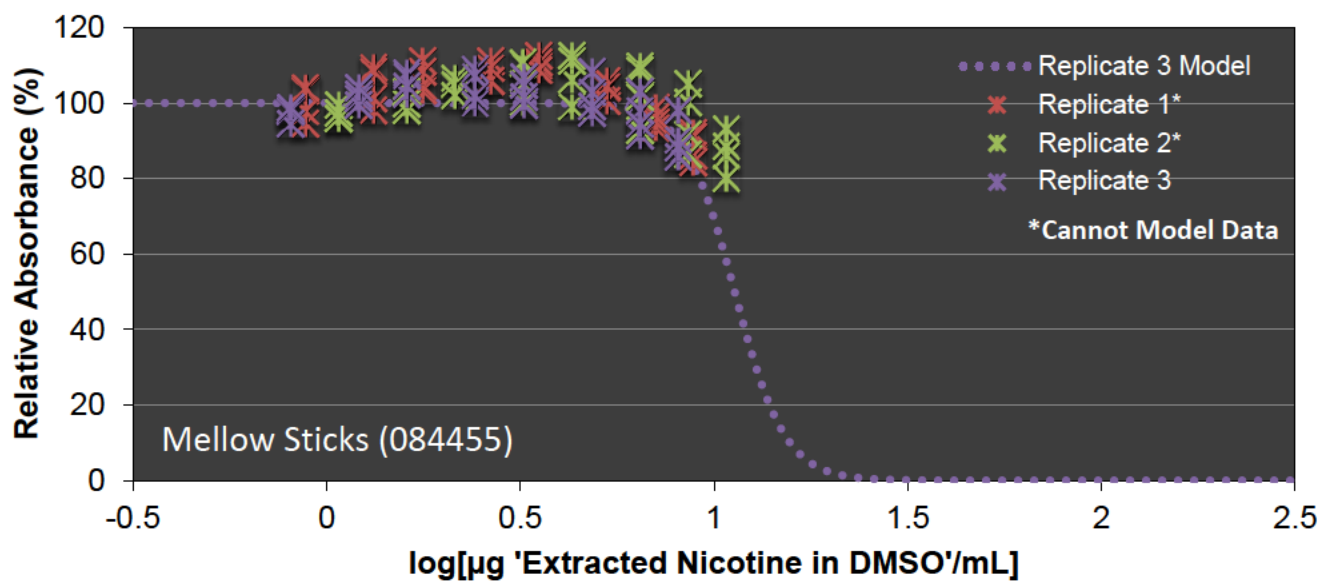
ANOVA-Based Comparison	n ₁	n ₂	t-statistic	p-value	significance at $\alpha = 0.05$
084394 vs. 084395	3	3	1.5350	0.1558	not significant
084394 vs. 084454	3	2	14.1023	0.0000	significant
084394 vs. 084455	3	1	8.9904	0.0000	significant
084394 vs. 084456	3	2	2.6811	0.0230	not significant
084394 vs. 084457	3	3	10.7159	0.0000	significant
084394 vs. 084458	3	3	16.8250	0.0000	significant
084395 vs. 084454	3	2	15.4753	0.0000	significant
084395 vs. 084455	3	1	10.0758	0.0000	significant
084395 vs. 084456	3	2	1.3082	0.2201	not significant
084395 vs. 084457	3	3	12.2509	0.0000	significant
084395 vs. 084458	3	3	18.3599	0.0000	significant
084454 vs. 084455	2	1	2.0351	0.0692	not significant
084454 vs. 084456	2	2	15.3211	0.0000	significant
084454 vs. 084457	2	3	4.5177	0.0011	significant
084454 vs. 084458	2	3	0.9464	0.3663	not significant
084455 vs. 084456	1	2	10.4746	0.0000	significant
084455 vs. 084457	1	3	1.4131	0.1880	not significant
084455 vs. 084458	1	3	2.9067	0.0157	not significant
084456 vs. 084457	2	3	12.2657	0.0000	significant
084456 vs. 084458	2	3	17.7298	0.0000	significant
084457 vs. 084458	3	3	6.1090	0.0001	significant

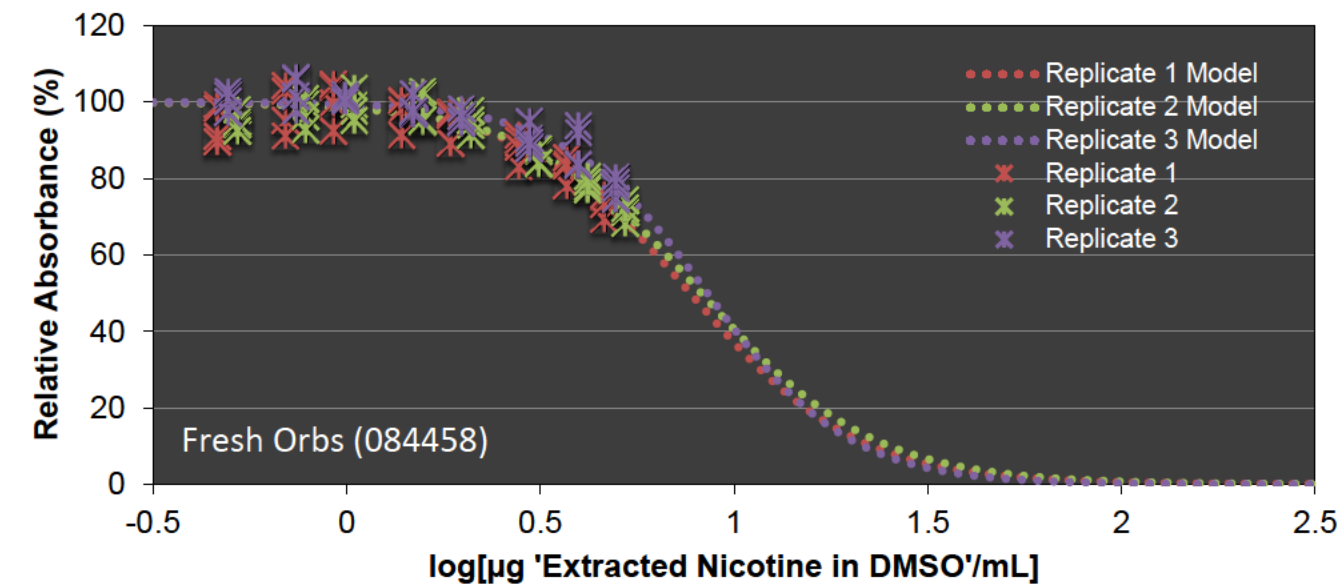
ANOVA-based comparison p-values less than the Bonferroni-adjusted $\alpha = 0.05$ indicate that significant differences in mean 'extracted nicotine' LOG[IC₅₀] were as follows:

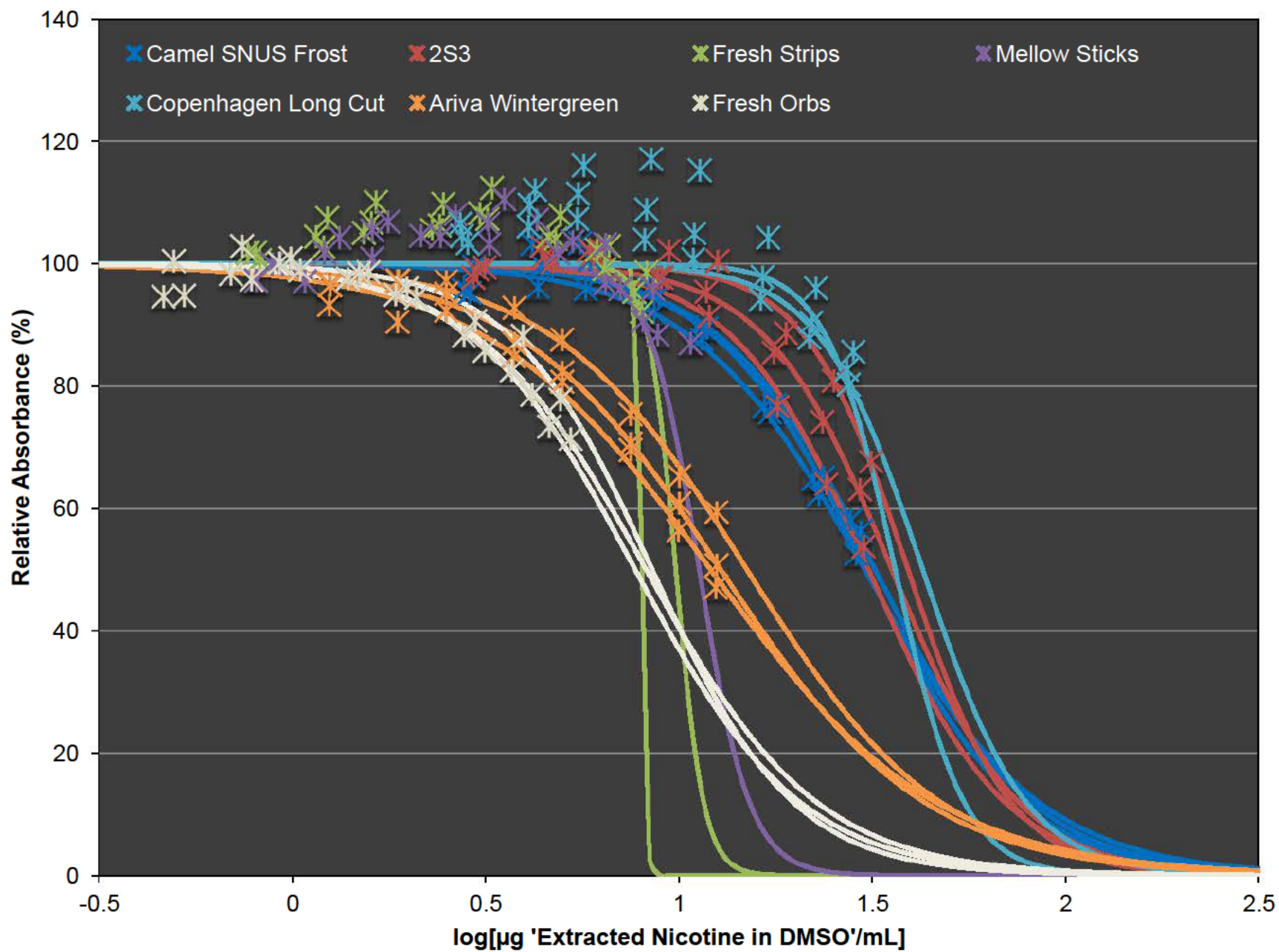
Sample ID	Sample Description	Mean IC ₅₀	Homogenous Groupings
084458	Fresh Orbs	0.911	X
084454	Fresh Strips*	0.948	X
084455	Mellow Sticks*	1.05	XX
084457	Ariva Wintergreen	1.12	X
084394	Camel SNUS Frost	1.49	X
084395	2S3	1.55	X
084456	Copenhagen Long Cut	1.60	X

* Fresh Strips and Mellow Sticks both have relatively poor model fit (low r^2 values), which should be considered in drawing conclusions from the comparison results involving these brands.









IC₅₀ (µg 'Extracted Smokeless Tobacco in DMSO'/mL) Analysis of the NRU Assay Dose-Response Curves

		'Extracted Smokeless Tobacco in DMSO' IC ₅₀ (µg/mL)														
Sample ID	Sample Description	Replicate 1				Replicate 2				Replicate 3				Statistics for Replicate 'ST' IC ₅₀ Estimates		
		<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	Mean	Standard Error	95% C.I.
084394	Camel SNUS Frost	-2.20	2449	3.39	0.92	-1.93	2344	3.37	0.96	-2.15	2432	3.39	0.97	2408	33	2269 to 2548
084395	2S3	-2.46	2296	3.36	0.92	-2.64	2685	3.43	0.84	-3.26	2767	3.44	0.87	2583	145	1958 to 3208
084454	Fresh Strips					-12.0	2729	3.44	0.05	-70.7	2317	3.37	-0.23	2523	206	-91.6 to 5138
084455	Mellow Sticks									-6.67	3112	3.49	0.37	3112	n/a	n/a
084456	Copenhagen Long Cut									-4.86	2944	3.47	0.51	-3.25	3499	3.54
084457	Ariva Wintergreen	-1.73	2661	3.43	0.94	-1.49	2148	3.33	0.96	-1.64	2280	3.36	0.97	2363	154	1702 to 3024
084458	Fresh Orbs	-2.03	3698	3.57	0.79	-1.97	3499	3.54	0.89	-2.38	3837	3.58	0.86	3678	98	3257 to 4100

n/a - not applicable

minimum relative absorbance was greater than 50% for all 4 assay plates. This situation results in increased uncertainty of the IC₅₀ estimate.

No IC₅₀ estimate could be calculated due to insufficient sigmoid shape of the dose-response curve.

Non-Linear Regression Model Applied to Dose-Response Data	
$y = \frac{100}{1 + 10^{[log(IC_{50}) - log(x)] \times b}}$	
<p><i>y</i> = average assay plate absorbance relative to that of the solvent control <i>x</i> = dose of Smokeless Tobacco Extract (µg/mL) <i>b</i> = constant related to the slope of the curve</p>	

One-Way ANOVA of Mean 'Extracted Smokeless Tobacco' LOG[IC₅₀] Estimates

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
Among Samples	0.089	6	0.015	10.030	0.001
Within Samples	0.015	10	0.001		
Total (Corr.)	0.103	16			

One-way ANOVA analysis indicates significant differences (at $\alpha = 0.05$) among mean 'Extracted Smokeless Tobacco' LOG[IC₅₀] estimates.

