

**Camel SNUS Modified Risk Messaging:  
Likelihood of Use among  
Tobacco Users and Non-Users**

**Final Report**

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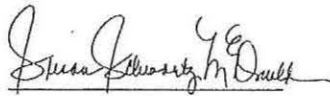
*This research was conducted on behalf of RAIS in support of tobacco product-related regulatory submissions, and will only be used and/or disseminated for such purposes.*

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## Camel SNUS Modified Risk Messaging: Likelihood of Use among Tobacco Users and Non-Users – Final Report

This study was conducted in accordance with the specifications noted in the study protocol (Protocol Identifier: RO-BR-2014-03; "Camel SNUS Modified Risk Messaging: Likelihood of Use among Tobacco Users and Non-Users"; *refer to Appendix C*) and in accordance with the Council of American Survey Research Organizations (CASRO) and the International Organization for Standardization (ISO 20252:2012) guidelines. The principals below have reviewed and approved the report, and are forwarding it as the "Final Report".

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# 1. STUDY BACKGROUND AND OBJECTIVES

## 1.1 Study Background

The U.S. Food and Drug Administration (FDA), prior to issuing a “risk modification order”, requires the manufacturer of a modified risk tobacco product (MRTP) to demonstrate that the product will likely benefit the health of the population as a whole, taking into account both users and non-users of tobacco products.<sup>1</sup> Key areas of investigation suggested as necessary to support an MRTP application include the likely effect the tobacco product and its marketing may have on tobacco use behaviors among current tobacco users and the likely effect the product and its marketing may have on tobacco initiation among tobacco non-users (i.e., both never users and former users). These research questions may be operationalized in terms of likelihoods of MRTP use, among consumers overall and within tobacco user groups (i.e., current, never and former regular tobacco users).

Projecting likelihoods of use for a tobacco product prior to that product being in the market requires either (1) use of an uptake algorithm based on sales of existing products; or, (2) development of a tobacco product-specific algorithm by surveying consumers about a product prior to market launch, and then re-interviewing those same consumers with regard to whether or not they purchased the product following market launch. To project likelihoods of use for a tobacco product prior to that product being in the market, RAI Services Company (RAIS)<sup>2</sup> commissioned two-wave survey research<sup>3</sup> to create a ratings conversion algorithm that translates continuous ‘likelihood to purchase for personal trial’ ratings into predicted purchase rates. The basis for the algorithm is a survey-weighted logistic regression model that uses ratings from an initial survey wave (prior to market launch) and actual purchase incidence from self-reported survey data collected among those same respondents nine months after market launch.

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<sup>1</sup> Guidance for Industry: Modified Risk Tobacco Product Applications (Draft Guidance; March 2012) <http://www.fda.gov/downloads/TobaccoProducts/GuidanceComplianceRegulatoryInformation/UCM297751.pdf>

<sup>2</sup> RAIS is a wholly owned subsidiary of Reynolds American Inc. (RAI), which bears primary responsibility for coordinating implementation of the Family Smoking Prevention and Tobacco Control Act for itself and RAI’s FDA-regulated tobacco operating companies, namely R. J. Reynolds Tobacco Company, American Snuff Company, LLC, and Santa Fe Natural Tobacco Company, Inc.

<sup>3</sup> The initial survey wave of the “Algorithm Development” research was conducted from December 23, 2009 through January 6, 2010, and 9-month follow-up wave was conducted from September 16, 2010 through October 5, 2010 (refer to [Appendix D](#)).

## 1.2 Study Objectives

RAI Services Company, on behalf of R. J. Reynolds Tobacco Company, intends to submit an MRTTP application to FDA requesting that the agency issue a “risk modification” order for Camel SNUS. The MRTTP application will propose modified risk messaging for six (6) Camel SNUS products (collectively “Camel SNUS”) currently marketed in the United States. Specifically, RAIS will seek an order for “reduced risk” messaging on Camel SNUS, intended for current regular tobacco users, as follows:

*“Smokers who switch completely from cigarettes to Camel SNUS can significantly reduce their risk of lung cancer, oral cancer, respiratory disease, and heart disease.”*

This study was developed to support the intended MRTTP application by assessing the potential effects of the proposed Camel SNUS modified risk messaging on the likelihood that:

- current regular tobacco users, including those who are likely to quit using tobacco (i.e., potential quitters), will start using Camel SNUS;
- former regular tobacco users will re-initiate tobacco use with Camel SNUS; and,
- never regular tobacco users will initiate tobacco use with Camel SNUS.

The primary objective of this research was to project likelihoods of use<sup>4</sup> for Camel SNUS, with versus without the proposed modified risk messaging, among consumers overall and among the following self-defined tobacco user groups:<sup>5</sup>

- current regular tobacco users, defined as currently using tobacco on a regular or occasional basis; included are potential quitters, or those

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<sup>4</sup> Likelihood of use operationalized in terms of likelihood to purchase for personal trial and predicted purchase rate (refer to Study Protocol, “Camel SNUS Modified Risk Messaging: Likelihood of Use among Tobacco Users and Non-Users”; [Appendix C](#)).

<sup>5</sup> There are several ways to define tobacco use status. Self-reported behavior is used because self-reported behavior aligns more closely with the dependent variable (i.e., ratings of likelihood of use). A number of published studies [Patrick DL, Cheadle A, Thompson DC, Diehr P, Koepsell T, Kinne S. (1994). The validity of self-reported smoking: a review and meta-analysis. *Am J Public Health*. 84(7):1086-1093; Tennekoon V, Rosenman R. (2015). The Pot Calling the Kettle Black? A Comparison of Measures of Current Tobacco Use. *Appl Econ*. 47(5):431-448.] demonstrate the utility of this measure. It is notable that survey questions identifying more conventional definitions of tobacco use (i.e., ever usage, cumulative lifetime usage, and current usage on some days, every day, or not at all) make it possible to analyze the data using these definitions.

current regular tobacco users who report an intention to quit using tobacco;<sup>6</sup>

- former regular tobacco users, defined as having been regular tobacco users in the past, but not currently using tobacco on a regular or occasional basis; and,
- never regular tobacco users, defined as never having been regular tobacco users.

The likelihood of use for Camel SNUS MRTP was also projected among White males, who report a higher prevalence of smokeless tobacco use compared to other demographic groups.

A secondary objective of this research was to understand product use intentions among current regular tobacco users and non-users who anticipate using Camel SNUS (i.e., rate their likelihood to purchase Camel SNUS as “2” or greater), with and without modified risk messaging, as follows:

- among current regular tobacco users who do not report an intention to quit tobacco, the percentages who anticipate using Camel SNUS instead of or in addition to their current tobacco product(s); and, for those who anticipate using Camel SNUS instead of their existing product, the likelihood they would switch back to their current product(s); and,
- among former regular and never regular tobacco users, the likelihood they would switch to a different tobacco product (including one that presents more risk) after using Camel SNUS.

In fulfillment of these research objectives, an online survey was conducted from November 24 through December 22, 2014, with a sample of 14,511 adults drawn from a national web panel.

The survey displayed Camel SNUS advertising materials in a test (with modified risk messaging) versus control (without modified risk messaging) format, and posed a question about consumers’ likelihood to purchase Camel SNUS for personal trial. Among those who anticipate using Camel SNUS (i.e., rate their likelihood to purchase Camel SNUS as “2” or greater), questions were asked with regard to how they intend to use the product.

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<sup>6</sup> Potential quitters are a subset of current regular tobacco users who do not intend to be using any tobacco product 9 months from the time of the survey. A time frame of 9 months was used to match the follow-up time period used when creating the algorithm developed to project purchase rate (refer to [Appendix D](#), “New Tobacco Product “Likelihood” Study: An Algorithm to Predict Usage of New Tobacco Products Prior to Market Launch”).

## 2. DETAILED STUDY DESIGN

### 2.1 Sample Design

The relevant universe for this research is all adults legally eligible to purchase tobacco (as legislated by the states in which they resided) up to 75 years old, regardless of current or prior tobacco use. The sampling frame was the Research Now consumer panel, a demographically balanced, web-based consumer panel containing over three million panelists from all 50 states and the District of Columbia.

To provide a robust sample, more than 14,500 respondents were surveyed across three tobacco user groups (i.e., current, former and never regular tobacco users). This sample size was selected to provide:

- balance on key demographic dimensions within each tobacco user quota group, allowing the sample to be weighted to population counts for all parameters of interest;
- the ability to perform statistical comparisons of test (with modified risk messaging) versus control (without modified risk messaging) Camel SNUS advertising materials; and,
- adequate statistical sensitivity to allow for measurement within a narrow band, i.e., confidence intervals smaller than  $\pm 2\%$  for the sample overall for survey as well as modeled data, and smaller than  $\pm 3\%$  within each tobacco user group.

Within each tobacco user group in each survey arm, respondents were sampled to ensure adequate representation of demographic groups that might not otherwise appear in sufficient numbers. The data were weighted to the U.S. adult population in order to support population-level generalizations (*refer to [Table 3](#) of this report for population estimates used in this study*).

Respondents were assigned via survey programming logic to one of eight monadic arms, defined by crossing the advertising materials (i.e., with or without modified risk messaging) with one of four government-mandated health warnings. The programming logic used an algorithm to ensure the arms were balanced by demographic characteristics.

## 2.2 Survey Content

The survey consisted of the following elements:<sup>7</sup>

- Questions on demographic characteristics (age, gender, race/ethnicity and education) to ensure that key consumer groups are represented and that results can be weighted appropriately as to be representative of the universe of consumers.
- Questions on current and past regular use of tobacco products to classify respondents into tobacco user groups and to ensure that tobacco use was balanced across arms (i.e., current versus former versus never regular tobacco users; and, users of cigarettes versus smokeless tobacco).
- Question on anticipated use of tobacco products nine months into the future to permit analysis of additional sub-groups (i.e., those intending/not intending to quit tobacco use).
- Presentation of advertising materials for Camel SNUS (*refer to [Appendix B](#)*); half of respondents viewed materials without modified risk messaging (control arm) and half viewed materials with modified risk messaging (test arm).
- Question on ratings of likelihood of purchase for personal trial to provide the purchase intent data for a projected purchase rate model.
- Question to determine how current regular tobacco users, who rate likelihood to purchase as “2” or greater, would envision using Camel SNUS.
- Question to determine how likely current regular tobacco users, who rate their likelihood of purchase as “2” or greater and envision using Camel SNUS instead of their current tobacco product(s), are to switch back to their current tobacco product(s) after trying Camel SNUS.
- Question to determine how likely former regular and never regular tobacco users, who rate likelihood of purchase as “2” or greater, are to switch to a more harmful existing tobacco product after trying Camel SNUS.
- Question to determine why current regular tobacco users, who intend to quit tobacco and rate likelihood of purchase as “2” or greater, have some interest in using Camel SNUS.
- Questions that allow consumers to be categorized based on historical and current tobacco usage.

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<sup>7</sup> Refer to [Section 7](#) of this report for survey instrument.

- Questions among current regular tobacco users to assess interest, and anticipated success, in quitting tobacco use.<sup>8</sup>
- Question to determine how long ago former regular tobacco users quit using tobacco.
- Questions to determine whether never regular tobacco users are likely to start using cigarettes.<sup>9</sup>

## 2.3 Field Process and Distribution of Completed Interviews

On the day the survey was launched, invitations were issued at rates projected to reach a first-day goal of 5% completion in all quota groups as a sampling quality control check. Invitations were then issued every day, focusing initially on reaching lower-incidence populations to ensure that an adequate sample size would be reached for all key sub-populations. A total of 14,511 consumers completed the survey, with overall demographic distributions shown below ([Table 1](#)), by tobacco status.

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<sup>8</sup> Food and Drug Administration (2010). Experimental Study on Graphic Warning Labels. [http://www.reginfo.gov/public/do/PRAViewICR?ref\\_nbr=201009-0910-002](http://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=201009-0910-002)

<sup>9</sup> Bunnell, RE, Agaku, IT, Arrazola, R, Apelberg, BJ, Caraballo, RS, Corey, CG, ... & King, BA. (2014). Intentions to smoke cigarettes among never-smoking US middle and high school electronic cigarette users, National Youth Tobacco Survey, 2011-2013. *Nicotine & Tobacco Research*, 17 (2): 228-235; Coleman, BN, Apelberg, BJ, Ambrose, BK, Green, KM, Choiniere, CJ, Bunnell, R, & King, BA. (2014). Association between electronic cigarette use and openness to cigarette smoking among US young adults. *Nicotine & Tobacco Research*, 17 (2): 212-218.

**Table 1: Unweighted Sample Distribution  
- Demographics by Tobacco Status -**

		Tobacco Status <sup>†</sup>			
		Total	Current Regular User	Former Regular User	Never Regular User
	(n) <sup>*</sup> =	14,511	4,497	4,972	5,042
<b><u>Region:</u></b>					
Northeast		2,577	786	931	860
Midwest		3,323	1,039	1,163	1,121
South		5,305	1,680	1,713	1,912
West		3,306	992	1,165	1,149
<b><u>Age (years):</u></b>					
18-30		3,246	1,169	611	1,466
31-50		5,566	1,919	1,746	1,901
51-75		5,699	1,409	2,615	1,675
<b><u>Gender:</u></b>					
Male		6,786	2,088	2,210	2,488
Female		7,725	2,409	2,762	2,554
<b><u>Race/Ethnicity:</u></b>					
Hispanic		2,394	752	759	883
Non-Hispanic White		9,316	2,817	3,333	3,166
Non-Hispanic Black		1,556	552	451	553
Non-Hispanic Asian/Other		1,476	464	504	508
<b><u>Education Level:</u></b>					
High School (or less)		5,769	1,886	2,009	1,874
Some College		4,092	1,507	1,396	1,189
Bachelor's Plus		4,650	1,104	1,567	1,979

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

<sup>\*</sup> Unweighted sample size (on which the weighted data are based).

*Table 2* shows that the survey programming logic successfully balanced tobacco user groups and demographic characteristics between the test and control arms.



**Table 2: Unweighted Sample Distribution of Test versus Control Arms  
- Demographics by Tobacco Status -**

		Tobacco Status <sup>†</sup>							
		Test				Control			
		Total	Current Regular User	Former Regular User	Never Regular User	Total	Current Regular User	Former Regular User	Never Regular User
(n) <sup>*</sup> =		(7,253)	(2,248)	(2,483)	(2,522)	(7,258)	(2,249)	(2,489)	(2,520)
<b><u>Region:</u></b>									
Northeast		1,288	393	463	432	1,289	393	468	428
Midwest		1,660	519	581	560	1,663	520	582	561
South		2,657	840	859	958	2,648	840	854	954
West		1,648	496	580	572	1,658	496	585	577
<b><u>Age (years):</u></b>									
18-30		1,622	584	306	732	1,624	585	305	734
31-50		2,774	957	868	949	2,792	962	878	952
51-75		2,857	707	1,309	841	2,842	702	1,306	834
<b><u>Gender:</u></b>									
Male		3,391	1,044	1,104	1,243	3,395	1,044	1,106	1,245
Female		3,862	1,204	1,379	1,279	3,863	1,205	1,383	1,275
<b><u>Race/Ethnicity:</u></b>									
Hispanic		1,194	375	378	441	1,200	377	381	442
Non-Hispanic White		4,651	1,407	1,663	1,581	4,665	1,410	1,670	1,585
Non-Hispanic Black		775	275	223	277	781	277	228	276
Non-Hispanic Asian/Other		736	230	252	254	740	234	252	254
<b><u>Education Level:</u></b>									
High School (or less)		2,886	943	1,005	938	2,883	943	1,004	936
Some College		2,047	754	698	595	2,045	753	698	594
Bachelor's Plus		2,320	551	780	989	2,330	553	787	990

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

<sup>\*</sup> Unweighted sample size (on which the weighted data are based).