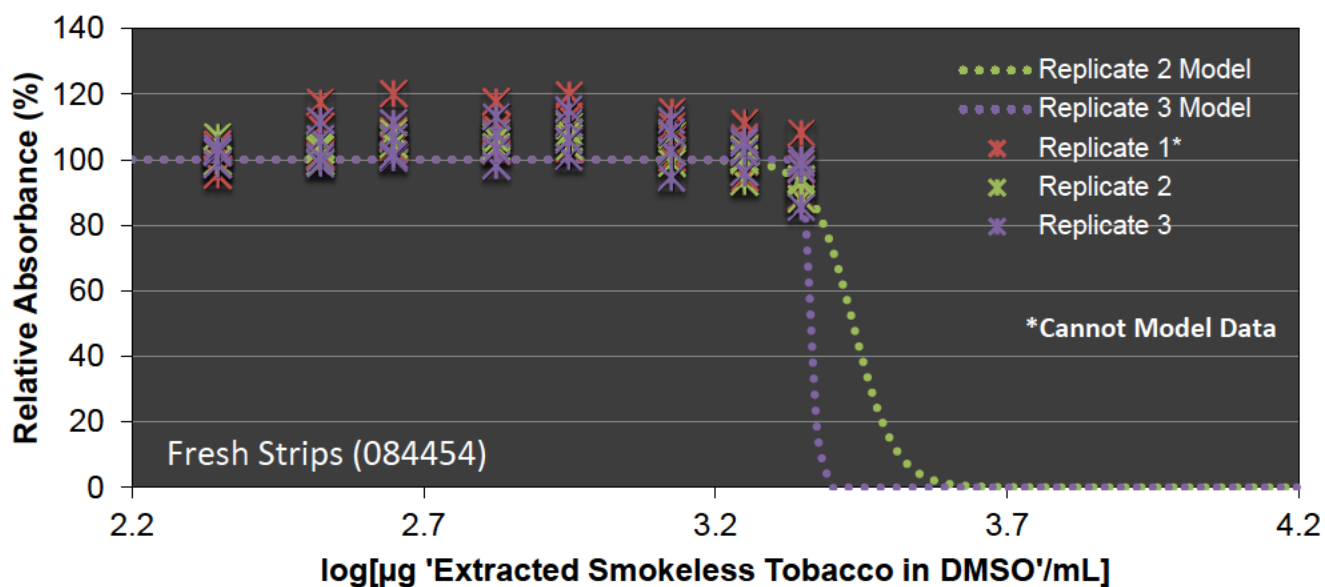
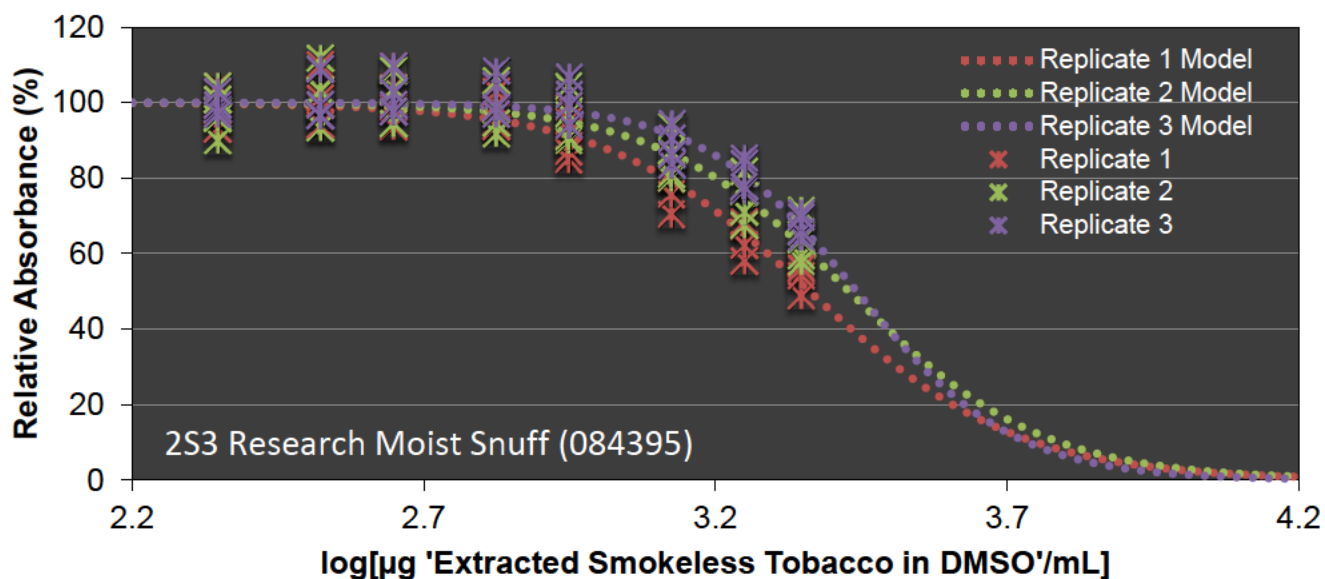
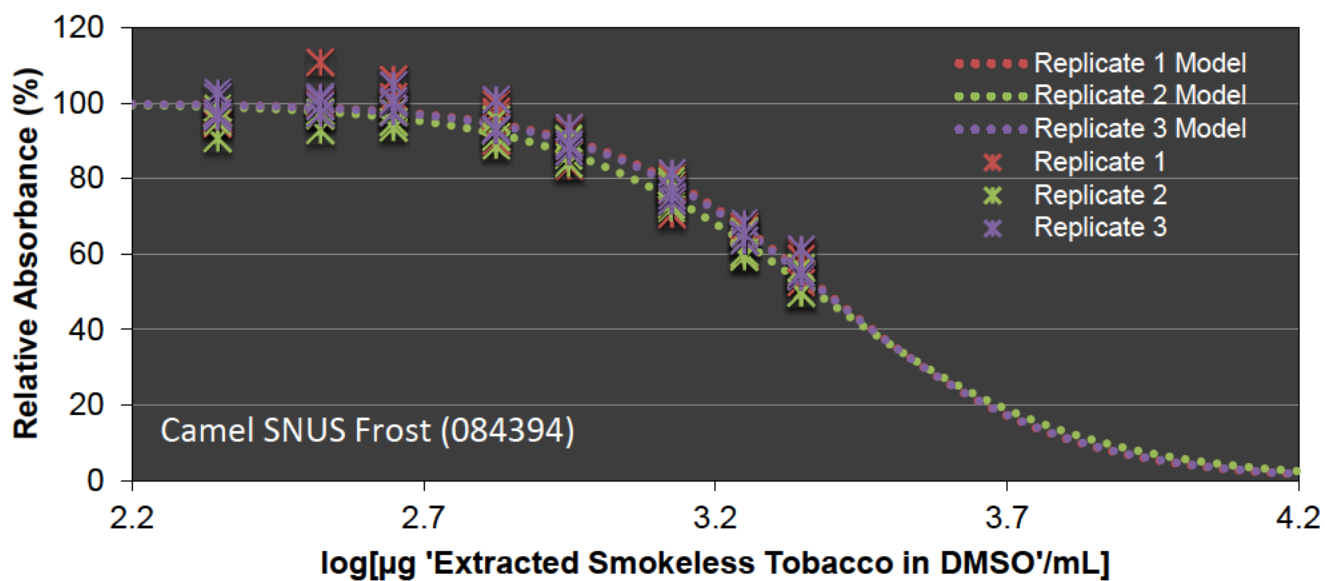
ANOVA-Based Comparisons of Mean 'Extracted Smokeless Tobacco' LOG[IC₅₀] for Contrasts of Interest using Bonferroni-adjusted p-values

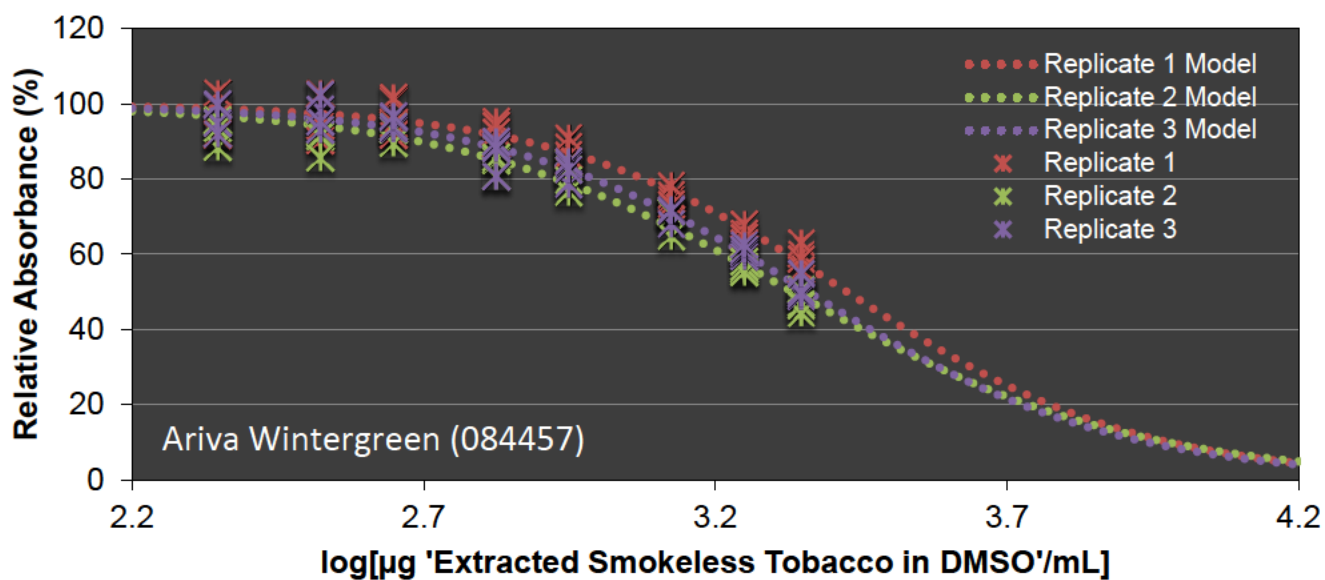
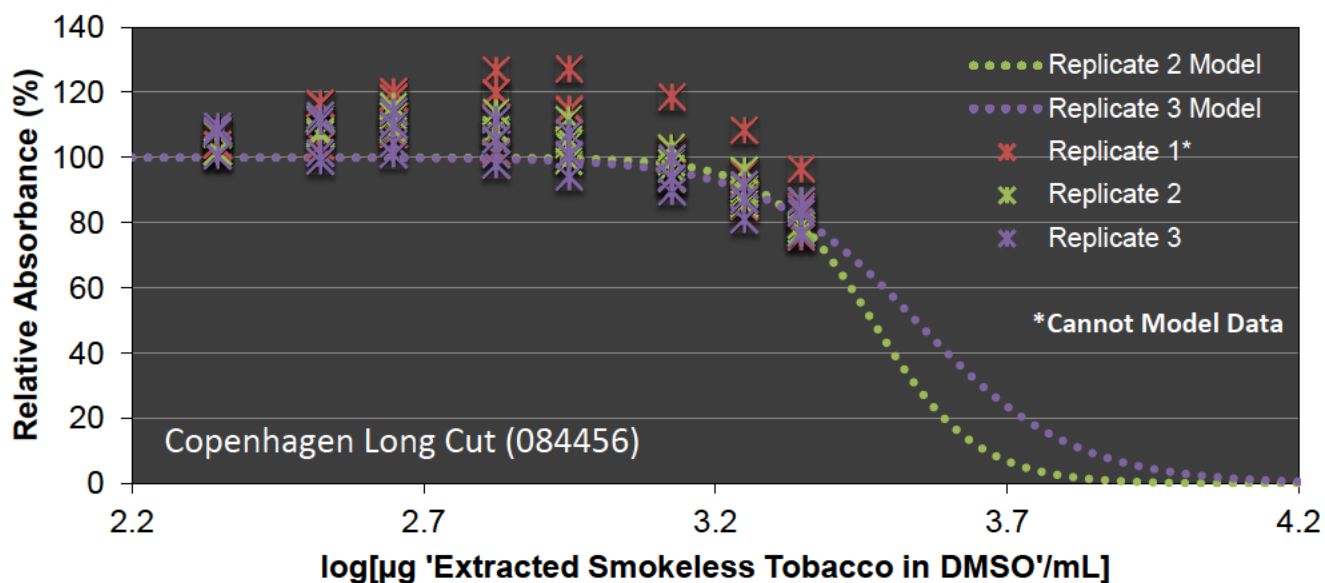
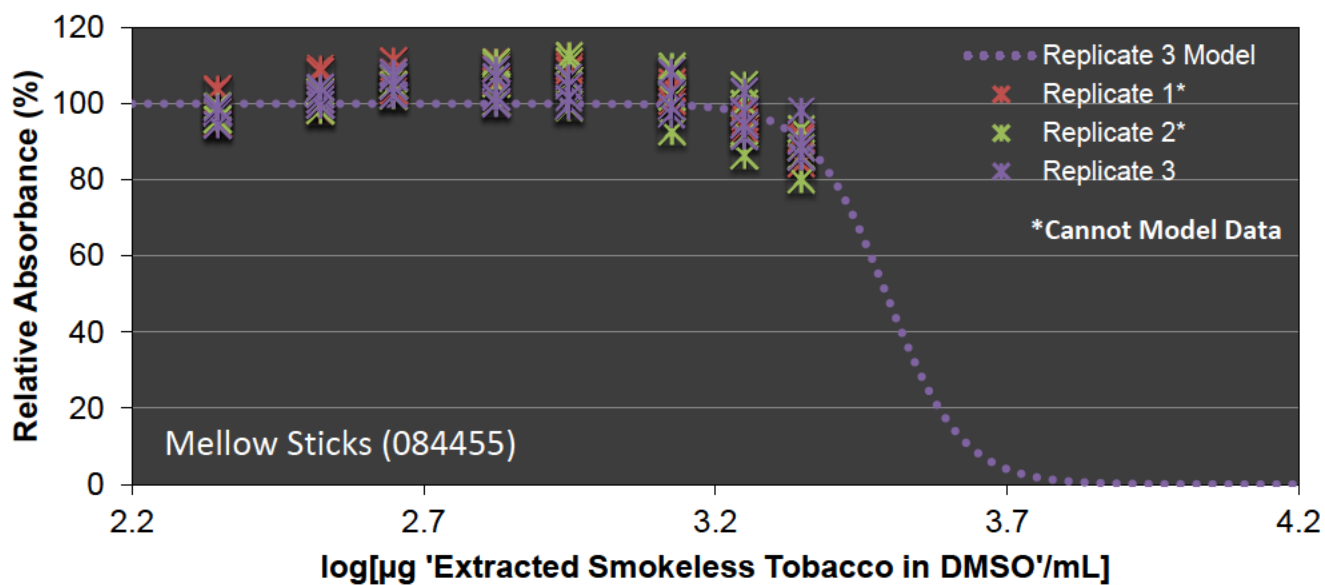
ANOVA-Based Comparison	n ₁	n ₂	t-statistic	p-value	significance at $\alpha = 0.05$
084394 vs. 084395	3	3	0.9251	0.3767	not significant
084394 vs. 084454	3	2	0.5373	0.6028	not significant
084394 vs. 084455	3	1	2.5112	0.0308	not significant
084394 vs. 084456	3	2	3.5616	0.0052	not significant
084394 vs. 084457	3	3	0.3190	0.7563	not significant
084394 vs. 084458	3	3	5.8587	0.0002	significant
084395 vs. 084454	3	2	0.2901	0.7777	not significant
084395 vs. 084455	3	1	1.8571	0.0930	not significant
084395 vs. 084456	3	2	2.7342	0.0210	not significant
084395 vs. 084457	3	3	1.2440	0.2419	not significant
084395 vs. 084458	3	3	4.9337	0.0006	significant
084454 vs. 084455	2	1	1.9671	0.0775	not significant
084454 vs. 084456	2	2	2.7608	0.0201	not significant
084454 vs. 084457	2	3	0.8226	0.4299	not significant
084454 vs. 084458	2	3	4.7029	0.0008	significant
084455 vs. 084456	1	2	0.2871	0.7799	not significant
084455 vs. 084457	1	3	2.7368	0.0209	not significant
084455 vs. 084458	1	3	1.6315	0.1338	not significant
084456 vs. 084457	2	3	3.8469	0.0032	not significant
084456 vs. 084458	2	3	1.6786	0.1242	not significant
084457 vs. 084458	3	3	6.1777	0.0001	significant