## 2.4 Weighting Process

A multi-step statistical weighting process was required to account for differential sampling rates used in the survey design, and to support the ability to make more accurate inferences regarding the populations of interest (i.e., consumers overall).

**Step 1:** Population counts were developed to estimate the number of individuals in each cell represented by the intersection of tobacco status and each demographic category (i.e., region, age, gender, race/ethnicity and education level). The Census Bureau's Population Estimates Program, the

Annual Social and Economic Supplement to the Current Population Survey (ASES-CPS; March 2014), and the Tobacco Use Supplement to the Current Population Survey (TUS-CPS; May 2010, August 2010 and January 2011) were used to develop population counts (*Table 3*).

**Table 3: Population Counts<sup>10</sup>**

		Tobacco Status <sup>†</sup>			
		Total	Current Regular User	Former Regular User	Never Regular User
	N =	222,096,066	35,171,156	36,496,245	150,428,665
<b><u>Region:</u></b>					
Northeast		39,948,804	5,537,029	6,914,188	27,497,587
Midwest		47,034,583	8,886,165	8,724,079	29,424,339
South		83,079,363	14,176,164	12,614,765	56,288,434
West		52,033,316	6,571,798	8,243,213	37,218,305
<b><u>Age (years):</u></b>					
18-30		55,473,091	8,935,246	3,557,023	42,980,822
31-50		81,944,032	13,830,976	10,742,212	57,370,844
51-75		84,678,943	12,404,934	22,197,010	50,076,999
<b><u>Gender:</u></b>					
Male		108,833,856	19,712,755	20,475,084	68,646,017
Female		113,262,210	15,458,401	16,021,161	81,782,648
<b><u>Race/Ethnicity:</u></b>					
Hispanic		35,047,357	3,727,930	3,041,331	28,278,096
Non-Hispanic White		143,077,689	25,138,685	28,966,621	88,972,383
Non-Hispanic Black		26,854,082	4,214,825	2,704,676	19,934,581
Non-Hispanic Asian/Other		17,116,938	2,089,716	1,783,617	13,243,605
<b><u>Education Level:</u></b>					
High School (or less)		90,374,223	19,862,150	14,464,796	56,047,277
Some College		65,458,788	10,881,047	11,261,753	43,315,988
Bachelor's Plus		66,263,055	4,427,959	10,769,696	51,065,400

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

**Step 2.** Base weights were then created separately for respondents in the test and control arms by dividing the population counts by the number of completed interviews in the cells that represent the intersection of tobacco

<sup>10</sup> Population counts source: ASES-CPS (March 2014) and TUS-CPS (May 2010, August 2010, and January 2011); retrieved from [http://thedataweb.rm.census.gov/ftp/cps\\_ftp.html#cpsupps](http://thedataweb.rm.census.gov/ftp/cps_ftp.html#cpsupps)

status and each demographic characteristic (refer to Tables 4 & 5 for test and control arms, respectively).

**Table 4: Base Weights for Test Arm**  
**- Population Counts Divided by Completed Interviews in Each Cell -**

	Tobacco Status <sup>†</sup>		
	Current Regular User	Former Regular User	Never Regular User
<b><u>Region:</u></b>			
Northeast	14,089.13	14,933.45	63,651.82
Midwest	17,121.71	15,015.63	52,543.46
South	16,876.39	14,685.41	58,756.19
West	13,249.59	14,212.44	65,066.97
<b><u>Age (years):</u></b>			
18-30	15,300.08	11,624.26	58,716.97
31-50	14,452.43	12,375.82	60,454.00
51-75	17,545.88	16,957.23	59,544.59
<b><u>Gender:</u></b>			
Male	18,881.95	18,546.27	55,226.08
Female	12,839.20	11,617.96	63,942.65
<b><u>Race/Ethnicity:</u></b>			
Hispanic	9,941.15	8,045.85	64,122.67
Non-Hispanic White	18,309.31	17,749.16	57,216.97
Non-Hispanic Black	15,610.46	12,238.35	73,288.90
Non-Hispanic Asian/Other	9,085.72	7,077.85	52,140.18
<b><u>Education Level:</u></b>			
High School (or less)	21,062.73	14,392.83	59,751.89
Some College	14,431.10	16,134.32	72,799.98
Bachelor's Plus	8,036.22	13,807.30	51,633.37

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

**Table 5: Base Weights for Control Arm**  
**- Population Counts Divided by Completed Interviews in Each Cell -**

	Tobacco Status <sup>†</sup>		
	Current Regular User	Former Regular User	Never Regular User
<b><u>Region:</u></b>			
Northeast	14,089.13	14,773.91	64,246.70
Midwest	17,088.78	14,989.83	52,449.80
South	16,876.39	14,771.39	59,002.55
West	13,249.59	14,090.96	64,503.13
<b><u>Age (years):</u></b>			
18-30	15,273.92	11,662.37	58,556.98
31-50	14,377.31	12,234.87	60,263.49
51-75	17,670.85	16,996.18	60,044.36
<b><u>Gender:</u></b>			
Male	18,881.95	18,512.73	55,137.36
Female	12,828.55	11,584.35	64,143.25
<b><u>Race/Ethnicity:</u></b>			
Hispanic	9,888.41	7,982.50	63,977.59
Non-Hispanic White	18,389.67	17,694.94	57,364.53
Non-Hispanic Black	15,552.86	12,350.12	73,020.44
Non-Hispanic Asian/Other	8,930.41	7,077.85	52,140.18
<b><u>Education Level:</u></b>			
High School (or less)	21,062.73	14,407.17	59,879.57
Some College	14,450.26	16,134.32	72,922.54
Bachelor's Plus	8,007.16	13,684.49	51,581.21

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

For each of the intersections of tobacco status and demographics in the test and control arms ([Tables 4 & 5](#)), a weight range ratio was developed by dividing the maximum base weight value by the minimum base weight value. [Table 6](#) shows the base weight ranges and ratios for each of the tobacco status/demographic intersections.

**Table 6: Base Weight Ranges and Ratios**

	Base Weight Ranges and Ratios	
	Test	Control
<b><u>Region:</u></b>		
Maximum	65,066.97	64,503.13
Minimum	13,249.59	13,249.59
Ratio	4.91	4.87
<b><u>Age (years):</u></b>		
Maximum	60,454.00	60,263.49
Minimum	11,624.26	11,662.37
Ratio	5.20	5.17
<b><u>Gender:</u></b>		
Maximum	63,942.65	64,143.25
Minimum	11,617.96	11,584.35
Ratio	5.50	5.54
<b><u>Race/Ethnicity:</u></b>		
Maximum	73,288.90	73,020.44
Minimum	7,077.85	7,077.85
Ratio	10.35	10.32
<b><u>Education Level:</u></b>		
Maximum	72,799.98	72,922.54
Minimum	8,036.22	8,007.16
Ratio	9.06	9.11

Higher ratios indicate less representative sampling and greater bias for a given dimension. The iterative weighting process was initiated from the dimension with the largest ratio (i.e., race/ethnicity for both test and control) in order to achieve weighting targets with the fewest number of iterations and to minimize the impact of the weighting (i.e., the distance between a respondent's final weight and their starting weight).

**Step 3.** Base weights were then adjusted using raking;<sup>11</sup> specifically, base weights were weighted up to population counts in cells represented by the intersection of tobacco status and gender; tobacco status and ethnicity; tobacco status and education; tobacco status and age; tobacco status and region; and, age and ethnicity.

<sup>11</sup> Battaglia, MP, Hoaglin, DC, and Frankel, MR. (2009). Practical Considerations in Raking Survey Data. Survey Practice. 2(5).

Raking helps to account for undercoverage and other sources of bias by adjusting the individual weights that result from the previously applied steps so that weighted estimates match independent estimates of population sizes from ASES-CPS (March 2014) and TUS-CPS (May 2010, August 2010 and January 2011).<sup>12</sup> The weighted demographics for respondents completing the survey in the test and controls arms are provided below (*refer to Tables 7 & 8, respectively*).

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<sup>12</sup> Population counts source: ASES-CPS (March 2014) and TUS-CPS (May 2010, August 2010, and January 2011); retrieved from [http://thedataweb.rm.census.gov/ftp/cps\\_ftp.html#cpssupps](http://thedataweb.rm.census.gov/ftp/cps_ftp.html#cpssupps)

**Table 7: Weighted Sample Distribution for Test Arm**

		Tobacco Status <sup>†</sup>			
		Total	Current Regular User	Former Regular User	Never Regular User
(n)* =		(7,253)	(2,248)	(2,483)	(2,522)
<b><u>Gender:</u></b>					
Male		49% (0%)	56% (0%)	56% (0%)	46% (0%)
Female		51% (0%)	44% (0%)	44% (0%)	54% (0%)
<b><u>Age (years):</u></b>					
18-30		25% (0%)	25% (0%)	10% (0%)	29% (0%)
31-50		37% (0%)	39% (0%)	29% (0%)	38% (0%)
51-75		38% (0%)	35% (0%)	61% (0%)	33% (0%)
<b><u>Region:</u></b>					
Northeast		18% (0%)	16% (0%)	19% (0%)	18% (0%)
Midwest		21% (0%)	25% (0%)	24% (0%)	20% (0%)
South		37% (0%)	40% (0%)	35% (0%)	37% (0%)
West		23% (0%)	19% (0%)	23% (0%)	25% (0%)
<b><u>Race/Ethnicity:</u></b>					
Hispanic		16% (0%)	11% (0%)	8% (0%)	19% (0%)
Non-Hispanic White		65% (+1%)	73% (+1%)	80% (+1%)	60% (+1%)
Non-Hispanic Black		12% (0%)	12% (0%)	7% (0%)	13% (0%)
Non-Hispanic Asian/Other		8% (0%)	6% (0%)	5% (0%)	9% (0%)
<b><u>Education Level:</u></b>					
Up to High School		41% (0%)	56% (0%)	40% (0%)	37% (0%)
Some College		29% (0%)	31% (0%)	31% (0%)	29% (0%)
Bachelor's Degree, plus		30% (0%)	13% (0%)	30% (0%)	34% (0%)

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

\* Unweighted sample size (on which the weighted data are based).

**Table 8: Weighted Sample Distribution for Control Arm**

	(n) <sup>*</sup> =	Tobacco Status <sup>†</sup>			
		Total	Current Regular User	Former Regular User	Never Regular User
<b><u>Gender:</u></b>		(7,258)	(2,249)	(2,489)	(2,520)
Male		49% (0%)	56% (0%)	56% (0%)	46% (0%)
Female		51% (0%)	44% (0%)	44% (0%)	54% (0%)
<b><u>Age (years):</u></b>					
18-30		25% (0%)	25% (0%)	10% (0%)	29% (0%)
31-50		37% (0%)	39% (0%)	29% (0%)	38% (0%)
51-75		38% (0%)	35% (0%)	61% (0%)	33% (0%)
<b><u>Region:</u></b>					
Northeast		18% (0%)	16% (0%)	19% (0%)	18% (0%)
Midwest		21% (0%)	25% (0%)	24% (0%)	20% (0%)
South		37% (0%)	40% (0%)	35% (0%)	37% (0%)
West		23% (0%)	19% (0%)	23% (0%)	25% (0%)
<b><u>Race/Ethnicity:</u></b>					
Hispanic		16% (0%)	11% (0%)	8% (0%)	19% (0%)
Non-Hispanic White		66% (+1%)	73% (+1%)	80% (+1%)	61% (+1%)
Non-Hispanic Black		12% (0%)	12% (0%)	8% (0%)	13% (0%)
Non-Hispanic Asian/Other		8% (0%)	6% (0%)	5% (0%)	9% (0%)
<b><u>Education Level:</u></b>					
Up to High School		41% (0%)	56% (0%)	40% (0%)	37% (0%)
Some College		29% (0%)	31% (0%)	31% (0%)	29% (0%)
Bachelor's Degree, plus		30% (0%)	13% (0%)	30% (0%)	34% (0%)

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

<sup>\*</sup> Unweighted sample size (on which the weighted data are based).

The percentages in parentheses in these tables provide the differences between the weighted demographics and the actual population counts, and demonstrate that the weights brought the samples into very close alignment with the U.S. population overall. The weighted demographics for respondents in the test and control arms are virtually identical, and the differences versus actual population counts are negligible.



### 3. ANALYSIS PLAN

#### 3.1 Analytic Approach

The objective of this study was to estimate the likelihood of use for Camel SNUS, with and without the proposed modified risk messaging, among consumers overall and among tobacco user sub-groups. A predictive algorithm was developed to transform ‘likelihood to purchase for personal trial’ ratings to projected purchase rates for a tobacco product prior to market launch (*for full detail on methodology, refer to “New Tobacco Product “Likelihood” Study: An Algorithm to Predict Usage of New Tobacco Products Prior to Market Launch”, provided as [Appendix D](#)*).

Accordingly, the analytic focus for this research was to identify the projected Camel SNUS purchase rates, which are based on the ratings conversion algorithm.

#### 3.2 Statistical Analyses

Confidence intervals are provided as descriptive statistics, and are calculated using standard formulas that use the normal approximation to the sampling distribution of a sample mean (which is justified by the large sample sizes via the Central Limit Theorem), appropriately incorporating the survey weights.

In addition to the confidence intervals, parametric statistics (i.e., analysis of variance [ANOVA] and t-test) that incorporate survey weights were employed to test differences in projected purchase rates between tobacco user groups.

### 4. STUDY FINDINGS

#### 4.1 Purchase Intent

[Table 9](#) presents the weighted mean ratings of likelihood to purchase for personal trial and the corresponding 95% confidence intervals ( $p=.05$ ) for respondents in the test and control arms among consumers overall and in each of the tobacco user groups (*refer to [Tables A-1 & A-2](#) in [Appendix A](#) for distribution of intent ratings*). A two-factor ANOVA reveals a significant main effect of tobacco user group ( $p<.0001$ ), no main effect of arm ( $p>.05$ ), and no interaction between those two factors ( $p>.05$ ). Post-hoc comparisons reveal that ratings among current regular tobacco users in the test and control arms are (1) statistically significantly higher than ratings among potential quitters; and, (2) are statistically significantly higher than ratings among former and never regular tobacco users.

**Table 9: Weighted Mean Likelihood to Purchase for Personal Trial Ratings  
- Test versus Control Camel SNUS Advertising Materials by Tobacco Status<sup>†</sup> -**

	Total	Current Regular User	Potential Quitter	Former Regular User	Never Regular User
Test (with modified risk messaging)	1.7 (.04) (n*=7,253)	3.1 (.13) (n*=2,248)	2.3 (.25) (n*=430)	1.6 (.07) (n*=2,483)	1.4 (.05) (n*=2,522)
Control (without modified risk messaging)	1.7 (.04) (n*=7,258)	3.0 (.13) (n*=2,249)	2.2 (.26) (n*=375)	1.6 (.07) (n*=2,489)	1.4 (.06) (n*=2,520)

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

\* Unweighted sample size (on which the weighted data are based).

When the analysis is restricted to White males, the same pattern of results emerges except that the difference between White males who are current regular users and White males who are potential quitters does not rise to statistical significance in the control arm (3.4 versus 3.0, respectively). In the test arm, ratings among White males who are current regular tobacco users are statistically significantly higher than ratings among White males who are potential quitters (3.6 versus 2.7, respectively). In both arms, ratings among White males who are current regular users are statistically significantly higher than ratings among White males who are former and never regular tobacco users (3.6 versus 1.8 and 1.4 in the test arm; and, 3.4 versus 1.7 and 1.4 in the control arm; refer to [Tables A-3 & A-4 in Appendix A](#)).

## 4.2 Model Estimates

The 10-point purchase for personal trial ratings were subjected to a transformational algorithm that yielded predicted purchase rates. That algorithm was developed previously<sup>13</sup> for the explicit purpose of enabling RAIS to project purchase rates for tobacco products based on pre-market purchase intent.