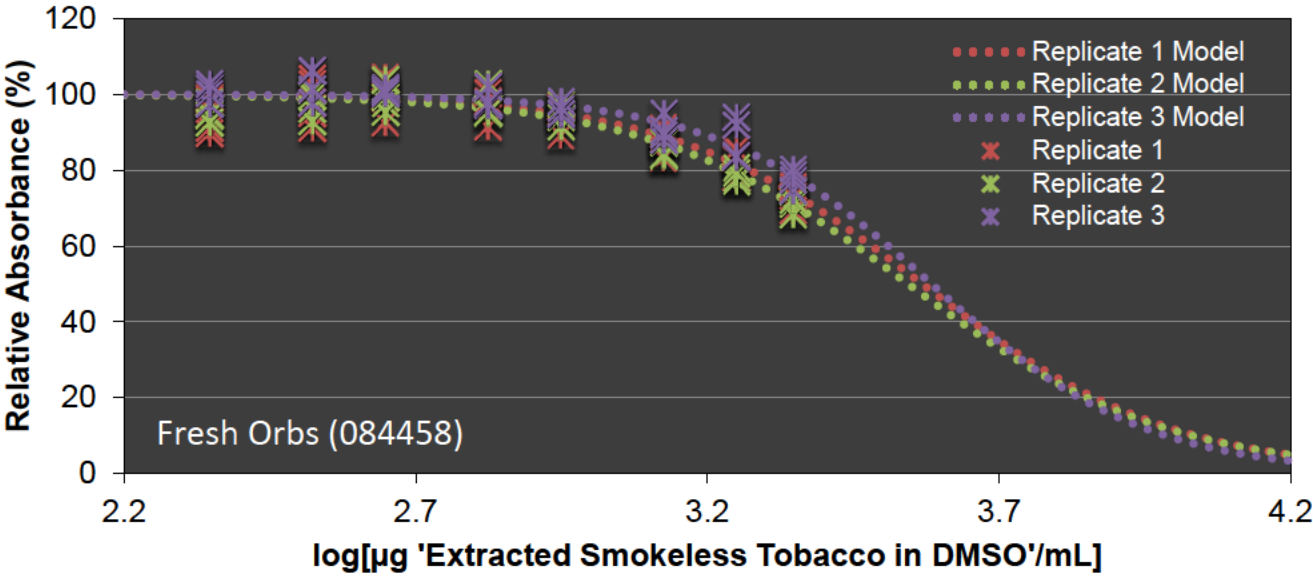
ANOVA-based comparison p-values less than the Bonferroni-adjusted $\alpha = 0.05$ indicate that significant differences in mean 'extracted smokeless tobacco' LOG[IC₅₀] were as follows:

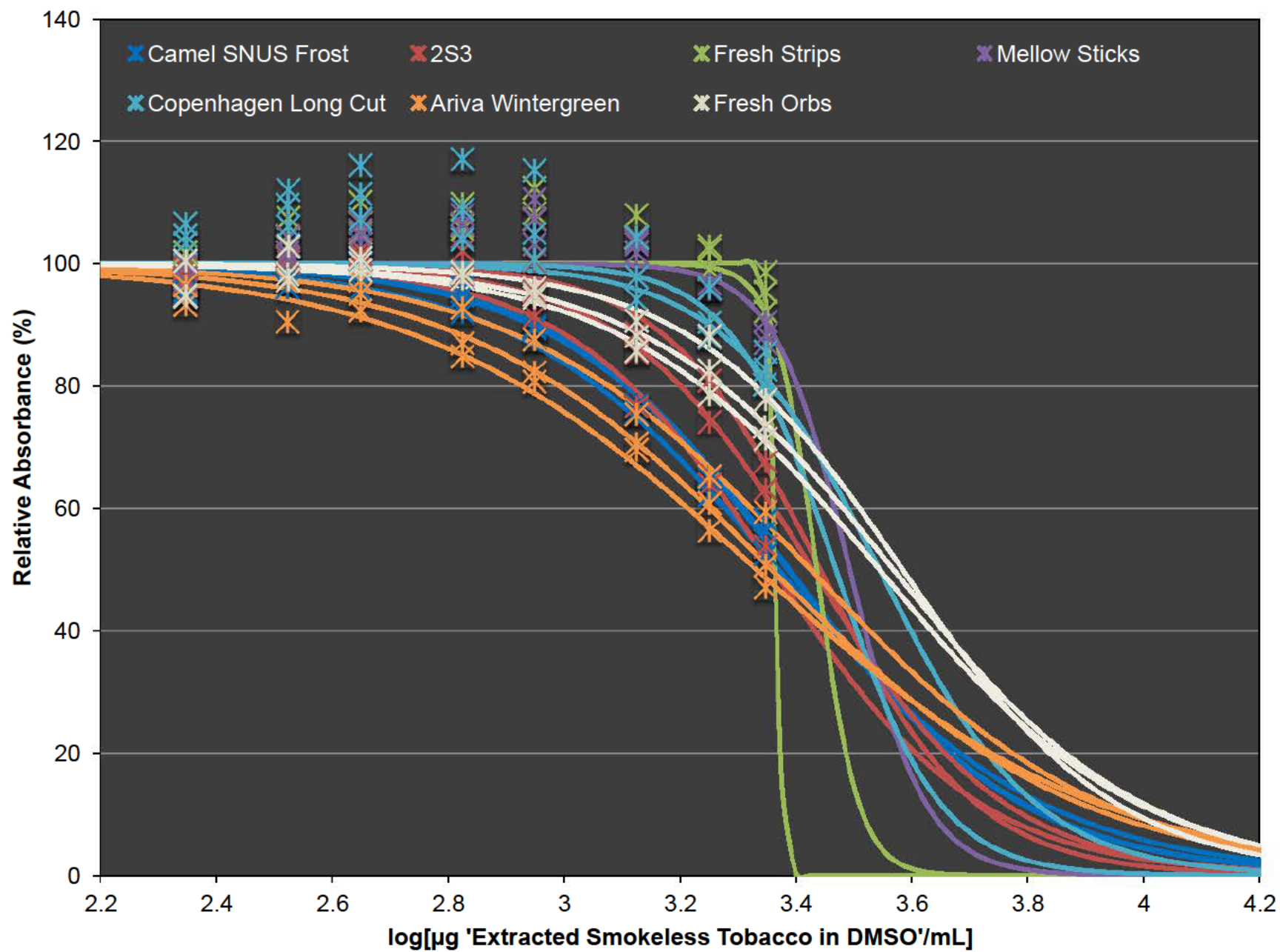
Sample ID	Sample Description	Mean IC ₅₀	Homogenous Groupings
084457	Ariva Wintergreen	3.37	X
084394	Camel SNUS Frost	3.38	X
084454	Fresh Strips*	3.40	X
084395	2S3	3.41	X
084455	Mellow Sticks*	3.49	XX
084456	Copenhagen Long Cut	3.51	XX
084458	Fresh Orbs	3.57	X

* Fresh Strips and Mellow Sticks both have relatively poor model fit (low r^2 values), which should be considered in drawing conclusions from the comparison results involving these brands.









IC₅₀ (µg 'Extracted Moisture-Corrected Smokeless Tobacco in DMSO'/mL) Analysis of the NRU Assay Dose-Response Curves

		'Extracted Moisture-Corrected Smokeless Tobacco in DMSO' IC ₅₀ (µg/mL)														
Sample ID	Sample Description	Replicate 1				Replicate 2				Replicate 3				Statistics for Replicate 'ST-H ₂ O' IC ₅₀ Estimates		
		<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	Mean	Standard Error	95% C.I.
084394	Camel SNUS Frost	-2.20	1675	3.22	0.92	-1.93	1603	3.21	0.96	-2.15	1660	3.22	0.97	1646	22	1552 to 1740
084395	2S3	-2.46	1054	3.02	0.92	-2.64	1236	3.09	0.84	-3.26	1274	3.11	0.87	1188	68	897 to 1479
084454	Fresh Strips					-12.0	2427	3.39	0.05	-70.7	2061	3.31	-0.23	2244	183	-81.5 to 4569
084455	Mellow Sticks									-6.67	2924	3.47	0.37	2924	n/a	n/a
084456	Copenhagen Long Cut									-4.86	1315	3.12	0.51	-3.25	1560	3.19
084457	Ariva Wintergreen	-1.73	2564	3.41	0.94	-1.49	2070	3.32	0.96	-1.64	2198	3.34	0.97	2277	148	1640 to 2915
084458	Fresh Orbs	-2.03	3508	3.55	0.79	-1.97	3319	3.52	0.89	-2.38	3639	3.56	0.86	3489	93	3089 to 3888

n/a - not applicable

minimum relative absorbance was greater than 50% for all 4 assay plates. This situation results in increased uncertainty of the IC₅₀ estimate.

No IC₅₀ estimate could be calculated due to insufficient sigmoid shape of the dose-response curve.

Non-Linear Regression Model Applied to Dose-Response Data	
$y = \frac{100}{1 + 10^{[\log(IC_{50}) - \log(x)] \times b}}$	
<p><i>y</i> = average assay plate absorbance relative to that of the solvent control <i>x</i> = dose of Moisture-Corrected Smokeless Tobacco Extract (µg/mL) <i>b</i> = constant related to the slope of the curve</p>	

**One-Way ANOVA of Mean 'Extracted
Moisture-Corrected Smokeless Tobacco'
LOG[IC₅₀] Estimates**

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
Among Samples	0.434	6	0.072	49.050	0.000
Within Samples	0.015	10	0.001		
Total (Corr.)	0.449	16			

One-way ANOVA analysis indicates significant differences (at $\alpha = 0.05$) among mean 'Extracted Moisture-Corrected Smokeless Tobacco' LOG[IC₅₀] estimates