[Table 10](#) presents the projected purchase rates and the corresponding 95% confidence intervals ( $p=.05$ ) for respondents in the test and control arms among consumers overall and among each of the tobacco user groups. A two-factor ANOVA reveals a significant main effect of tobacco user group ( $p<.0001$ ),

<sup>13</sup> For full detail on survey methodology, refer to [Appendix D](#), “New Tobacco Product “Likelihood” Study: Algorithm to Predict Usage of New Tobacco Products Prior to Market Launch”.

no main effect of arm ( $p>.05$ ), and no interaction between those two factors ( $p>.05$ ). Post-hoc comparisons reveal that projected purchase rates among current regular tobacco users in the test and control arms are (1) statistically significantly higher than projected purchase rates among potential quitters; and, (2) statistically significantly higher than projected purchase rates among former and never regular tobacco users.

**Table 10: Model Estimates**  
**- Test versus Control Camel SNUS Advertising Materials by Tobacco Status<sup>†</sup> -**

	% Estimated to Purchase				
	Total	Current Regular Users	Potential Quitters	Former Regular Users	Never Regular Users
Test (with modified risk messaging)	1.3% (0.9-2.1) (n*=7,253)	5.9% (4.3-8.2) (n*=2,248)	4.2% (2.9-6.0) (n*=430)	1.2% (0.6-2.4) (n*=2,483)	0.3% (0.2-0.5) (n*=2,522)
Control (without modified risk messaging)	1.3% (0.9-2.0) (n*=7,258)	5.8% (4.2-8.0) (n*=2,249)	4.0% (2.8-5.8) (n*=375)	1.2% (0.6-2.4) (n*=2,489)	0.3% (0.2-0.5) (n*=2,520)

Numbers in parentheses represent the 95% confidence intervals.

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

\* Unweighted sample size (on which the weighted data are based).

When the analysis is restricted to White males, the same pattern of results emerges except that the difference between White males who are current regular users and White males who are potential quitters does not rise to statistical significance in the control arm (7.1% versus 5.8%, respectively). In the test arm, projected purchase rates among White males who are current regular tobacco users are statistically significantly higher than projected purchase rates among White males who are potential quitters (7.3% versus 5.1%, respectively). In both arms, projected purchase rates among White males who are current regular tobacco users are statistically significantly higher than projected purchase rates among White males who are former and never regular tobacco users (7.3% versus 1.6% and 0.3% in the test arm; and, 7.1% versus 1.5% and 0.3% in the control arm; *refer to Table A-5 in Appendix A*).

### 4.3 Tobacco Use Intentions among Potential Camel SNUS Users

#### A. Reported Intended Use among Current Regular Tobacco Users

*Table 11* presents findings on how current regular tobacco users who rate their likelihood to purchase Camel SNUS as “2” or greater expect to use Camel SNUS, and reveals that 15% report they will stop using their current tobacco product completely. Thirty-three percent of respondents report that they expect to use Camel SNUS in place of some portion of their current tobacco (leading to no net increase in tobacco use), while 20% report that they expect to use Camel SNUS in addition to their current product. Nearly one-third of respondents report that they are not sure how they would use Camel SNUS. There are no statistically significant differences with regard to how current regular tobacco users report expected use of Camel SNUS between the test and control arms (i.e., viewed advertising with versus without modified risk messaging, respectively).

**Table 11: Reported Intended Use of Camel SNUS among Current Regular Tobacco Users**

	Current Regular Users <sup>†</sup>	
	Test	Control
<i>Would use Camel SNUS...</i>	n* = 936	n* = 900
Instead of current tobacco (stop using current tobacco completely)	15% (2.5)	12% (2.4)
In addition to current tobacco (overall increase in tobacco use)	20% (2.9)	21% (3.0)
In place of some of current tobacco (no net increase in tobacco use)	33% (3.4)	34% (3.5)
Don't know	32% (3.4)	34% (3.5)

Analysis includes current regular users who indicated likelihood of use rating of “2” or greater.

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

\* Unweighted sample sizes (on which the weighted data are based).

## **B. Reported Intended Tobacco Use Behaviors among Current, Former and Never Regular Users**

The subset of current regular tobacco users who report they will use Camel SNUS instead of their current tobacco product(s) (*refer above*) also rated how likely they would be to switch back to their current tobacco product after trying Camel SNUS, based on a 10-point scale. Current regular tobacco users, who viewed the advertising with modified risk messaging and report intending to use Camel SNUS instead of their current tobacco product, report they are no more likely to switch back to their current tobacco product after trying Camel SNUS than respondents who viewed the advertising without modified risk messaging (mean rating of 6.0 in test versus 6.3 in control; *refer to Table A-6 in Appendix A for the distribution of responses*).

Former regular and never regular tobacco users who rate their likelihood to purchase Camel SNUS as “2” or greater similarly rated how likely they would be to switch to a different tobacco product (one that presents more risk for the test arm) after trying Camel SNUS, based on a 10-point scale (*refer to Table A-7 in Appendix A for distribution of intent ratings*). A two-way ANOVA shows a main effect of arm ( $p < .0001$ ), no effect of tobacco user group ( $p > .05$ ), and no interaction between those two factors ( $p > .05$ ). These data indicate that former and never regular tobacco users who view the advertising with modified risk messaging report being less likely to switch to another tobacco product after

trying Camel SNUS than those who view the advertising without modified risk messaging; the difference between former regular tobacco users, test versus control, is statistically significant (*Table 12*).

**Table 12: Mean Rating of Likelihood to Switch to a Different Tobacco Product after Trying Camel SNUS among Former and Never Regular Users**

	Former Regular <sup>†</sup>	Never Regular <sup>†</sup>
Test (with modified risk messaging)	3.3 <sup>^</sup> (.27) (n*=426)	3.5 <sup>^</sup> (.31) (n*=288)
Control (without modified risk messaging)	4.3 (.29) (n*=384)	4.1 (.31) (n*=279)

Analysis includes former regular and never regular users who indicated likelihood of use rating of “2” or greater.

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

<sup>^</sup> Statistically significantly different from control

\* Unweighted sample size (on which the weighted data are based).

### C. Potential Quitters

*Table 13* presents information on why potential quitters who rate their likelihood to purchase Camel SNUS as “2” or greater are interested in trying the product. Approximately one-third of potential quitters in the test and control arms (35% and 30%, respectively) report that they would use Camel SNUS to help them quit tobacco use, with much lower percentages (11% and 14%, respectively) reporting they would use Camel SNUS in situations where they cannot use current tobacco products; and, just over 40% of potential quitters report they are just curious about the product. There are no statistically significant differences in the percentages, test versus control (i.e., viewed advertising with versus without modified risk messaging).



**Table 13: Reasons for Trying Camel SNUS among Potential Quitters**

	Potential Quitters <sup>†</sup>	
	Test	Control
<i>Which of the following reasons best explain why you have some interest in trying Camel SNUS?</i>	n* = 144	n* = 115
To help me quit	35% (8.7)	30% (9.7)
It will allow me to use tobacco in situations where I cannot use my current product	11% (5.5)	14% (7.3)
I'm just curious about it	42% (8.9)	45% (10.6)
Don't know	12% (5.7)	12% (6.9)

Analysis includes potential quitters who indicated likelihood of use rating of "2" or greater.

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

\* Unweighted sample sizes (on which the weighted data are based).

#### 4.4 Additional Information Regarding Tobacco Use Behaviors

Responses to survey questions regarding quitting intentions among current regular tobacco users ([Table A-8](#)), length of time since quitting among former regular tobacco users ([Table A-9](#)), and cigarette use intentions among never regular tobacco users ([Table A-10](#)) are provided in *Appendix A*.

## 5. CONCLUSIONS

Projected likelihoods of use among consumers overall, as well as among current, former and never regular tobacco users suggest that the proposed modified risk messaging for Camel SNUS is unlikely to have an adverse effect on the health of the population. Specifically:

- The overall projected purchase rate for Camel SNUS among consumers viewing the modified risk messaging is 1.3%.
- Confirming the ingoing hypothesis, the purchase rate is driven primarily by current regular tobacco users (5.9%), followed by former regular users (1.2%); the projected purchase rate is virtually zero among never regular users (0.3%).
- Estimated purchase rates are likely overstated by the algorithm, as demonstrated by five validation studies of the model in which actual

purchase was consistently over-predicted (refer to [Appendix D](#) for full discussion).

- The differences in projected purchase rates for the test and control arms are not statistically significant, suggesting that the proposed modified risk messaging does not increase likelihood of use among tobacco users or non-users.

## 6. STUDY STRENGTHS AND LIMITATIONS

As with any research, this study has several identifiable strengths and limitations. The key strengths of this research are:

- The methodological rigor with which the study was conducted, including a large random sample of more than 14,500 consumers and quotas to allow meaningful sub-group analyses. In addition, a multi-step statistical weighting process yielded weighted estimates that closely match population sizes obtained from the Census Bureau's Population Estimates Program,<sup>14</sup> which, in turn, increases confidence in the population-based projections. The study has approximately 80% power to detect mean differences in predicted purchase rate of roughly 1% across the arms.
- The reliance on relevant statutes,<sup>15</sup> FDA's draft guidance on submitting an MRTP application,<sup>16</sup> and information obtained during face-to-face meetings with FDA's Center for Tobacco Products to frame research questions. The research began with a comprehensive review of these materials to maximize the probability that the study design would appropriately and sufficiently project consumers' likelihood of use for the MRTP. For example, a test versus control format was used in response to a recommendation in FDA's draft guidance.
- The administration of the survey online, which allows for more complex skip patterns in survey design and more accurate data capture than paper-and-pencil methodologies.

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<sup>14</sup> Population counts source: ASES-CPS (March 2014) and TUS-CPS (May 2010, August 2010, and January 2011); retrieved from [http://thedataweb.rm.census.gov/ftp/cps\\_ftp.html#cpssupps](http://thedataweb.rm.census.gov/ftp/cps_ftp.html#cpssupps)

<sup>15</sup> Family Smoking Prevention and Tobacco Control Act (June 2009); <http://www.gpo.gov/fdsys/pkg/PLAW-111publ31/pdf/PLAW-111publ31.pdf>.

<sup>16</sup> Guidance for Industry: Modified Risk Tobacco Product Applications (Draft Guidance; March 2012) <http://www.fda.gov/downloads/TobaccoProducts/GuidanceComplianceRegulatoryInformation/UCM297751.pdf>



- The exclusion of consumers who participated in any previous Camel SNUS modified risk messaging surveys to avoid any bias that might be associated with previous exposure to the tested messaging.<sup>17</sup>
- Use of a survey that was thoroughly tested as part of the process of developing an algorithm to convert likelihood to purchase ratings to projected purchase rates. The primary survey questions underwent extensive pre-testing prior to fielding the original algorithm survey, and have been answered by more than 50,000 consumers over the past few years. In addition, the Camel SNUS modified risk messaging materials were thoroughly tested and evaluated prior to fielding the survey.<sup>18</sup>
- Although not considered fully validated, the algorithm that is used to convert likelihood to purchase ratings to projected purchase rates was developed and subsequently tested using tobacco products. Rather than relying on an “off-the-shelf” model to estimate purchase rates, this research relied on a model custom-built for tobacco products prior to market launch.

The key limitations of this research are:

- The sample was drawn from an internet panel, which excludes consumers who do not have access to the internet or who choose not to join the panel. Panel surveys have, however, become the industry standard, and have been used by FDA in its own research. In addition, we have no reason to believe that purchase ratings for tobacco products among non-panel members would be sufficiently different from demographically similar internet panel users to have a material effect on the research findings.
- The inability to verify respondents’ actual tobacco behaviors. Similar to virtually all other comparable tobacco-related studies, this study categorized consumers based on self-reported data regarding tobacco use behavior. It is, therefore, possible that consumers misrepresented their actual tobacco use behavior, but given the anonymous nature of the data collection methodology, they would have no known motivation to do so.
- The model that estimates purchase rates was developed using a combustible tobacco product that was a market leader (Marlboro), which

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<sup>17</sup> See “Camel SNUS Modified Risk Messaging: Comprehension and Perceptions among Tobacco Users and Non-Users, Final Report.”

<sup>18</sup> See “Camel SNUS Modified Risk Messaging: Comprehension and Perceptions among Tobacco Users and Non-Users, Final Report.”

resulted in over-prediction in five subsequent studies, including two smokeless tobacco products (*refer to [Appendix D](#) for full discussion*). It remains to be determined if the model would over-predict purchase rates for an MRTP, but it is reasonable to believe that it would.

## 7. SURVEY INSTRUMENT

**Research conducted on behalf of RAIS in anticipation of potential FDA requirements. Research shall only be used and/or disseminated for compliance-related activities.**

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### **Camel SNUS Likelihood of Use Survey**

- Screener -

Thank you for visiting our survey site to answer a few qualifying questions. This survey is strictly for research purposes only.

It is NAXION's policy to keep interviews anonymous and responses confidential. Consistent with this policy, NAXION will only entrust survey data with other entities when: 1) the participant gives explicit permission to release this data; 2) the data is shared with an entity who agrees in writing that the data will be held strictly confidential and that the data will be used for research purposes only; or, 3) the release of this data is required by law.

You will not be contacted for sales purposes as a result of participating in this survey.

For further information on NAXION's privacy policy, you can view our website at [www.naxionthinking.com/privacy-policy/privacy-policy-domestic-and-global-information](http://www.naxionthinking.com/privacy-policy/privacy-policy-domestic-and-global-information). To view our respondent incentive statement, visit [www.naxionthinking.com/incentivestatement](http://www.naxionthinking.com/incentivestatement).

All questions on each screen must be answered before you move to the next screen, so please be sure you have answered every question before trying to move forward. On the next few screens you will be asked a few questions to see if you qualify for this study. If you qualify, the survey itself should take 10 minutes to complete.

---

#### **PROGRAMMER:**

##### **1) INSERT STANDARD INSTRUCTION SCREEN**

**FIELD OPS: RECRUIT RESPONDENTS FROM ONLY "TRADITIONAL" RESEARCH NOW PANEL  
DO NOT ALLOW SURVEY TO BE TAKEN VIA IPHONE/BLACKBERRY, etc.**

**HAVE RECRUITERS DRAW SAMPLE...**

- 1) ACCORDING TO MINIMUM PURCHASE AGE IN STATE (SEE S7 INSTRUCTIONS)**
- 2) ACCORDING TO QUOTA**
- 3) NOTE THAT NO STATES ARE EXCLUDED**

S2. What is your current age?

\_\_\_\_\_ Years

**PROGRAMMER:**

1. RANGE IS 10-99
  2. IF < 18 OR IF > 75, TERMINATE NOW
- 

S7. In what state do you currently reside?

**[SHOW POP UP LIST OF STATES]**

**PROGRAMMER:**

1. IF STATE IS ALABAMA, ALASKA, NEW JERSEY OR UTAH AND S2= 18, TERMINATE NOW  
(minimum age for tobacco purchase in these states is 19)
  2. NOTE THAT RESPONDENTS IN ALL 50 US STATES AND DISTRICT OF COLUMBIA ARE ELIGIBLE TO PARTICIPATE IN THIS STUDY
- 

In this survey we are interested in the opinions of people who have been, or are, regular users of certain products, as well as people who have never used them.

S1a. Would you consider yourself to be – or to have been at any time in the past – a “regular user” of any of the following products? We leave it to you to define regular use.

*Select “yes” or “no” in each row.*

	Yes I am – or was – a regular user	No, I have never been a regular user
Beer or malt-based beverages?	<input type="radio"/>	<input type="radio"/>
Bottled water (still or carbonated)?	<input type="radio"/>	<input type="radio"/>
Nutritional supplements/vitamins?	<input type="radio"/>	<input type="radio"/>
Tobacco products?	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

- 1) DISPLAY ROWS IN RANDOM ORDER
-

S1b. Focusing only on the present, how would you currently describe yourself, relative to each of the following categories?

*Select one response in each row.*

	Current Non-user	Current Occasional User	Current Regular User
Beer or malt-based beverages?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bottled water (still or carbonated)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nutritional supplements/vitamins?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tobacco products?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

1) **DISPLAY ONLY ROWS ANSWERED AS “Yes” IN S1a, IN SAME ORDER AS IN S1a**

**CLASSIFY AS:**

A) **Current Regular User**: S1b “Tobacco product” IS “Occasional” or “Regular” (col 2 or 3)

B) **Former Regular User**: S1b “Tobacco product” IS “Non-user” **AND** S1a “Tobacco product” IS “Yes”

C) **Never Regular User**: S1a “Tobacco product” IS “No”

---

S3. What is your gender?

Male	<input type="radio"/>
Female	<input type="radio"/>

---

S4. What is the highest grade you have completed in school? *(Select one)*

High school or less	<input type="radio"/>
Some college or technical/vocational training	<input type="radio"/>
Four years of college (Bachelor's degree)	<input type="radio"/>
More than Bachelor's degree	<input type="radio"/>

---

S5a. Do you consider yourself to be of Hispanic, Latino, or Spanish origin?

Yes	<input type="radio"/>
No	<input type="radio"/>

S5b. What do you consider to be your race? *(Select all that apply)*

White	<input type="checkbox"/>
African American / Black	<input type="checkbox"/>
Asian	<input type="checkbox"/>
Other	<input type="checkbox"/>

**PROGRAMMER:**

**1. DISPLAY S5a AND S5b ON SAME SCREEN**

---

S6. Which of the following best describes your total household income?

Under \$25,000	<input type="radio"/>
\$25,000 to \$49,999	<input type="radio"/>
\$50,000 to \$74,999	<input type="radio"/>
\$75,000 to \$99,999	<input type="radio"/>
\$100,000 or more	<input type="radio"/>

---

- S8. Earlier you indicated that you [currently use tobacco products./have used tobacco products on a “regular basis” in the past, but that you no longer do.] [Please indicate your usage, if any, of each of the following types of tobacco products./Which of the following types of tobacco products did you use regularly?] *(Select [one response in each row/all that apply])*

		Use Currently	Used in the Past	Never Used	Used in the Past
1	Cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
2	Roll-your-own Cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
3	E-cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
4	Tobacco Heating Cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
5	Cigarillos (si-geh-RI-lohs) and Filtered Cigars	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
6	Bidis (BEE-dees) or Kreteks (KREH-techs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
7	Traditional Cigars	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
8	Pipe Tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
9	Hookah (WHO-kah)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
10	Smokeless Tobacco, like dip, chew, or snuff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
11	SNUS (SNOOS) Pouches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
12	Dissolvable tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>
13	Other tobacco product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>

**PROGRAMMER:**

1. ASK IF CLASSIFIED AS “CURRENT” OR “FORMER” TOBACCO USER
2. IF S1b “Tobacco product” IS “Occasional” OR “Regular,” USE FIRST TEXT IN BRACKETS, ELSE USE 2<sup>ND</sup> TEXT
3. SHOW FORMER TOBACCO USERS COLUMN 4 ONLY



- S9. Which of the following brands of SNUS do you currently use?  
*Select "yes" or "no" in each row.*

	Yes	No
Camel	<input type="radio"/>	<input type="radio"/>
Copenhagen	<input type="radio"/>	<input type="radio"/>
General	<input type="radio"/>	<input type="radio"/>
General Swedish Variety	<input type="radio"/>	<input type="radio"/>
Grand Prix	<input type="radio"/>	<input type="radio"/>
Klondike	<input type="radio"/>	<input type="radio"/>
Marlboro	<input type="radio"/>	<input type="radio"/>
Nordic Ice	<input type="radio"/>	<input type="radio"/>
Skoal	<input type="radio"/>	<input type="radio"/>
Tourney	<input type="radio"/>	<input type="radio"/>
Triumph	<input type="radio"/>	<input type="radio"/>
Some other brand of SNUS	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

1. ASK IF S8 ROW 11 COLUMN 1 IS SELECTED
2. MUST SAY "YES" TO AT LEAST 1 ROW
3. TERMINATE IF ROW 1 IS "YES"

**ARM ASSIGNMENT: CHECK QUOTAS TO SEE IF ELIGIBLE FOR EACH SURVEY ARM  
THERE ARE 8 ARMS IN THIS STUDY:**

- Arm 1: Control Warning #1
- Arm 2: Control Warning #2
- Arm 3: Control Warning #3
- Arm 4: Control Warning #4
- Arm 5: Test Warning #1
- Arm 6: Test Warning #2
- Arm 7: Test Warning #3
- Arm 8: Test Warning #4

**IF ELIGIBLE FOR MORE THAN ONE ARM, ASSIGN WHERE NEEDED THE MOST TO BALANCE:**

1. **SMOKING STATUS (CURRENT, FORMER, NEVER)**
2. **CURRENT CIGARETTE USER (S8 ROW 1 IS "USE CURRENTLY")**
3. **CURRENT SNUS USER (S8 ROW 11 IS "USE CURRENTLY")**
4. **FORMER SNUS USER (S8 ROW 11 IS "USED IN PAST")**
5. **DEMOGRAPHICS**

---

You have qualified for our survey, and we'd like to invite you to participate. The survey will require ten minutes to complete, and we ask for your undivided attention once you begin it. If you do not have ten minutes right now, please click "Stop," and return any time during the next 24 hours when you have an uninterrupted ten minutes.

---

## Camel SNUS MRTP Likelihood of Use Survey

– Survey –

1. Now, please think ahead to nine months from now. Based on your experience, product preferences, and personal goals, do you expect that you will be using the following types of products nine months from now?

*Select “yes” or “no” in each row.*

	Yes	No
Cigarette	<input type="radio"/>	<input type="radio"/>
Cigar/cigarillos	<input type="radio"/>	<input type="radio"/>
Pipe	<input type="radio"/>	<input type="radio"/>
Chewing tobacco	<input type="radio"/>	<input type="radio"/>
Snuff	<input type="radio"/>	<input type="radio"/>
SNUS	<input type="radio"/>	<input type="radio"/>
Any other type of tobacco	<input type="radio"/>	<input type="radio"/>

### PROGRAMMER:

1. **ASK ALL**
2. **DEFINE AS “CURRENT REGULAR USER INTENDING TO QUIT” IF CURRENT REGULAR USER AND ALL ROWS ARE “NO”**

---

This survey focuses on new information about an existing tobacco product. Everyone is asked all of the questions in this survey, regardless of the products they currently use or their expectations regarding future tobacco use.

Please take your time and review the information on the next few screens closely so that you will be able to answer the questions that follow.

**[INSERT CAMEL SNUS MRTP STIMULI]**

---

- 2a. Assuming the product were available today, how likely would you be to purchase Camel SNUS in order to try it?

*Select one.*

Definitely Would <u>Not</u> Purchase It (to Try) ↓					Definitely Would Purchase It (to Try) ↓				
1	2	3	4	5	6	7	8	9	10
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

**1) ASK ALL**

---

- 2b. You indicated that you have some interest in purchasing Camel SNUS in order to try it. How would you envision using Camel SNUS?

*Select one.*

I would use Camel SNUS <b><i>instead of</i></b> my current tobacco product(s) (would stop using my current tobacco product completely)	<input type="radio"/>
I would use Camel SNUS <b><i>in addition to</i></b> my current tobacco product(s) (leading to an overall increase in tobacco use)	<input type="radio"/>
I would use Camel SNUS <b><i>in place of some</i></b> of my current tobacco product(s) (leading to <u>no</u> net increase in tobacco use)	<input type="radio"/>
Don't know	<input type="radio"/>

**PROGRAMMER:**

- 1. ASK IF CURRENT REGULAR USER AND Q2a RATING IS  $\geq 2$**
- 2. SKIP IF CURRENT REGULAR USER INTENDING TO QUIT**

- 2c. How likely would you be to switch back to your current (existing) tobacco product after you try Camel SNUS?

*Select one.*

Not At All Likely to Switch Back to my Current Tobacco Product(s) ↓					Very Likely to Switch Back to my Current Tobacco Product(s) ↓				
1	2	3	4	5	6	7	8	9	10
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

1. ASK IF Q2b ROW 1 IS SELECTED
- 

- 2d. You indicated that you have some interest in purchasing Camel SNUS in order to try it. If you were to try Camel SNUS, how likely would you be to switch to a different tobacco product [that presents more risk, such as cigarettes,] after you try Camel SNUS?

*Select one.*

Not At All Likely to Switch to a Different Tobacco Product(s) [that Presents More Risk] ↓					Very Likely to Switch to a Different Tobacco Product(s) [that Presents More Risk] ↓				
1	2	3	4	5	6	7	8	9	10
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

1. ASK IF FORMER REGULAR OR NEVER REGULAR USER AND Q2a RATING IS  $\geq 2$   
2. SHOW REPLACEMENT TEXT IN THE QUESTION TEXT AND GRID IF ARM 5, 6, 7, OR 8 (TEST)
-

- 2e. You indicated that you plan to quit using tobacco, but that you have at least some interest in purchasing Camel SNUS in order to try it (that is, you did not rate your intention to try Camel SNUS a “1” in the previous question).

Which one of the following reasons best explains why you have some interest in trying Camel SNUS?

*Select one.*

To help me quit	<input type="radio"/>
It will allow me to use tobacco in situations where I cannot use my current product	<input type="radio"/>
I’m just curious about it	<input type="radio"/>
Don’t know	<input type="radio"/>

**PROGRAMMER:**

- 1. ASK IF CURRENT REGULAR USER INTENDING TO QUIT AND Q2a RATING IS  $\geq 2$**
-

3a1. Have you ever used any of the following tobacco products, even one or two times?

*(Select “yes” or “no” in each row)*

		Yes	No
1	Cigarettes	<input type="radio"/>	<input type="radio"/>
2	Roll-your-own Cigarettes	<input type="radio"/>	<input type="radio"/>
3	E-cigarettes	<input type="radio"/>	<input type="radio"/>
4	Tobacco Heating Cigarettes	<input type="radio"/>	<input type="radio"/>
5	Cigarillos (si-geh-RI-lohs) and Filtered Cigars	<input type="radio"/>	<input type="radio"/>
6	Bidis (BEE-dees) or Kreteks (KREH-techs)	<input type="radio"/>	<input type="radio"/>
7	Traditional Cigars	<input type="radio"/>	<input type="radio"/>
8	Pipe Tobacco	<input type="radio"/>	<input type="radio"/>
9	Hookah (WHO-kah)	<input type="radio"/>	<input type="radio"/>
10	Smokeless Tobacco, like dip, chew, or snuff	<input type="radio"/>	<input type="radio"/>
11	SNUS (SNOOS) Pouches	<input type="radio"/>	<input type="radio"/>
12	Dissolvable tobacco	<input type="radio"/>	<input type="radio"/>
13	Other tobacco product	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

**1) ASK ALL**

---

3a2. Have you ever used any of the following tobacco product(s) fairly regularly?

*(Select “yes” or “no” in each row)*

		Yes	No
1	Cigarettes	<input type="radio"/>	<input type="radio"/>
2	Roll-your-own Cigarettes	<input type="radio"/>	<input type="radio"/>
3	E-cigarettes	<input type="radio"/>	<input type="radio"/>
4	Tobacco Heating Cigarettes	<input type="radio"/>	<input type="radio"/>
5	Cigarillos (si-geh-RI-lohs) and Filtered Cigars	<input type="radio"/>	<input type="radio"/>
6	Bidis (BEE-dees) or Kreteks (KREH-techs)	<input type="radio"/>	<input type="radio"/>
7	Traditional Cigars	<input type="radio"/>	<input type="radio"/>
8	Pipe Tobacco	<input type="radio"/>	<input type="radio"/>
9	Hookah (WHO-kah)	<input type="radio"/>	<input type="radio"/>
10	Smokeless Tobacco, like dip, chew, or snuff	<input type="radio"/>	<input type="radio"/>
11	SNUS (SNOOS) Pouches	<input type="radio"/>	<input type="radio"/>
12	Dissolvable tobacco	<input type="radio"/>	<input type="radio"/>
13	Other tobacco product	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

- 1) ASK IF ANY ROW IN 3a1 IS “YES”
  - 2) ONLY SHOW ROWS THAT ARE “YES” IN 3a1
-



- 3b. How many cigarettes have you smoked in your entire life? A pack usually has 20 cigarettes in it. *Select one.*

1	1 or more puffs but never a whole cigarette	<input type="radio"/>
2	1 to 10 cigarettes (about ½ pack total)	<input type="radio"/>
3	11 to 20 cigarettes (about ½ pack to 1 pack)	<input type="radio"/>
4	21 to 50 cigarettes (more than 1 pack but less than 3 packs)	<input type="radio"/>
5	51 to 99 cigarettes (more than 2 ½ packs but less than 5 packs)	<input type="radio"/>
6	100 or more cigarettes (5 packs or more)	<input type="radio"/>

**PROGRAMMER:**

- 1) ASK IF 3a1 ROW 1 = "YES"
-

- 3c. Please indicate how often you currently use each of the following types of tobacco.  
*Select one response in each row.*

		Every Day	Some Days	Not at All
1	Cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	Roll-your-own Cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	E-cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	Tobacco Heating Cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	Cigarillos (si-geh-RI-lohs) and Filtered Cigars	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	Bidis (BEE-dees) or Kreteks (KREH-techs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	Traditional Cigars	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Pipe Tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	Hookah (WHO-kah)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	Smokeless Tobacco, like dip, chew, or snuff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	SNUS (SNOOS) Pouches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	Dissolvable tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	Other tobacco product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

- 1) ASK IF ANY ROW IS "YES" IN 3A1
- 2) SHOW ROWS THAT ARE "YES" IN 3A1

PROGRAMMER TO CLASSIFY RESPONDENTS AS FOLLOWS:

DEFINE AS NEVER USER IF:

- 3a1 is "NO" FOR ALL ROWS

IF DO NOT QUALIFY AS NEVER USER, DEFINE AS CURRENT CIGARETTE USER IF:

- 3a1 ROW 1 (Cigarettes) IS "Yes" AND
- 3b IS ROW 6 (100+ Cigarettes) AND
- 3c ROW 1 (Cigarettes) IS "EVERY DAY" OR "SOME DAYS"

IF DO NOT QUALIFY AS NEVER OR CURRENT CIGARETTE USER, DEFINE AS CURRENT TOBACCO USER (NON-CIGARETTE) IF:

- 3a1 ROW 2 IS "YES" AND
- 3a2 ROW 2 IS "YES" AND
- 3c ROW 2 IS "EVERY DAY" OR "SOME DAYS"
- CYCLE THROUGH THIS LOGIC FOR ALL ROWS 2 THROUGH 13 TO SEE IF AT LEAST ONE ROW/PRODUCT QUALIFIES

IF DO NOT QUALIFY FOR ANY OF THE ABOVE, DEFINE AS CIGARETTE EXPERIMENTER IF:

- 3a1 ROW 1 IS "YES" AND
- 3b IS NOT ROW 6 (100+ CIGARETTES) AND
- 3c ROW 1 IS "EVERY DAY" OR "SOME DAYS"

IF DO NOT QUALIFY FOR ANY OF THE ABOVE, DEFINE AS NON-CIGARETTE EXPERIMENTER IF:

- 3a1 ROW 2 IS "YES" AND
- 3a2 ROW 2 IS "NO" AND
- 3c ROW 2 IS "EVERY DAY" OR "SOME DAYS"
- CYCLE THROUGH THIS LOGIC FOR ALL ROWS 2 THROUGH 13 TO SEE IF AT LEAST ONE ROW/PRODUCT QUALIFIES

IF DO NOT QUALIFY FOR ANY OF THE ABOVE, DEFINE AS FORMER CIGARETTE USER IF:

- 3a1 ROW 1 IS "YES" AND
- 3b IS ROW 6 (100+ Cigarettes) AND
- 3c ROW 1 IS "NOT AT ALL"

IF DO NOT QUALIFY FOR ANY OF THE ABOVE, DEFINE AS FORMER TOBACCO USER (NON-CIGARETTE) IF:

- 3a1 ROW 2 IS "YES" AND
- 3a2 ROW 2 IS "YES" AND
- 3c ROW 2 IS "NOT AT ALL"
- CYCLE THROUGH THIS LOGIC FOR ALL ROWS 2 THROUGH 13 TO SEE IF AT LEAST ONE ROW/PRODUCT QUALIFIES

IF DO NOT QUALIFY FOR ANY OF THE ABOVE, DEFINE AS FORMER CIGARETTE EXPERIMENTER IF:

- 3a1 ROW 1 IS "YES" AND
- 3b IS NOT ROW 6 (100+ CIGARETTES) AND
- 3c ROW 1 "NOT AT ALL"

IF DO NOT QUALIFY FOR ANY OF THE ABOVE, DEFINE AS FORMER NON-CIGARETTE EXPERIMENTER IF:

- 3a1 ROW 2 IS "YES" AND
- 3a2 ROW 2 IS "NO" AND
- 3c ROW 2 IS "NOT AT ALL"
- CYCLE THROUGH THIS LOGIC FOR ALL ROWS 2 THROUGH 13 TO SEE IF AT LEAST ONE ROW/PRODUCT QUALIFIES

**ANALYSES GROUPS:**

- 1) CURRENT USERS =
  - a. CURRENT CIGARETTE USERS
  - b. CURRENT TOBACCO USERS (NON-CIGARETTE)
- 2) FORMER USERS =
  - a. FORMER CIGARETTE USERS
  - b. FORMER TOBACCO USERS (NON-CIGARETTE)
  - c. FORMER CIGARETTE EXPERIMENTERS
  - d. FORMER NON-CIGARETTE EXPERIMENTERS
- 3) NEVER USERS
- 4) EXPERIMENTERS =
  - a. CIGARETTE EXPERIMENTERS
  - b. NON-CIGARETTE EXPERIMENTERS

For this next series of questions, we are interested in your anticipated behavior if no new tobacco products are introduced to the market.