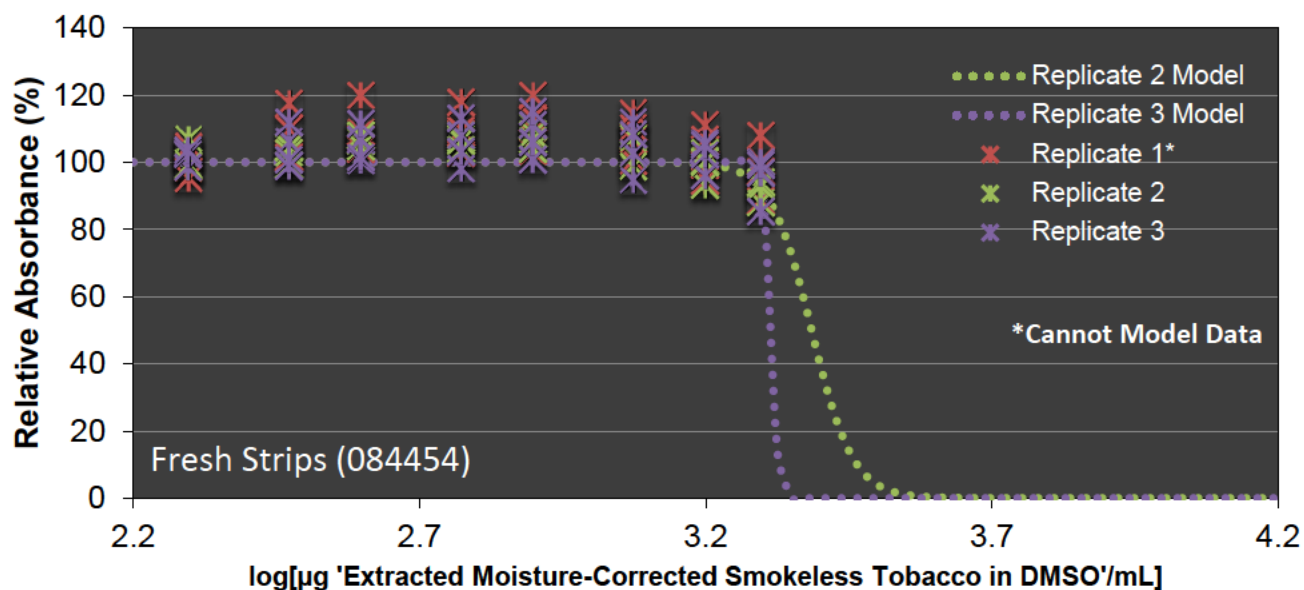
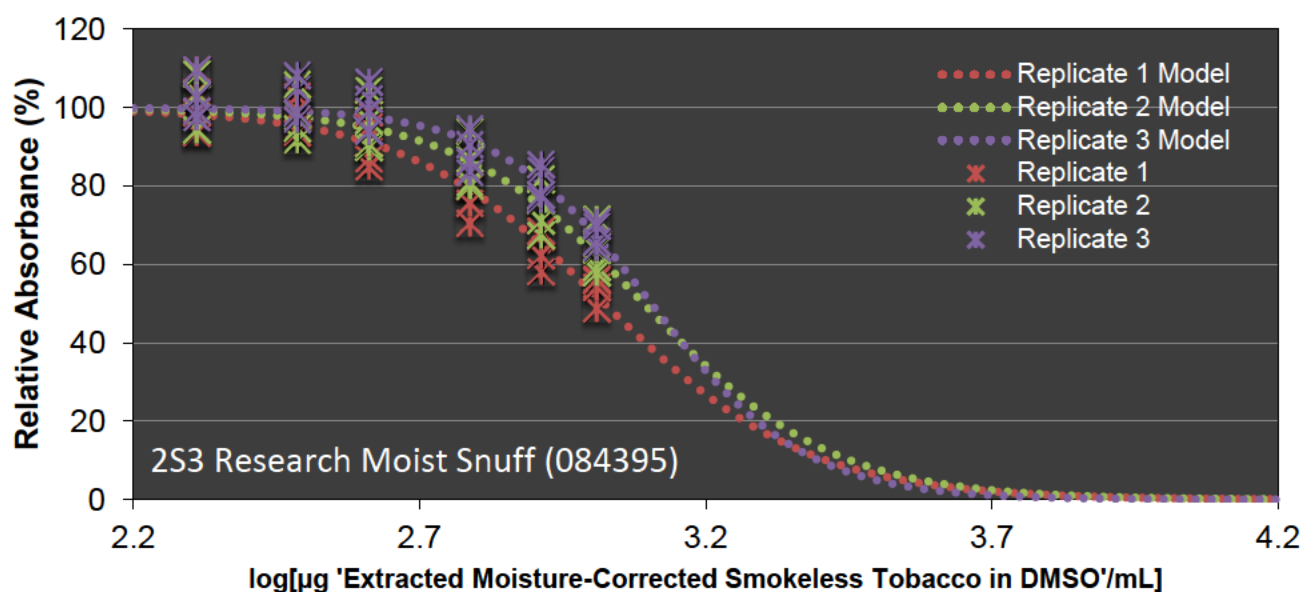
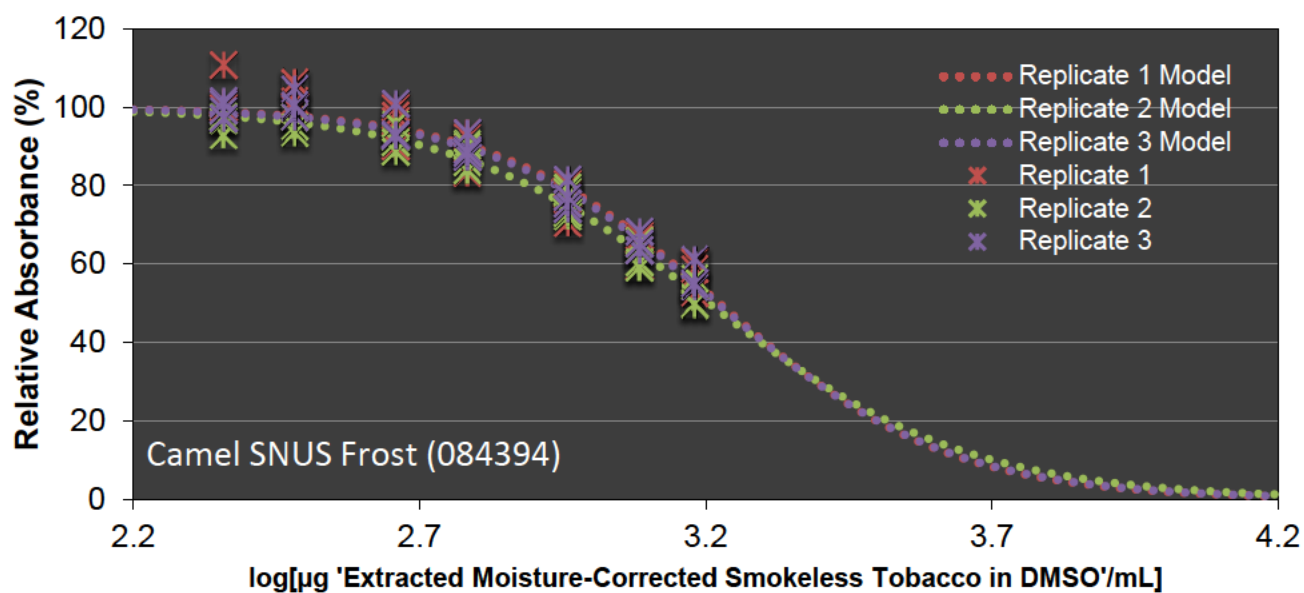
**ANOVA-Based Comparisons of Mean 'Extracted Moisture-
Corrected Smokeless Tobacco' LOG[IC₅₀] for Contrasts of
Interest using Bonferroni-adjusted p-values**