- 4a. During the past 12 months, have you stopped using tobacco for one day or longer because you were trying to quit using tobacco? *Select one.*

Yes	<input type="radio"/>
No	<input type="radio"/>

**PROGRAMMER:**

- 1) ASK IF “CURRENT REGULAR USER” (BASED ON S1 SERIES) OR “CURRENT USER” (NEW DEFINITION BASED Q3 SERIES)**
- 

- 4b. How much do you want to quit using tobacco? *Select one.*

Not at all	<input type="radio"/>
A little	<input type="radio"/>
Somewhat	<input type="radio"/>
A lot	<input type="radio"/>
No opinion	<input type="radio"/>

**PROGRAMMER:**

- 1) ASK IF “CURRENT REGULAR USER” (BASED ON S1 SERIES) OR “CURRENT USER” (NEW DEFINITION BASED Q3 SERIES)**
-

- 4c. How likely do you think it is that you will try to quit using tobacco within the next 30 days?

*Select one.*

Very unlikely	<input type="radio"/>
Somewhat unlikely	<input type="radio"/>
Somewhat likely	<input type="radio"/>
Very likely	<input type="radio"/>
No opinion	<input type="radio"/>

**PROGRAMMER:**

- 1) ASK IF “CURRENT REGULAR USER” (BASED ON S1 SERIES) OR “CURRENT USER” (NEW DEFINITION BASED Q3 SERIES)**
- 

- 4d. If you did try to quit using tobacco within the next 30 days, how likely do you think it is that you would succeed in quitting? *Select one.*

Very unlikely	<input type="radio"/>
Somewhat unlikely	<input type="radio"/>
Somewhat likely	<input type="radio"/>
Very likely	<input type="radio"/>
No opinion	<input type="radio"/>

**PROGRAMMER:**

- 1) ASK IF “CURRENT REGULAR USER” (BASED ON S1 SERIES) OR “CURRENT USER” (NEW DEFINITION BASED Q3 SERIES)**

**CLASSIFY RESPONDENT AS POTENTIAL QUITTER IF:**

- **4a = YES AND**
  - **4b = SOMEWHAT OR A LOT AND**
  - **4c = SOMEWHAT OR VERY LIKELY AND**
  - **4d = SOMEWHAT OR VERY LIKELY**
-

5. How long has it been since you quit using tobacco? *Select one.*

Less than 6 months	<input type="radio"/>
6 months or longer	<input type="radio"/>

**PROGRAMMER:**

- 1) ASK FORMER REGULAR USER (BASED ON S1 SERIES) OR FORMER USER (NEW DEFINITION BASED Q3 SERIES)**
-

6a. Do you think you will smoke a cigarette in the next year? *Select one.*

1	Definitely yes	<input type="radio"/>
2	Probably yes	<input type="radio"/>
3	Probably no	<input type="radio"/>
4	Definitely no	<input type="radio"/>
5	Don't know	<input type="radio"/>

6b. If one of your best friends were to offer you a cigarette, would you smoke it?  
*Select one.*

1	Definitely yes	<input type="radio"/>
2	Probably yes	<input type="radio"/>
3	Probably no	<input type="radio"/>
4	Definitely no	<input type="radio"/>
5	Don't know	<input type="radio"/>

**PROGRAMMER:**

- 1) ASK Q6A AND Q6B IF NEVER REGULAR USER (BASED ON S1 SERIES) OR NEVER USER (NEW DEFINITION BASED Q3 SERIES)
- 2) ROTATE ROW ORDER (BUT ALWAYS KEEP ROW 5 LAST) SO THAT HALF OF RESPONDENTS SEE ROWS 1, 2, 3, 4, 5 AND HALF SEE 4, 3, 2, 1, 5 (ROW ORDER SHOULD BE THE SAME IN BOTH GRIDS)



Please note that the goal of this survey is only to examine likelihood of use for tobacco products in the presence and absence of modified risk messaging among current tobacco users and non-users. It is **not** intended to encourage you or anyone else to continue or start using tobacco products.

- Individuals should consider the conclusions of the U.S. Surgeon General, as well as information from the Centers for Disease Control and Prevention, and other public health and medical officials when making decisions regarding the use of tobacco.
- The best course of action for tobacco users concerned about their health is to quit.
- Minors should never use tobacco products, and adults who do not use or have quit using tobacco products should not start.
- Adults who smoke should avoid exposing minors to secondhand smoke; and, adult smokers should comply with rules and regulations designed to respect the rights of other adults.

**PROGRAMMER:**

**1. SHOW ALL**

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All information contained in this advertising is provided for your information only and for regulatory research purposes only. [In order to advertise that a smokeless tobacco product is less harmful than a cigarette or another smokeless tobacco product, the company must first obtain clearance from the U.S. Food and Drug Administration (“FDA”). As part of that clearance process, a company must present evidence on the potential for modified risk messaging to affect likelihood of product use among current tobacco users and non-users.] The advertisements used in this research study[, those that include modified risk messaging for Camel SNUS,] have not and will not be used by the company to promote its products commercially without first obtaining clearance from FDA to do so.

The information and opinions expressed here are believed to be accurate, based on sound science and the best judgment available to the company. However, no action or inaction should be taken based on the contents of this information; instead, you should consult appropriate health professionals on any matter relating to your health.

**THANK YOU SCREEN**

**PROGRAMMER: SHOW ALL**

**SHOW REPLACEMENT TEXT TO ARMS 5, 6, 7, AND 8 ONLY**

**Table 1 (n=15,000): Quotas per Arm (8 arms)**

	Current Tobacco User	Former Tobacco User	Never-Tobacco User
	625	625	625
Northeast	88 – 125	88 – 125	88 – 125
Midwest	113 – 163	113 – 163	113 – 163
South	188 – 250	188 – 250	188 – 250
West	113 – 163	113 – 163	113 – 163
18-30	163 – 200	75 – 100	163 – 200
31-50	238 – 275	200 – 238	238 – 275
51-75	163 – 200	288 – 325	163 – 200
Male	282 – 344	282 – 344	282 – 344
Female	282 – 344	282 – 344	282 – 344
Hispanic	82 – 107	82 – 107	82 – 107
Non-Hispanic - White	375 – 438	375 – 438	375 – 438
Non-Hispanic - Black	63 – 88	63 – 88	63 – 88
Non-Hispanic - Asian/Other	44 – 63	44 – 63	44 – 63
Up to High School	300 – 338	213 – 250	200 – 238
Some College	163 – 200	163 – 200	150 – 188
Bachelor's Plus	100 – 138	188 – 225	213 – 250

**Northeast**  
Connecticut  
Maine  
Massachusetts  
New Hampshire  
Rhode Island  
New Jersey  
New York  
Pennsylvania  
Vermont

**Midwest**  
Indiana  
Illinois  
Iowa  
Kansas  
Michigan  
Minnesota  
Missouri  
Nebraska  
North Dakota  
Ohio  
South Dakota  
Wisconsin

**South**  
Alabama  
Arkansas  
Delaware  
District of Columbia  
Florida  
Georgia  
Kentucky  
Louisiana  
Maryland  
Mississippi  
North Carolina  
Oklahoma  
South Carolina  
Tennessee  
Texas  
Virginia  
West Virginia

**West**  
Alaska  
Arizona  
California  
Colorado  
Hawaii  
Idaho  
Montana  
Nevada  
New Mexico  
Oregon  
Utah  
Washington  
Wyoming

## Appendix A: Supplemental Data Tables

**Table A-1: Weighted Rating Distribution: Test versus Control Camel SNUS Materials**  
– Purchase Intent Ratings –

		All Respondents	
		Test	Control
		(7,253)	(7,258)
Definitely Would Not Purchase	(n)* =		
	1	82% (1.0%)	83% (0.9%)
	2	4% (0.5%)	4% (0.5%)
	3	3% (0.4%)	2% (0.4%)
	4	1% (0.3%)	2% (0.3%)
	5	3% (0.4%)	2% (0.4%)
	6	2% (0.3%)	2% (0.3%)
	7	2% (0.3%)	2% (0.3%)
	8	2% (0.3%)	2% (0.3%)
	9	1% (0.2%)	1% (0.2%)
Definitely Would Purchase	10	1% (0.3%)	1% (0.3%)
Mean		1.7 (.04)	1.7 (.04)

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

\* Unweighted sample sizes (on which the weighted data are based) are shown.

**Table A-2: Weighted Rating Distribution: Test versus Control Camel SNUS Materials**

– Purchase Intent Ratings by Tobacco Status<sup>†</sup> –

	Current Regular Users		Potential Quitters		Former Regular Users		Never Regular Users	
	Test (n*=2,248)	Control (n*=2,249)	Test (n*=430)	Control (n*=375)	Test (n*=2,483)	Control (n*=2,489)	Test (n*=2,522)	Control (n*=2,520)
Definitely Would Not Purchase								
1	52% (2.3)	55% (2.3)	65% (5.1)	69% (5.4)	84% (1.6)	86% (1.5)	89% (1.2)	89% (1.2)
2	8% (1.2)	6% (1.1)	7% (2.8)	5% (2.6)	5% (1.0)	3% (0.7)	3% (0.7)	3% (0.7)
3	7% (1.1)	7% (1.1)	6% (2.6)	6% (3.0)	3% (0.7)	2% (0.6)	2% (0.5)	1% (0.4)
4	4% (0.9)	5% (1.0)	4% (2.0)	3% (2.0)	1% (0.5)	1% (0.5)	1% (0.4)	1% (0.4)
5	8% (1.2)	7% (1.3)	5% (2.4)	7% (3.0)	2% (0.5)	2% (0.6)	2% (0.5)	1% (0.5)
6	5% (1.0)	5% (1.0)	4% (2.2)	2% (1.6)	2% (0.5)	2% (0.6)	1% (0.4)	1% (0.4)
7	6% (1.1)	5% (1.0)	3% (1.9)	3% (1.9)	1% (0.5)	1% (0.4)	1% (0.3)	1% (0.4)
8	5% (1.0)	5% (1.0)	3% (1.7)	3% (1.9)	2% (0.5)	1% (0.4)	1% (0.4)	1% (0.4)
9	2% (0.7)	2% (0.6)	<1% (0.7)	1% (1.3)	<1% (0.2)	1% (0.3)	<1% (0.2)	<1% (0.2)
Definitely Would Purchase								
10	4% (0.8)	4% (0.9)	2% (1.6)	1% (1.3)	1% (0.5)	1% (0.5)	1% (0.3)	1% (0.3)
Mean	3.1 (.13)	3.0 (.13)	2.3 (.25)	2.2 (.26)	1.6 (.07)	1.6 (.07)	1.4 (.05)	1.4 (.06)

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

\* Unweighted sample size (on which the weighted data are based).

**Table A-3: Weighted Rating Distribution: Test versus Control Camel SNUS Materials**  
– All White Males –

		<b>All White Males</b>	
		<b>Test</b>	<b>Control</b>
	(n)* =	(2,199)	(2,207)
<b>Definitely Would Not Purchase</b>	1	76% (1.8)	77% (1.8)
	2	6% (1.1)	5% (1.0)
	3	4% (0.8)	4% (0.9)
	4	2% (0.6)	2% (0.6)
	5	3% (0.8)	3% (0.7)
	6	3% (0.7)	3% (0.6)
	7	2% (0.6)	2% (0.6)
	8	2% (0.5)	2% (0.6)
	9	1% (0.3)	1% (0.4)
<b>Definitely Would Purchase</b>	10	2% (0.4)	1% (0.4)
<b>Mean</b>		<b>1.9 (.08)</b>	<b>1.9 (.08)</b>

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

\* Unweighted sample sizes (on which the weighted data are based) are shown.

**Table A-4: Weighted Rating Distribution: Test versus Control Camel SNUS Materials**  
– Purchase Intent Ratings among White Males by Tobacco Status<sup>†</sup> –

	Current User White Males		Potential Quitter White Males		Former User White Males		Never User White Males	
	Test (n*=649)	Control (n*=651)	Test (n*=116)	Control (n*=93)	Test (n*=757)	Control (n*=780)	Test (n*=793)	Control (n*=776)
Definitely Would Not Purchase								
1	44% (4.1)	46% (4.2)	59% (9.5)	46% (11.4)	79% (2.9)	81% (2.7)	86% (2.4)	86% (2.5)
2	9% (2.3)	7% (2.1)	8% (5.2)	10% (6.8)	7% (1.8)	4% (1.4)	5% (1.5)	4% (1.5)
3	6% (2.0)	8% (2.2)	4% (3.9)	11% (7.5)	4% (1.4)	3% (1.1)	3% (1.1)	3% (1.2)
4	5% (1.7)	5% (2.0)	6% (4.6)	6% (5.4)	1% (0.8)	2% (0.9)	1% (0.8)	1% (0.7)
5	9% (2.4)	9% (2.4)	7% (4.8)	10% (7.1)	2% (1.0)	2% (1.0)	2% (1.0)	1% (0.8)
6	7% (2.0)	6% (1.9)	6% (4.5)	<1% (0.8)	2% (1.0)	3% (1.2)	2% (0.8)	1% (0.8)
7	8% (2.2)	6% (2.0)	4% (3.5)	5% (4.4)	2% (0.9)	1% (0.8)	1% (0.6)	1% (0.7)
8	6% (1.9)	7% (2.1)	3% (3.6)	6% (5.3)	2% (1.0)	1% (0.7)	1% (0.6)	1% (0.7)
9	3% (1.4)	3% (1.3)	1% (1.8)	2% (3.1)	<1% (0.3)	1% (0.5)	<1% (0.2)	<1% (0.4)
Definitely Would Purchase								
10	5% (1.7)	4% (1.7)	3% (3.4)	2% (3.3)	1% (0.8)	2% (0.9)	<1% (0.4)	<1% (0.3)
Mean	3.6 (.24)	3.4 (.24)	2.7 (.49)	3.0 (.57)	1.8 (.13)	1.7 (.13)	1.4 (.09)	1.4 (.10)

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

\* Unweighted sample size (on which the weighted data are based).

**Table A-5: Model Estimates**  
– Among White Males by Tobacco Status<sup>†</sup> –

	White Males				
	Total	Current Users	Potential Quitters	Former Users	Never Users
	% Estimated to Purchase	% Estimated to Purchase	% Estimated to Purchase	% Estimated to Purchase	% Estimated to Purchase
Test (with modified risk messaging)	1.9% (1.3-2.9) (n*=2,199)	7.3% (5.3-9.9) (n*=649)	5.1% (3.6-7.2) (n*=116)	1.6% (0.8-3.1) (n*=757)	0.3% (0.2-0.5) (n*=793)
Control (with modified risk messaging)	1.9% (1.3-2.9) (n*=2,207)	7.1% (5.2-9.7) (n*=651)	5.8% (4.1-8.2) (n*=93)	1.5% (0.8-3.1) (n*=780)	0.3% (0.2-0.5) (n*=776)

Numbers in parentheses represent the 95% confidence interval.

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

\* Unweighted sample size (on which the weighted data are based).

**Table A-6: Likelihood to Switch Back to Current Tobacco Product(s)  
After Trying Camel SNUS**

– Current Regular Users<sup>†</sup> Who Rate Likelihood to Use Camel SNUS “2” or Greater and  
Expect to Use Camel SNUS Instead of Current Tobacco Product(s) –

		Current Regular Users	
		Test	Control
(n)* =		(141)	(104)
Not At All Likely to Switch Back to Current Tobacco Product	1	4% (3.8)	2% (2.9)
	2	3% (3.8)	1% (1.9)
	3	6% (4.1)	5% (4.2)
	4	3% (3.0)	6% (5.6)
	5	26% (8.1)	26% (9.6)
	6	18% (7.1)	19% (8.6)
	7	14% (6.4)	14% (7.2)
	8	14% (6.2)	14% (6.8)
	9	6% (4.2)	12% (6.5)
Very Likely to Switch Back to Current Tobacco Product	10	6% (4.0)	3% (2.8)
Mean		6.0 (.40)	6.3 (.39)

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

\* Unweighted sample sizes (on which the weighted data are based) are shown.



**Table A-7: Likelihood to Switch to a Different Tobacco Product(s)  
After Trying Camel SNUS**

– Former and Never Regular Users<sup>†</sup> Who Rate Likelihood to Use Camel SNUS “2” or Greater –

		Former Regular Users		Never Regular Users	
		Test (n*=426)	Control (n*=384)	Test (n*=288)	Control (n*=279)
Not At All Likely to Switch to a Different Tobacco Product	1	38% (5.3)	20% (4.6)	34% (5.6)	17% (4.5)
	2	13% (3.7)	11% (3.4)	17% (4.5)	19% (4.7)
	3	9% (3.0)	14% (4.1)	7% (2.9)	11% (3.7)
	4	8% (2.7)	6% (2.8)	10% (3.5)	7% (3.2)
	5	10% (3.2)	20% (4.6)	12% (3.8)	18% (4.7)
	6	6% (2.7)	9% (3.3)	6% (2.8)	9% (3.4)
	7	6% (2.4)	6% (2.7)	4% (2.3)	4% (2.4)
	8	5% (2.4)	6% (2.7)	5% (2.5)	8% (3.3)
	9	2% (1.4)	3% (1.9)	2% (1.7)	2% (1.5)
Very Likely to Switch to a Different Tobacco Product	10	2% (1.5)	4% (2.2)	4% (2.2)	4% (2.4)
	Mean	3.3 (.27)	4.3 (.29)	3.5 (.31)	4.1 (.31)

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

\* Unweighted sample sizes (on which the weighted data are based) are shown.

**Table A-8: Likelihood to Quit Tobacco**  
– Among Current Regular Users<sup>†</sup> –

<b>Current Regular Users: Likelihood to Quit Tobacco (Q4a-Q4d)</b>		
<b>Q4a: During the past 12 months, have you stopped using tobacco for one day or longer because you were trying to quit using tobacco?</b>	<b>Test (n* = 2,248)</b>	<b>Control (n* = 2,249)</b>
Yes	48% (2.3)	45% (2.3)
No	52% (2.3)	55% (2.3)
<b>Q4b: How much do you want to quit using tobacco?</b>		
Not at all	13% (1.6)	13% (1.6)
A little	16% (1.7)	15% (1.6)
Somewhat	31% (2.1)	36% (2.2)
A lot	36% (2.2)	31% (2.2)
No opinion	5% (1.0)	5% (1.0)
<b>Q4c: How likely do you think it is that you will try to quit using tobacco within the next 30 days?</b>		
Very unlikely	35% (2.2)	37% (2.3)
Somewhat unlikely	26% (2.0)	24% (2.0)
Somewhat likely	22% (1.9)	22% (1.9)
Very likely	14% (1.6)	13% (1.5)
No opinion	4% (0.9)	4% (1.0)
<b>Q4d: If you did try to quit using tobacco within the next 30 days, how likely do you think it is that you would succeed in quitting?</b>		
Very unlikely	18% (1.8)	20% (1.9)
Somewhat unlikely	23% (1.9)	22% (1.9)
Somewhat likely	32% (2.1)	30% (2.1)
Very likely	22% (1.9)	23% (2.0)
No opinion	5% (1.1)	5% (1.0)

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

\* Unweighted sample sizes (on which the weighted data are based) are shown.

**Table A-9: Length of Time Since Quitting Tobacco**  
– Among Former Regular Users<sup>†</sup> –

<b>Former Regular Users Length of Time Since Quit Tobacco (Q5)</b>		
	<b>Test</b> (n* = 2,483)	<b>Control</b> (n* = 2,489)
Less than 6 months	9% (1.2)	8% (1.1)
6 months or longer	91% (1.2)	92% (1.1)

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

\* Unweighted sample sizes (on which the weighted data are based) are shown.

**Table A-10: Likelihood to Initiate Tobacco**  
– Among Never Regular Users<sup>†</sup> –

<b>Table 10: Never Regular Users</b>		
<b>Q6a: Do you think you will smoke a cigarette in the next year?</b>	<b>Test (n* = 2,522)</b>	<b>Control (n* = 2,520)</b>
Definitely yes	1% (0.4)	1% (0.4)
Probably yes	3% (0.6)	3% (0.6)
Probably no	5% (0.9)	6% (1.0)
Definitely no	89% (1.2)	88% (1.3)
Don't know	2% (0.6)	2% (0.6)
<b>Q6b: If one of your best friends were to offer you a cigarette, would you smoke it?</b>	<b>Test (n* = 2,522)</b>	<b>Control (n* = 2,520)</b>
Definitely yes	1% (0.3)	1% (0.3)
Probably yes	3% (0.7)	4% (0.8)
Probably no	6% (0.9)	6% (1.0)
Definitely no	88% (1.3)	87% (1.3)
Don't know	2% (0.6)	2% (0.5)

Numbers in parentheses represent the 95% confidence interval half-width ( $\pm$  mean estimate).

<sup>†</sup> Tobacco status is based on self-reported tobacco usage.

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Appendix B: Camel SNUS MRTP Likelihood of Use Stimuli  
"TEST" STIMULI (WITH MODIFIED RISK MESSAGING)



The advertisement features a large, faint "CAMEL" watermark in the background. The main text is arranged in a vertical stack: "SWAP" in blue, "THE SMOKE FOR" in blue, "MORE" in orange, "FREEDOM" in orange, "&" in orange, "LESS" in blue, and "RISK" in blue. To the right of this text is a tin of Camel SNUS mellow, which is silver with an orange label featuring a blue camel silhouette and the words "SNUS mellow". A lit cigarette lies horizontally in front of the tin, with a small pile of ash and tobacco at its tip. In the bottom left corner, the word "SNUS" is printed in a small, black, sans-serif font. At the bottom of the advertisement is a white rectangular box with a black border containing the text "WARNING: Smokeless tobacco is addictive."

**SWAP**  
THE SMOKE FOR  
**MORE**  
FREEDOM  
& **LESS**  
**RISK**

SNUS

**WARNING: Smokeless tobacco is addictive.**



# CAMEL

## WHAT IS CAMEL SNUS?

- Camel SNUS (rhymes with "moose") is finely ground premium tobacco in a soft fleece pouch.
- Like all tobacco products, Camel SNUS contains nicotine and is addictive.

## HOW IS IT DIFFERENT?

- Many smokeless tobacco products, like dip and chew, are fermented loose tobacco.
- Sure, they're smoke-free, but they can get messy and require spitting.
- Snus is different. It's smoke-free, mess-free and spit-free.
- Camel SNUS is heat-treated, not fermented, and crafted with four main ingredients: tobacco, water, salt and flavoring.

## HOW DO I USE IT?

- Smokers who use Camel SNUS instead of cigarettes can significantly reduce their health risks from smoking.
- Slide a pouch under your upper lip.
- Taste the real, premium tobacco.
- Dispose of the pouch in the trash when you are finished.

### 4 SIMPLE MAIN INGREDIENTS



### 2 POUCH SIZES (actual size)



### 5 FLAVORS



SNUS

**WARNING: Smokeless tobacco is addictive.**

## NO SMOKE = LESS RISK



Smokers who switch completely from cigarettes to Camel SNUS can significantly reduce their risk of lung cancer, oral cancer, respiratory disease, and heart disease.



Scientific studies have shown that Camel SNUS contains fewer carcinogens than cigarette smoke.



Camel SNUS is smoke-free, so there are no secondhand smoke risks for those around you.

## I'M A SMOKER. WHY WOULD I SWITCH?

### No smoke means...

- No hassle
- No lingering smoke smell
- More freedom
- Fewer carcinogens
- Less risk for you and those around you



DISCOVER MORE @ [SNUSNATION.COM](https://www.snusnation.com)\*

## NO TOBACCO PRODUCT IS SAFE

- However, smokers who use Camel SNUS **instead of** cigarettes can significantly reduce their health risks from smoking.
- Like all tobacco products, Camel SNUS contains nicotine and **is addictive**.
- Adults who do not use or have quit using tobacco products should not start. Minors and pregnant women should never use tobacco products.
- If you're a smoker concerned about the health risks from smoking, the best choice is to quit. A good place to begin is talking with a healthcare provider.
- But if you're not going to quit using tobacco products, you should think about switching to Camel SNUS.

\*WEBSITE RESTRICTED TO AGE 21+ TOBACCO CONSUMERS SNUS

**WARNING: Smokeless tobacco is addictive.**



CAMEL

**SWAP**  
THE SMOKE FOR  
**MORE**  
FREEDOM  
& **LESS**  
**RISK**



SNUS

**WARNING:** This product  
can cause mouth cancer.



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### 4 SIMPLE MAIN INGREDIENTS



### 2 POUCH SIZES



### 5 FLAVORS



CUSTOMIZE YOUR ENJOYMENT WITH UP TO  
**30 MINUTES**  
OF FLAVOR PER POUCH



SNUS

**WARNING:** This product can cause mouth cancer.

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\*WEBSITE RESTRICTED TO AGE 21+ TOBACCO CONSUMERS SNUS

**WARNING: This product  
can cause mouth cancer.**



CAMEL

**SWAP**  
THE SMOKE FOR  
**MORE**  
FREEDOM  
& **LESS**  
**RISK**



SNUS

WARNING: This product is not a  
safe alternative to cigarettes.

## WHAT IS CAMEL SNUS?

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## HOW DO I USE IT?

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- Slide a pouch under your upper lip.
- Taste the real, premium tobacco.
- Dispose of the pouch in the trash when you are finished.

### 4 SIMPLE MAIN INGREDIENTS



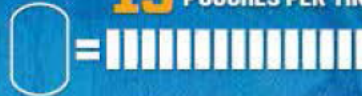
Regular

Large



### 5 FLAVORS

15 POUCHES PER TIN



CUSTOMIZE YOUR  
ENJOYMENT WITH UP TO  
**30 MINUTES**  
OF FLAVOR PER POUCH



SNUS

**WARNING:** This product is not a safe alternative to cigarettes.



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\*WEBSITE RESTRICTED TO AGE 21+ TOBACCO CONSUMERS SNUS

**WARNING:** This product is not a safe alternative to cigarettes.

CAMEL

**SWAP**  
THE SMOKE FOR  
**MORE**  
FREEDOM  
& **LESS**  
**RISK**



SNUS

WARNING: This product can cause  
gum disease and tooth decay.



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### 4 SIMPLE MAIN INGREDIENTS



### 5 FLAVORS



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ENJOYMENT WITH UP TO  
**30 MINUTES**  
OF FLAVOR PER POUCH



SNUS

**WARNING:** This product can cause gum disease and tooth decay.

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\*WEBSITE RESTRICTED TO AGE 21+ TOBACCO CONSUMERS SNUS

**WARNING:** This product can cause gum disease and tooth decay.



**SWAP**  
**THE SMOKE FOR**  
**MORE**  
**FREEDOM**



A tin of Camel SNUS mellow is shown next to a crushed cigarette. The tin is silver with an orange label featuring a blue camel logo and the text "CAMEL" at the top and "SNUS mellow" at the bottom. The cigarette is crushed and lying on its side, with some ash visible.

SNUS

**WARNING: Smokeless tobacco is addictive.**

CAMEL

## WHAT IS CAMEL SNUS?

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### 4 SIMPLE MAIN INGREDIENTS



Regular Large

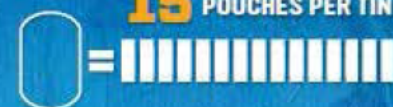


2 POUCH SIZES  
(actual size)



5 FLAVORS

15 POUCHES PER TIN



CUSTOMIZE YOUR  
ENJOYMENT WITH UP TO  
**30 MINUTES**  
OF FLAVOR PER POUCH



SNUS

**WARNING: Smokeless tobacco is addictive.**





DISCOVER MORE @ [SNUSNATION.COM](http://SNUSNATION.COM)\*

## HOW IS IT DIFFERENT?

- Many smokeless tobacco products, like dip and chew, are fermented loose tobacco.
- Sure, they're smoke-free, but they can get messy and require spitting.
- Snus is different. It's smoke-free, mess-free and spit-free.
- Camel SNUS is heat-treated, not fermented, and crafted with four main ingredients: tobacco, water, salt and flavoring.

## I'M A SMOKER. WHY WOULD I SWITCH?

No smoke means...

- No hassle
- No lingering smoke smell
- More freedom

\*WEBSITE RESTRICTED TO AGE 21+ TOBACCO CONSUMERS **SNUS**

**WARNING: Smokeless tobacco is addictive.**

CAMEL

**SWAP**  
**THE SMOKE FOR**  
**MORE**  
**FREEDOM**



SNUS

**WARNING: This product  
can cause mouth cancer.**



CAMEL

## WHAT IS CAMEL SNUS?

- Camel SNUS (rhymes with "moose") is finely ground premium tobacco in a soft fleece pouch.

## HOW DO I USE IT?

- Slide a pouch under your upper lip.
- Taste the real, premium tobacco.
- Dispose of the pouch in the trash when you are finished.

### 4 SIMPLE MAIN INGREDIENTS



### 5 FLAVORS



CUSTOMIZE YOUR  
ENJOYMENT WITH UP TO  
**30 MINUTES**  
OF FLAVOR PER POUCH



SNUS

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SNUS

WARNING: This product is not a  
safe alternative to cigarettes.

# CAMEL

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## HOW DO I USE IT?

- Slide a pouch under your upper lip.
- Taste the real, premium tobacco.
- Dispose of the pouch in the trash when you are finished.