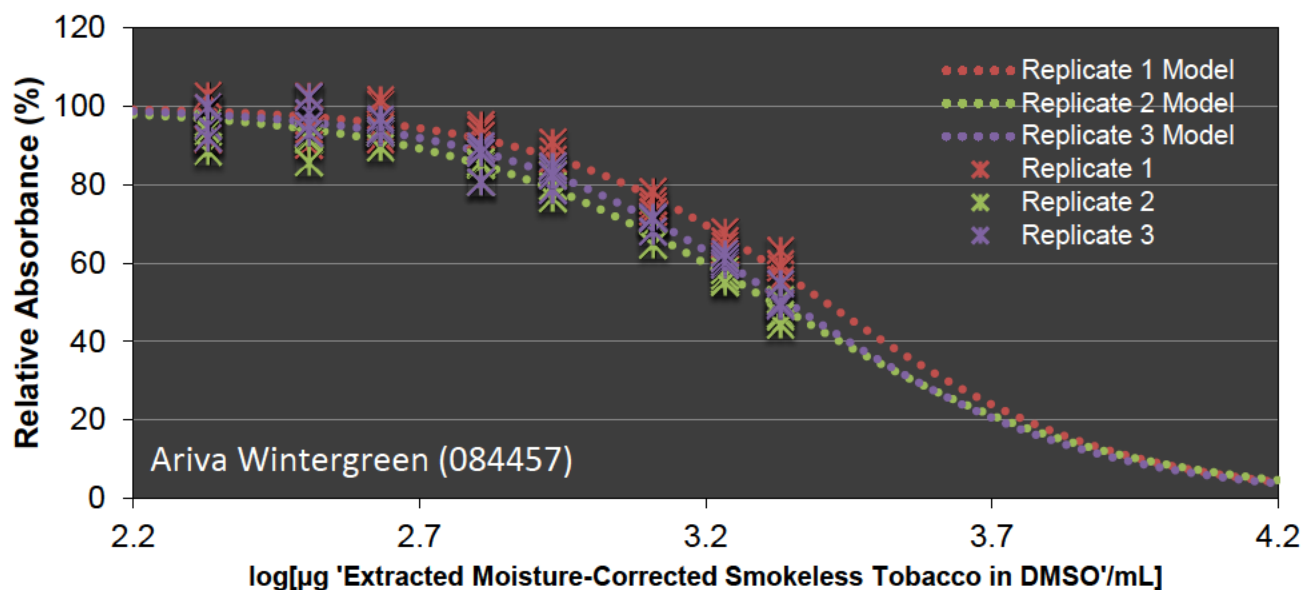
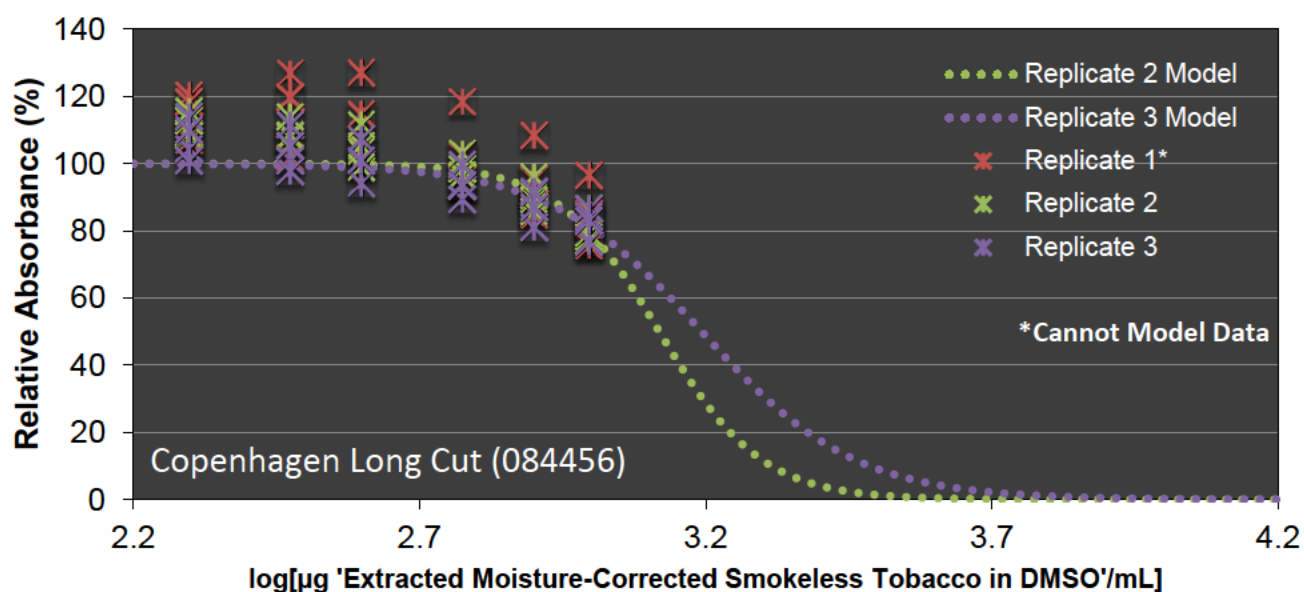
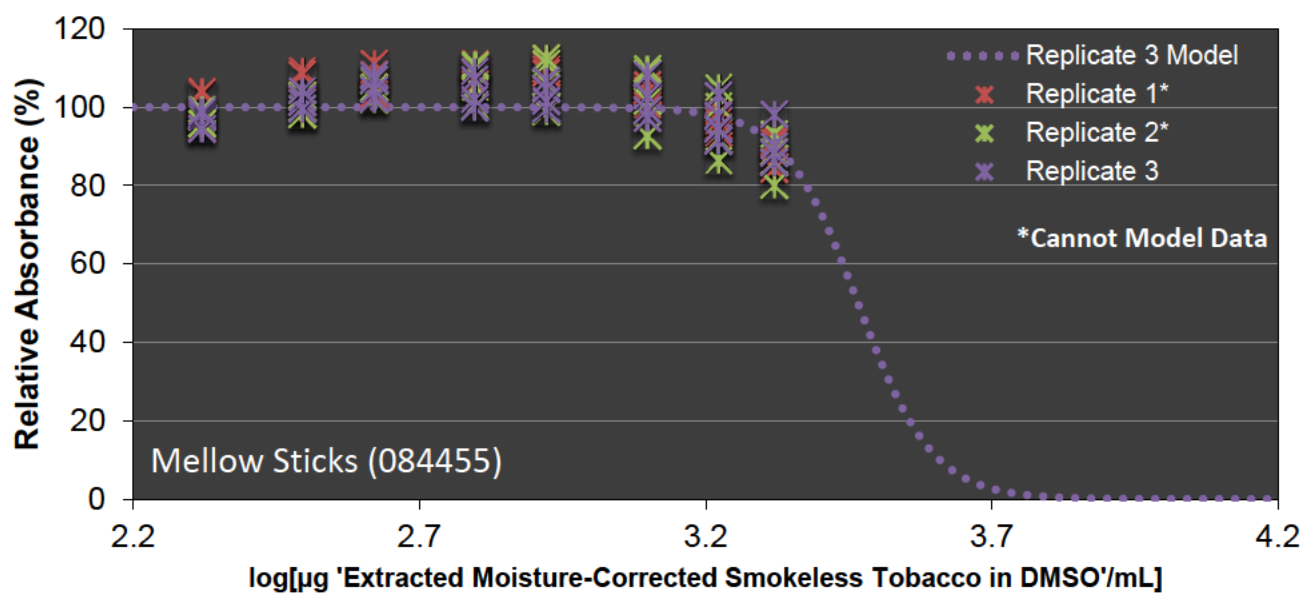
ANOVA-Based Comparison	n ₁	n ₂	t-statistic	p-value	significance at $\alpha = 0.05$
084394 vs. 084395	3	3	4.5588	0.0010	significant
084394 vs. 084454	3	2	3.7971	0.0035	not significant
084394 vs. 084455	3	1	5.6281	0.0002	significant
084394 vs. 084456	3	2	1.7203	0.1161	not significant
084394 vs. 084457	3	3	4.4419	0.0013	significant
084394 vs. 084458	3	3	10.3928	0.0000	significant
084395 vs. 084454	3	2	7.8746	0.0000	significant
084395 vs. 084455	3	1	8.8516	0.0000	significant
084395 vs. 084456	3	2	2.3572	0.0401	not significant
084395 vs. 084457	3	3	9.0007	0.0000	significant
084395 vs. 084458	3	3	14.9516	0.0000	significant
084454 vs. 084455	2	1	2.4760	0.0328	not significant
084454 vs. 084456	2	2	5.0367	0.0005	significant
084454 vs. 084457	2	3	0.1758	0.8639	not significant
084454 vs. 084458	2	3	5.4985	0.0003	significant
084455 vs. 084456	1	2	6.5885	0.0001	significant
084455 vs. 084457	1	3	2.4872	0.0321	not significant
084455 vs. 084458	1	3	1.7207	0.1160	not significant
084456 vs. 084457	2	3	5.6933	0.0002	significant
084456 vs. 084458	2	3	11.0159	0.0000	significant
084457 vs. 084458	3	3	5.9509	0.0001	significant

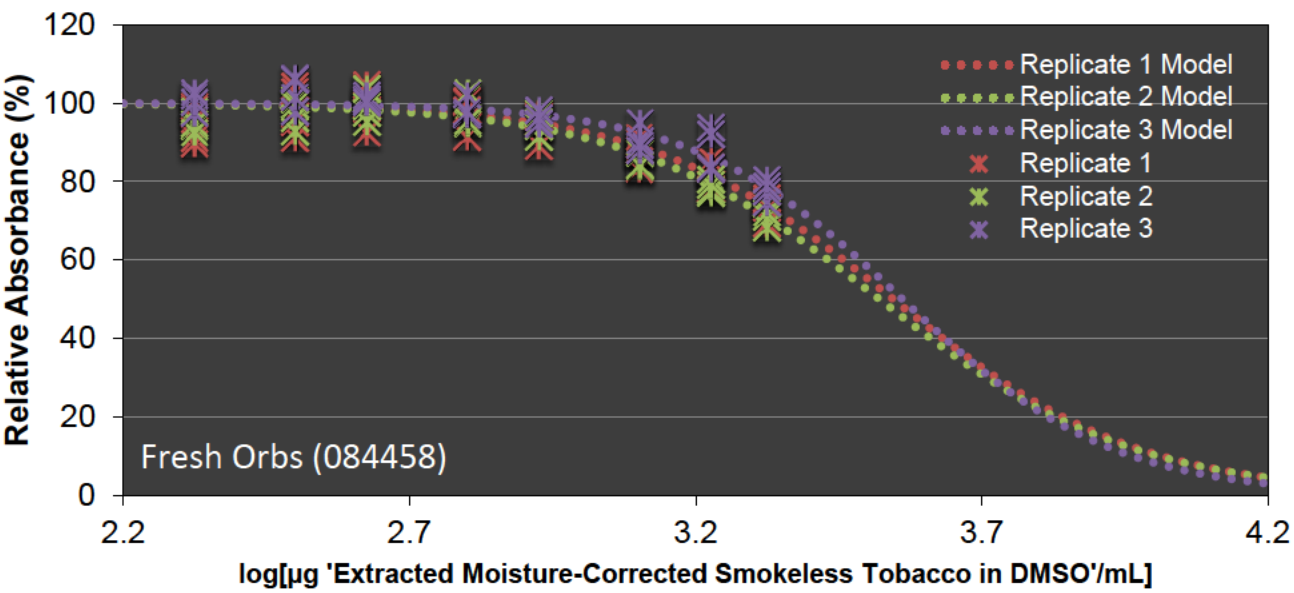
ANOVA-based comparison p-values less than the Bonferroni-adjusted $\alpha = 0.05$ indicate that significant differences in mean 'extracted moisture-corrected smokeless tobacco' LOG[IC₅₀] were as follows:

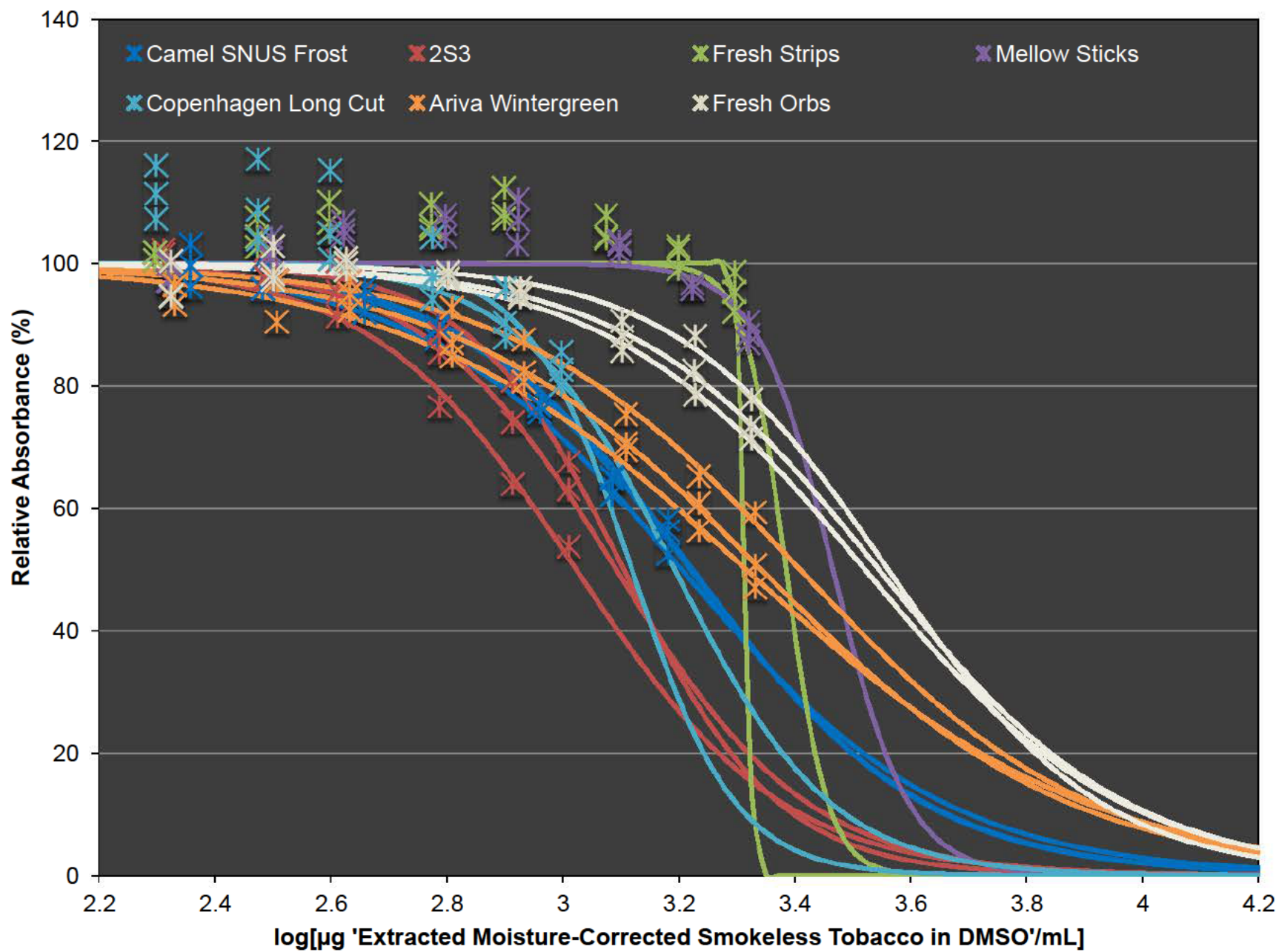
Sample ID	Sample Description	Mean IC ₅₀	Homogenous Groupings
084395	2S3	3.07	X
084456	Copenhagen Long Cut	3.16	XX
084394	Camel SNUS Frost	3.22	XX
084454	Fresh Strips*	3.35	XX
084457	Ariva Wintergreen	3.36	X
084455	Mellow Sticks*	3.47	XX
084458	Fresh Orbs	3.54	X

* Fresh Strips and Mellow Sticks both have relatively poor model fit (low r^2 values), which should be considered in drawing conclusions from the comparison results involving these brands.









IC₅₀ Analysis of the NRU Assay Dose-Response Curves for Smokeless Tobacco (µg 'Extracted Nicotine in DMSO'/mL) and Smoked Tobacco (µg 'Nicotine in CSC'/mL) Samples

		'Nicotine in CSC' (KR 2R4F) and 'Extracted Nicotine in DMSO' IC ₅₀ (µg/mL)														
Sample ID	Sample Description	Replicate 1				Replicate 2				Replicate 3				Statistics for Replicate 'Nic.' IC ₅₀ Estimates		
		<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	<i>b</i>	IC ₅₀	log(IC ₅₀)	<i>r</i> ²	Mean	Standard Error	95% C.I.
084394	Camel SNUS Frost	-2.20	30.7	1.49	0.92	-1.93	30.3	1.48	0.96	-2.15	32.2	1.51	0.97	31.1	0.6	28.5 to 33.6
084395	2S3	-2.46	31.0	1.49	0.92	-2.64	35.6	1.55	0.84	-3.26	39.2	1.59	0.87	35.2	2.4	25 to 45.4
084396	KR 2R4F	-3.27	4.92	0.692	0.96	-2.57	2.93	0.467	0.99	-3.68	3.79	0.579	0.98	3.88	0.58	1.4 to 6.36
084454	Fresh Strips					-12.0	9.82	0.992	0.05	-70.7	8.00	0.903	-0.23	8.91	0.91	-2.7 to 20.5
084455	Mellow Sticks									-6.67	11.3	1.05	0.37	11.3	n/a	n/a
084456	Copenhagen Long Cut					-4.86	36.3	1.56	0.51	-3.25	42.8	1.63	0.57	39.5	3.2	-1.44 to 80.5
084457	Ariva Wintergreen	-1.73	15.0	1.18	0.94	-1.49	12.1	1.08	0.96	-1.64	12.8	1.11	0.97	13.3	0.9	9.53 to 17.1
084458	Fresh Orbs	-2.03	7.71	0.887	0.79	-1.97	8.23	0.915	0.89	-2.38	8.53	0.931	0.86	8.16	0.24	7.12 to 9.19

n/a - not applicable

minimum relative absorbance was greater than 50% for all 4 assay plates. This situation results in increased uncertainty of the IC₅₀ estimate.

No IC₅₀ estimate could be calculated due to insufficient sigmoid shape of the dose-response curve.

Cigarette smoke condensate (CSC) test sample with µg 'Nicotine in CSC'/mL dose basis

Sigmoid Model Applied to Dose-Response Data
$y = \frac{100}{1 + 10^{[\log(IC_{50}) - \log(x)] \times b}}$
<p><i>y</i> = average assay plate absorbance relative to that of the solvent control</p> <p><i>x</i> = dose of Nicotine in CSC or Smokeless Tobacco Extract (µg/mL)</p> <p><i>b</i> = constant related to the slope of the curve</p>

**One-Way ANOVA of Mean 'Extracted Nicotine' and
'Nicotine in CSC' LOG[IC₅₀] Estimates**

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
Among Samples	2.457	7	0.351	97.420	< 0.001
Within Samples	0.043	12	0.004		
Total (Corr.)	2.500	19			

One-way ANOVA analysis indicates significant differences (at $\alpha = 0.05$) among mean 'Nicotine' dose base LOG[IC₅₀] estimates.

ANOVA-Based Comparisons of Smokeless Tobacco Mean 'Extracted Nicotine' LOG[IC₅₀] to Control Brand KR 2R4F (084396) Mean 'Nicotine in CSC' LOG[IC₅₀] using Bonferroni-adjusted p-values

ANOVA-Based Comparison	n ₁	n ₂	t-statistic	p-value	significance at $\alpha = 0.05$
084394 vs. 084396	3	3	18.6196	3.2E-10	significant
084395 vs. 084396	3	3	19.7009	1.7E-10	significant
084454* vs. 084396	2	3	6.7192	2.1E-05	significant
084455* vs. 084396	1	3	6.8326	1.8E-05	significant
084456 vs. 084396	2	3	18.5426	3.4E-10	significant
084457 vs. 084396	3	3	11.0705	1.2E-07	significant
084458 vs. 084396	3	3	6.7669	2.0E-05	significant

ANOVA-based comparison p-values less than the Bonferroni-adjusted $\alpha = 0.05$ indicate that significant differences were detected between the mean LOG[IC₅₀] of the KR 2R4F smoked tobacco samples (μg 'Nicotine in CSC'/mL) and that of each smokeless tobacco sample (μg 'Extracted Nicotine'/mL).

* Fresh Strips (084454) and Mellow Sticks (084455) both have relatively poor model fit (low r^2 values), which should be considered in drawing conclusions from the comparison results involving these brands.