### 4 SIMPLE MAIN INGREDIENTS



**2** POUCH SIZES  
(actual size)



**5** FLAVORS



**15** POUCHES PER TIN

CUSTOMIZE YOUR  
ENJOYMENT WITH UP TO  
**30 MINUTES**  
OF FLAVOR PER POUCH



SNUS

**WARNING:** This product is not a safe alternative to cigarettes.





DISCOVER MORE @ [SNUSNATION.COM](http://SNUSNATION.COM)\*

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**WARNING:** This product is not a safe alternative to cigarettes.

CAMEL

**SWAP**  
**THE SMOKE FOR**  
**MORE**  
**FREEDOM**



SNUS

WARNING: This product can cause  
gum disease and tooth decay.



# CAMEL

## WHAT IS CAMEL SNUS?

- Camel SNUS (rhymes with "moose") is finely ground premium tobacco in a soft fleece pouch.

## HOW DO I USE IT?

- Slide a pouch under your upper lip.
- Taste the real, premium tobacco.
- Dispose of the pouch in the trash when you are finished.

### 4 SIMPLE MAIN INGREDIENTS



### 2 POUCH SIZES



### 5 FLAVORS



CUSTOMIZE YOUR  
ENJOYMENT WITH UP TO  
**30 MINUTES**  
OF FLAVOR PER POUCH



SNUS

**WARNING:** This product can cause gum disease and tooth decay.



DISCOVER MORE @ [SNUSNATION.COM](http://SNUSNATION.COM)\*

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\*WEBSITE RESTRICTED TO AGE 21+ TOBACCO CONSUMERS SNUS

**WARNING:** This product can cause gum disease and tooth decay.



**Regulatory Oversight**  
**Behavioral Research**  
**Study Protocol**

**Protocol Identifier: RO-BR-2014-03**

**Camel SNUS Modified Risk Messaging: Likelihood of Use among Tobacco Users and Non-Users**

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# Camel SNUS Modified Risk Messaging: Likelihood of Use among Tobacco Users and Non-Users

## A Introduction

### A1 Study Abstract

RAI Services Company (RAIS),<sup>19</sup> on behalf of R. J. Reynolds Tobacco Company, intends to submit a Modified Risk Tobacco Product (MRTP) application to the U.S. Food and Drug Administration (FDA) requesting that the Agency issue a “risk modification” order for Camel SNUS. The MRTP application will propose modified risk messaging for six (6) Camel SNUS products (collectively “Camel SNUS”) currently marketed in the United States. Specifically, RAIS will seek an order for “reduced risk” messaging on Camel SNUS, intended for current regular tobacco users, as follows:

*“Smokers who switch completely from cigarettes to Camel SNUS can significantly reduce their risk of lung cancer, oral cancer, respiratory disease, and heart disease.”*

This study has been developed to support that application by assessing the potential effects of the proposed Camel SNUS modified risk messaging on the likelihood that:

- current regular tobacco users, including those who are more likely to quit using tobacco (i.e., potential quitters), will start using Camel SNUS
- former regular tobacco users will re-initiate tobacco use with Camel SNUS
- never regular tobacco users will initiate tobacco use with Camel SNUS

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<sup>19</sup> RAIS is a wholly-owned subsidiary of Reynolds American Inc. (“RAI”) that bears primary responsibility for coordinating regulatory compliance for RAI’s FDA-regulated operating companies, namely R. J. Reynolds Tobacco Company, American Snuff Company, LLC, and Santa Fe Natural Tobacco Company, Inc.



## A2 Research Objectives

(1) **Primary research objective** - measure likelihood of use<sup>20</sup> for Camel SNUS, with versus without modified risk messaging, among consumers overall and among the following self-defined tobacco user groups<sup>21</sup>:

- *current regular tobacco users*: currently use tobacco on a regular or occasional basis
  - *potential quitters*: current regular tobacco users who report an intention to quit using tobacco<sup>22</sup>
- *former regular tobacco users*: have been regular tobacco users in the past, but do not currently use tobacco on a regular or occasional basis
- *never regular tobacco users*: have never been regular tobacco users

In addition, likelihood of use will be measured separately for white males in each of the self-defined tobacco user groups. White males are most likely to be affected positively or negatively by the Camel SNUS modified risk messaging, based on the current demographic characteristics of smokeless tobacco users.

(2) **Secondary research objective** – understand product use intentions among current tobacco users and non-users who anticipate using Camel SNUS (with and without modified risk messaging), as follows:

- *among current regular tobacco users who do not report an intention to quit tobacco*,
  - % who anticipate using Camel SNUS *in addition* to using their current tobacco product(s)
  - % who anticipate using Camel SNUS *instead of* using their current tobacco product(s)

---

<sup>20</sup> Likelihood of use operationalized in terms of likelihood to purchase with intent to try and predicted purchase rate (refer to subsequent sections in the protocol for additional discussion).

<sup>21</sup> There are several ways to define tobacco use status. Self-reported behavior is used because a number of published studies and a meta-analysis (Patrick, Cheadle, Thompson, Diehr, Koepsell, and Kinne, 1994, *American Journal of Public Health*, 84(7), 1086-1093) demonstrate its utility; and, self-reported behavior aligns more closely with the dependent variable (i.e., ratings of likelihood of use) than categorizations based on historical and current tobacco use behaviors. Note, however, that including survey questions about historical use will make it possible to likewise analyze the data using definitions based on those variables.

<sup>22</sup> Potential quitters are a subset of current regular tobacco users who do not intend to be using any tobacco product 9 months from the time of the survey. A time frame of 9 months was used to match the time period used when creating the algorithm developed to estimate purchase of a tobacco product with intent to try.

- distribution of ratings of likelihood to switch back to their current tobacco product(s), including more harmful tobacco products
- *among former regular tobacco users,*
  - distribution of ratings of likelihood to re-initiate use of more harmful existing tobacco products (e.g., using Camel SNUS as a gateway)
- *among never regular tobacco users,*
  - distribution of ratings of likelihood to switch to more harmful existing tobacco products (e.g., using Camel SNUS as a gateway)

### **A3 Research Hypothesis**

The primary research hypothesis is that there will be a significant interaction for the predicted purchase rate of Camel SNUS among self-defined tobacco groups and the presence or absence of the proposed modified risk messaging, such that: (a) the difference between the predicted purchase rates (i.e., with modified risk messaging versus without messaging) will be larger among current regular tobacco users than among former and never regular tobacco users; and, (b) the predicted purchase rate for Camel SNUS with modified risk messaging will be statistically significantly higher among current regular tobacco users than among former and never regular tobacco users.

<b>B Background</b>
---------------------

### **B1 Rationale for the Study**

RAIS is in the process of developing an application to FDA to market Camel SNUS as an MRTP. Specifically:

*“Under Section 911 of the Family Smoking Prevention and Tobacco Control Act of 2009 (FSPTCA) the law requires the FDA, when evaluating an MRTP application, to take into account the “increased or decreased likelihood that existing users of tobacco products who would otherwise stop using such product will switch to the tobacco product that is the subject of the application” as well as “the increased or decreased likelihood that persons who do not use tobacco products will start using the tobacco product that is the subject of the application.”* <sup>23</sup>

<sup>23</sup> Food and Drug Administration (FDA). (2009, June 22). *Family Smoking Prevention and Tobacco Control Act § 911(g)(4)(B)-(C)*, 21 U.S.C. § 387k(g)(4)(B)-(C). Retrieved from <http://www.gpo.gov/fdsys/pkg/PLAW-111publ31/pdf/PLAW-111publ31.pdf>

Therefore, consideration for this research began with a thorough review of FDA's draft guidance document, "Guidance for Industry: Modified Risk Tobacco Product Applications"<sup>24</sup> and the Institute of Medicine Report, "Scientific Standards for Studies on Modified Risk Tobacco Products".<sup>25</sup> Those documents recommend conducting objective, hypothesis-driven research with experimental outcomes to estimate usage of a product before it enters the market in order to ultimately estimate the product's potential impact on population health.

Thus, this research was designed to project likelihood of use for Camel SNUS with modified messaging among consumers, overall and among specified sub-groups of tobacco users and non-users (e.g., current regular tobacco users, including those intending to quit tobacco; former regular and never regular tobacco users).

## **B2 Prior Literature and Studies**

Currently, there are no available studies that provide information on the methodologies that best project likelihood of use for an MRTP. As a result, the extensive market research literature associated with projecting usage of new products more generally was used to inform the current methodology.<sup>26</sup>

An evidence-based algorithm was developed to convert likelihood of purchase with intent to try ratings to projectable estimates of actual purchase (i.e., projected purchase rates).

There is, of course, no way to develop a predictive algorithm specifically for an MRTP because there are currently no such products in the marketplace. For that reason, an algorithm was developed using ratings of likelihood to purchase for a new-to-market cigarette (based on exposure to an advertisement) prior to its launch, and self-reported purchase behavior after nine months. The resulting algorithm is expected to over-estimate likelihood of use for an MRTP, based on two considerations:

- it assumes that awareness and availability of the MRTP are comparable to a well-recognized and widely distributed cigarette brand (i.e., the algorithm was developed using a Marlboro brand cigarette)

---

<sup>24</sup> Food and Drug Administration (FDA). (2012, March). *Guidance for Industry: Modified Risk Tobacco Product Applications: Draft Guidance*. Retrieved from <http://www.fda.gov/downloads/TobaccoProducts/GuidanceComplianceRegulatoryInformation/UCM297751.pdf>

<sup>25</sup> Institute of Medicine (IOM). (2011, December 14). *Scientific Standards for Studies on Modified Risk Tobacco Products*. Washington, DC: National Academy of Sciences.

<sup>26</sup> Morwitz V.G., Steckel J.H. & Gupta A. (1997). *When do purchase intentions predict sales?* Working Paper, Marketing Science Institute, June, Report No. 97-112.

- it assumes that all purchasers continue to use the MRTP, despite the fact that some consumers may not find the product to be acceptable

In five (5) empirical tests using subsequent tobacco products that have been launched, the algorithm over-predicted actual purchase in every instance. For a complete discussion of how that algorithm was developed, and how it has been used to date, refer to [Attachment I](#), “New Tobacco Product “Attractiveness” Study: An Algorithm to Predict Usage of New Tobacco Products Prior to Market Launch (Methodological Report).”

<b>C Study Outcomes</b>
-------------------------

### ***C1 Primary Outcome Measures***

The primary outcome measure for this study will be, as follows:

- estimated percentages of consumers who will actually purchase Camel SNUS with and without modified risk messaging, developed by submitting likelihood ratings data to an empirically developed, evidence-based algorithm

Data for this measure will be provided for consumers overall, as well as for specified sub-groups outlined in [Section A2](#) of this study protocol.

### ***C2 Rationale for the Selection of Outcome Measures***

The outcome measure, estimated percentage of consumers who will actually purchase Camel SNUS with and without modified risk messaging based on likelihood to purchase ratings, was developed and tested using a number of different tobacco products. For a complete discussion of how the algorithm was developed to transform scalar ratings data into purchase estimates, refer to *Attachment I*.

### ***C3 Research Stimuli***

The research stimuli will be high resolution color images of print advertisements for Camel SNUS, with and without modified risk messaging (“test” and “control” stimuli, respectively). The test stimulus will include images and information for the entire Camel SNUS family (two pouch sizes, regular and large; and, five styles including Frost, Mint, Mellow, Robust, and Winterchill). Each test stimulus will also include one of four randomly assigned mandated warning labels that will cover at least 20% of the area of each image or page of the advertisement. This design is recommended because it mimics the environment in which the proposed modified risk messaging would appear in the marketplace.

The research stimuli images are provided in [Appendix B](#), “Camel SNUS MRTP Likelihood of Use Stimuli.”

## **D Study Design**

### ***D1 Overview or Design Summary***

#### ***A. Data Collection Procedures***

Research Now will send e-mail invitations to a random subset of panel members who belong to the target population of U.S. adults who are legally eligible to purchase tobacco (as legislated by the states in which they reside), up to a maximum of 75 years old. Each invitation will contain a generic survey title (“Get Rewarded for Your Time – Study about Consumers”), the length of the survey, incentive amount provided for successful completion of the survey, and instructions for accessing the secure website for the survey (hosted by **NAXION**). Once a panel member enters the secure website, a brief introduction will inform the panel member of the private and voluntary nature of the survey. Individuals who consent to participate in the survey will be able to access the survey by clicking on the link to the survey URL. Panel members who choose to participate will answer a few qualifying questions necessary to monitor quotas.

Upon completion of the screener, respondents will be assigned via survey programming logic to one of eight monadic “arms” created by crossing type of messaging (i.e., with or without modified risk messaging) and four mandated warnings in order to ensure demographic balance across the arms.

#### ***B. Survey Content and Structure***

The survey itself (refer to [Appendix A](#): “Camel SNUS MRTP Likelihood of Use Survey”) will consist of the following elements:

- question about anticipated future tobacco use (to understand future intentions prior to presenting information, including modified risk messaging, specific to Camel SNUS)<sup>27</sup>
- presentation of an advertisement for Camel SNUS, with or without modified risk messaging
- ratings of likelihood of purchase with the intent to try using a 10-point scale, whereby “1” means “Definitely Would Not Purchase It to Try” and “10” means

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<sup>27</sup> A time frame of 9 months was used for this question to match the time period used when creating the algorithm developed to predict purchase rate with intent to try.

### “Definitely Would Purchase It to Try”

- question to determine how current regular tobacco users, who rate their likelihood to purchase greater than “1”, anticipate using Camel SNUS (e.g., instead of, or in addition to, existing tobacco product(s))
- question to determine how likely current regular tobacco users, who rate their likelihood of purchase greater than “1” *and* plan to use Camel SNUS instead of their current tobacco product(s), are to switch back to their current tobacco product(s) after trying Camel SNUS
- question to determine how likely former and never regular tobacco users, who rate likelihood of purchase greater than “1”, are to switch to a more harmful existing tobacco product after trying Camel SNUS
- question to determine why current regular tobacco users, who intend to quit tobacco but rate likelihood of purchase greater than “1”, have some interest in using Camel SNUS
- questions that allow consumers to be categorized based on historical tobacco usage
- questions (from the FDA Cigarette Warning Label study<sup>28</sup>) for current tobacco users to assess interest, and anticipated success, in quitting tobacco use
- question to determine how long ago former tobacco users quit using tobacco
- questions to determine whether never tobacco users are likely to start using tobacco

## ***D2 Subject Selection and Withdrawal***

### ***A. Inclusion Criteria***

U.S. adults who are: (1) legally eligible to purchase tobacco products (as legislated by the states in which they reside), up to a maximum age of 75 years old; and, (2) members of the Research Now panel. Research Now will only invite English-speaking consumers because Camel SNUS modified risk messaging and advertising are expected to be in English only.

### ***B. Exclusion Criteria***

Individuals who are not old enough to purchase tobacco legally (based on the minimum tobacco-purchasing age in the state of residence), or who currently use Camel SNUS.

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<sup>28</sup> Food and Drug Administration (FDA). (2012). *Communicating Smoking Risks through Graphic Warning Labels*.

In addition, Research Now is constantly managing panel members labeled as “professional survey takers” or “gamers.” Research Now has an extensive process in place to track and remove members who have proven in previous surveys that they are not taking surveys properly. Research Now checks for members who are speeding, entering gibberish into open-ended questions, and/or failing “traps” programmed into some surveys in order to identify whether the member should be flagged. If a member continually exhibits “bad behavior”, Research Now flags them. The respondents that are flagged for a propensity for bad survey behavior will then receive only dummy surveys moving forward, i.e., until they show that they are able to properly take surveys. If they exhibit the bad behavior on the dummy surveys, then they are removed from the panel. If they do well with the dummy surveys (exhibiting “good behavior”), then they are reactivated and put back in the panel.

Finally, Research Now also has a continuous process in place that allows respondents to “rest.” Panel members set the number of survey invitations they would like to receive per week when they enroll in the panel. Once that limit is reached, they are deemed “resting” and not available for surveys until their frequency limiters are reset. These limiters allow Research Now to maintain their panelists and keep them engaged.

### ***C. Subject Recruitment Plans and Consent Process***

Members of the Research Now national consumer online panel, a demographically balanced panel with over three million members from all 50 states in the United States and the District of Columbia (DC),<sup>29</sup> will receive an e-mail inviting them to participate in screening for the survey. Those who agree to participate will proceed to answer a few qualifying questions.

### ***D. Randomization Method and Blinding***

Invitations will be sent to a random sample from the Research Now panel. The survey sponsor and topic will be blinded.

### ***E. Risks and Benefits***

We do not perceive there to be any risks associated with participating in this study, but all respondents will be shown a disclaimer at the conclusion of the survey in order to mitigate the possibility that consumers perceive the survey to be an inducement to use

---

<sup>29</sup> The study sample will be balanced by U.S. Census region (i.e., Northeast, Midwest, South, West), as described in [Table 3](#); thus, respondents on Research Now’s panel from the Pacific Islands and other territories such as American Samoa, Armed Forces Europe, Armed Forces Pacific, Federated States of Micronesia, Palau, Northern Mariana Islands, Virgin Islands, and Puerto Rico will not be included in the sample.

tobacco. Respondents will receive a nominal benefit from Research Now for participating in this study (refer to [Section I2](#) for rewards/reimbursement details).

Panel membership and survey participation are both entirely voluntary. To minimize the prospect that consumers perceive the survey to be an inducement to use tobacco, the following statement will appear at the end of the survey<sup>30</sup>:

*“Please note that the goal of this survey is only to examine likelihood of use for tobacco products in the presence and absence of modified risk messaging among current tobacco users and non-users. It is **not** intended to encourage you or anyone else to continue or start using tobacco products.”*

- *Individuals should consider the conclusions of the U.S. Surgeon General, as well as information from the Centers for Disease Control and Prevention, and other public health and medical officials when making decisions regarding the use of tobacco.*
- *The best course of action for tobacco users concerned about their health is to quit.*
- *Minors should never use tobacco products, and adults who do not use or have quit using tobacco products should not start.*
- *Adults who smoke should avoid exposing minors to secondhand smoke; and, adult smokers should comply with rules and regulations designed to respect the rights of other adults.*

*All information contained in this advertising is provided for your information only and for regulatory research purposes only. [In order to advertise that a smokeless tobacco product is less harmful than a cigarette or another smokeless tobacco product, the company must first obtain clearance from the U.S. Food and Drug Administration (“FDA”). As part of that clearance process, a company must present evidence on the potential for modified risk messaging to affect likelihood of product use among current tobacco users and non-users.] The advertisements used in this research study [those that include modified risk messaging for Camel SNUS,] have not and will not be used by the company to promote its products commercially without first obtaining clearance from FDA to do so.*

*The information and opinions expressed here are believed to be accurate, based on sound science and the best judgment available to the company. However, no action or inaction should be taken based on the contents of this information; instead, you should consult appropriate health professionals on any matter relating to your health.”*

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<sup>30</sup> The text in brackets will not be shown to consumers in the “control” (proposed Camel SNUS advertising without modified risk messaging) arm.



## ***E1 Screening for Eligibility***

The sampling frame for the study is all U.S. adults who are legally eligible to purchase tobacco products (as legislated by the states in which they reside), up to 75 years old. Although Camel SNUS modified risk messaging is expressly intended for people who are adult tobacco users, the study intends to examine likelihood of use for the product among all adult consumers (i.e., current regular tobacco users and non-users). Due to concerns about showing tobacco products to minors and consistent with RAIS policy, there will be no attempt to draw a sample of consumers below the legal age for purchasing tobacco products.

The survey will use a convenience sample drawn from the Research Now national consumer online panel, a demographically balanced panel with over three million members from all 50 states and DC. Historically, survey research relied on probability sampling to justify the use of parametric statistics (e.g., to allow calculation of a statistical confidence interval). But non-probability samples are, today, both commonplace and widely accepted in light of the acknowledged challenges of drawing true probability samples and the belief that, with appropriate care, it is legitimate to use well-designed non-probability samples to represent the population at large (*for a discussion, see The Journal of Survey Statistics and Methodology, November 2013*). Although we will be unable to generalize our findings to individuals who do not use the internet, we have no reason to believe that their likelihood of use, based on predicted purchase rates, for Camel SNUS with modified risk messaging will be sufficiently different from demographically similar internet panel users to have a material effect on the research outcome.

All sampled panel members who, upon receiving an e-mail invitation, agree to proceed through the survey screening will answer a few qualifying questions designed to monitor quotas developed to maximize representativeness of the sample with respect to basic demographic parameters (e.g., smoking behavior, age, gender, education, and ethnicity/race), and to facilitate weighting of the data to match the U.S. population overall.<sup>31</sup>

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<sup>31</sup> The following sources will be used to develop all population counts: Census website (<http://www.census.gov/>); the March 2013 Annual Social and Economic Supplement to the Current Population Survey (CPS); and, the Tobacco Use Supplement to the Current Population Survey (from May 2010, August 2010, and January 2011).

## **E2 Sampling Plan**

Upon completion of the screener, consumers will be stratified into one of three self-defined tobacco user groups (see survey document in [Appendix A](#)):

- current regular tobacco user
- former regular tobacco user
- never regular tobacco user

Quotas will be in place on the following dimensions:

- *tobacco behavior group*: current, former, or never regular tobacco users
- *age*: legal tobacco age, by state, to 30 years, 31 to 50 years, or 51 to 75 years
- *gender*: male or female
- *education*: high school or less, some college, 4-year degree, or post-4-year degree
- *ethnicity*: Hispanic or non-Hispanic
- *race*: Caucasian, African American, or Asian/Other
- *geography*: Northeast, South, Midwest, or West

Within in each quota cell (represented by the combination of tobacco user group and demographics), respondents will be randomly assigned to view one of the two stimuli, with or without modified risk messaging, presented with one of the four mandated warnings.

The arms of this survey will be balanced on (1) the number of current regular SNUS users; (2) the number of former regular SNUS users; and (3) the number of current regular cigarette users.

A copy of the proposed screener, eligibility criteria, and quotas can be found in [Appendix A Table 1](#).

<b>F Statistical Plan</b>
---------------------------

### **F1 Sample Size Determination and Power**

The total sample size for this study will be approximately 15,000 consumers (i.e., tobacco users and non-users), with half of them seeing an advertisement with modified risk messaging and half of them seeing an advertisement without modified risk messaging. This sample size is driven by a desire to have a sufficiently large sample in

each of the three tobacco user groups, i.e., current, former, and never regular tobacco users, and to allow for quota-sampling by combinations of demographic variables (e.g., age groups within the ethnicities and geographic regions).

This sample size is sufficient to allow the data to be weighted to population counts for all parameters of interest in each of the three tobacco user groups, as specified in [Section E2, “Sampling Plan”](#).

The following table provides anticipated confidence intervals for key consumer groups and sub-groups, based on standard errors from a previous study of ratings for Camel SNUS Frost Large:

Type of Respondent	Confidence Intervals on Predicted Purchase Rate
All respondents	0.8% - 1.9%
Current regular users	3.6% - 6.9%
Potential Quitters	2.5% - 5.3%
Former regular users	0.6% - 2.4%
Never regular users	0.2% - 0.6%
White males	1.0% - 2.2%

With 7,500 consumers per messaging arm, the study will have approximately 80% power to detect mean differences in predicted purchase rate of roughly 1% across the arms.

## **F2 Analysis Plan**

### **A. Data Weighting**

Data will be weighted to account for quota sampling (*see quota groups, Appendix A Table 1*). In preparation for weighting, population counts will be developed to estimate the number of individuals in each cell represented by the intersection of geographic region, tobacco use status, and age. The weighting process will then consist of:

- developing **base weights** by dividing the number of completed interviews in the cells that represent the intersection of geographical region, tobacco use status, and age by the population counts in those cells
- adjusting the base weights using **raking** to weight up to population counts in cells represented by the intersection of the following parameters:
  - tobacco status and gender

- tobacco status and ethnicity
- tobacco status and education
- tobacco status and age
- tobacco status and region
- age and ethnicity

Raking<sup>32</sup> helps to account for under-coverage and other sources of bias by adjusting the individual weights that result from the previously applied steps to independent estimates of population parameters from the Census Bureau's Population Estimates Program, the Annual Social and Economic Supplement to the Current Population Survey (CPS), and the Tobacco Use Supplement to the Current Population Survey.<sup>33</sup>

### **B. Analysis**

The data will be properly weighted and will be submitted to the previously mentioned algorithm to project purchase estimates for Camel SNUS with and without modified risk messaging. An analysis of variance (ANOVA) will be conducted using message format (with versus without modified risk messaging) and tobacco user group (current, former, and never regular tobacco users) as factors. The same analyses will be conducted for white males only.

## **F3 Statistical Methods**

Projected purchase rates will be used as dependent variables in traditional parametric analyses (i.e., ANOVA and t-tests) to test the hypothesis listed in [Section A3](#). Because Research Now uses probability sampling when inviting panel members to be screened for survey participation, it is appropriate to use inferential statistics, based on the understanding that assumptions must be made to extrapolate beyond the population of panel members.

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<sup>32</sup> Michael P. Battaglia, David Izrael, David C. Hoaglin, and Martin R. Frankel. (2009, June). *Practical Considerations in Raking Survey Data*. Survey Practice, Volume 2, No. 5.

<sup>33</sup> Centers for Disease Control and Prevention. (2012). *Improving Survey Methodology*. Office of Surveillance, Epidemiology, and Laboratory Services, Behavioral Risk Factor Surveillance System. Retrieved from [http://www.cdc.gov/surveillancepractice/documents/DBS\\_BRFSS%20Improvements\\_12\\_232372\\_M\\_REM\\_5\\_25\\_2012.pdf](http://www.cdc.gov/surveillancepractice/documents/DBS_BRFSS%20Improvements_12_232372_M_REM_5_25_2012.pdf)

<b>G Data Handling and Record Keeping</b>
---

## ***G1 Confidentiality and Security***

**NAXION** is an ISO 20252:2012 certified company. As such, we comply with documented procedures with regard to confidentiality and security.

Regarding confidentiality, **NAXION** will only entrust survey data with other entities when: 1) the participant gives explicit permission to release this data; 2) the data is shared with an entity who agrees in writing that the data will be held strictly confidential and that the data will be used for research purposes only; or, 3) the release of this data is required by law. This assurance is shown to survey participants before they provide any survey data. They may refuse to participate in the survey as a consequence if they wish.

Participants are also shown an active link to **NAXION's** privacy policy.

No respondent-identifiable information (e.g., name, date of birth, address, phone number, or social security number) will be available to **NAXION**; thus, respondents' identities will never be made known to RAIS.

Data is held securely and in compliance with client instructions and professional codes. Electronic documents are backed up from the network, and at least one copy of the network backups are stored offsite.

Additionally, we adhere to the following:

- all critical systems are backed up
- backups are periodically tested
- virus protection software is effective and current
- data on laptops are not shared across staff members
- memory sticks are encrypted and cleared between use by different staff members

Items above are audited by a third party on an annual basis.

## ***G2 Training***

**NAXION** employees are initially trained by being assigned to tasks that are reviewed by a more experienced employee. For example, a new employee may write a part of a survey which will be reviewed by another employee with sufficient experience to write the survey himself/herself. In the event that formal training is conducted, that training

will be recorded by Human Resources on the personnel record. Employees keep a record of the in-house training sessions they have attended.

Otherwise, training needs are primarily identified via performance appraisals. These appraisals are completed by the staff member's supervisor. Training needs are clearly identified. Performance appraisals are conducted at least once per year for staff members below the Group Director level. During the first year of employment, there are also 3-month and 6-month performance evaluations.

### ***G3 Records Retention***

NAXION stores its documents in compliance with its clients' requirements. For RAIS, records are stored indefinitely.

Research records will be retained such that a project could be replicated in the future, as necessary, including primary records and supporting records (which include research process management system records). Records will be retained securely and in such a way that they are safe from damage. Electronic records will be backed up, and at least one copy will be stored offsite.

### ***G4 Performance Monitoring***

On an annual basis, the Research Process Management System (NAXION's internal performance monitoring system) is reviewed by the Quality Manager, COO, and CEO to determine:

- its business effectiveness
- compliance to processes within the company
- need for change or improvement
- that it continues to meet industry standards and legal and regulatory requirements

<b>H Study Monitoring, Auditing, and Inspecting</b>
---

#### ***H1 Study Monitoring Plan***

Throughout field, NAXION will monitor the number of completed surveys in each quota cell/group daily via a proprietary online reporting system. Survey sampling adjustments can then be made on an ongoing basis to help achieve the desired number of completed surveys in each quota cell.



Experience with online tobacco research suggests that about 15% of those who are sent survey invitations will complete a study. **NAXION** will implement several procedures to maximize participation. We will keep the study questionnaire at a reasonable length to minimize break-offs. Additionally, the following procedures will be used to maximize cooperation and to achieve the desired response rates:

- Research Now will provide toll-free telephone numbers to all sampled individuals, and invite them to call with any questions or concerns about any aspect of the study. **NAXION** will provide a toll-free telephone number and e-mail address for a **NAXION** project member should participants have any questions about the study or their rights as a study participant.
- Research Now staff will work with the project staff of **NAXION** to address any problems that arise throughout the course of data collection.

Invited panel members who do not visit the site for screening will receive one e-mail reminder from Research Now requesting their participation in the survey. These “reminder” e-mails will be sent roughly one week after initial survey invitations.

## ***H2 Auditing and Inspecting***

As due diligence, **NAXION** conducted a pre-test with 18 respondents to confirm the clarity of the test materials and the survey length. During the pre-test, respondents were allowed to complete the survey without interruption in order to achieve an estimate on how long it takes to complete the survey, and then a qualified moderator conducted a short qualitative interview (“cognitive debrief”) to expose each pretest respondent’s thought process while answering questions and whether there were any areas/questions that were unclear or confusing. Respondents represented a mix of the demographic categories being used for quota-sampling purposes. Respondents participating in the pre-test indicated that all questions were clear and that there were no areas of confusion in the survey; therefore, no edits were made to the survey based on the pre-test. Finally, **NAXION** project managers and other **NAXION** employees thoroughly tested the programmed questionnaire, along with any algorithms for sampling before launching the survey via the Internet. **NAXION** will also have live online reports that show the number of completed surveys throughout field. Reports will run every hour, and will detail completed surveys by tobacco user group and demographic characteristics. These reports allow **NAXION** project managers to ensure that the sampling algorithm is operating as planned throughout the fielding process, and that the desired tobacco-user group and demographics are attained.

***I1    Organization and Participating Centers***

NAXION will manage the information collection on behalf of RAIS, process the data, and perform all statistical analyses. Michael Polster, Ph.D. is the project director at NAXION, with overall responsibility for coordinating study activities. He will be working under the leadership of the firm’s CEO. NAXION will subcontract to Research Now to collect the survey data.

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***I2    Subject Stipends or Payments***

Research Now panel members earn currency or points for their time participating in surveys. Incentives are based on estimates of the time and effort required to complete a survey. Members can redeem their currency/points for rewards that are of interest to them. Providing every panel member with an incentive for each interaction helps maximize panel retention and survey response rates.

***I3    Study Timetable***

We estimate that this study will require approximately eleven weeks to complete, according to the following timeline:

**PROPOSED TIMETABLE**

Draft Survey .....	Week 1
Programming and Pretest .....	Weeks 2 and 3

Survey Fielding .....	Weeks 4, 5, 6, and 7
Data Analysis and Report Writing.....	Weeks 8, 9, and 10
Final Report Available.....	Week 11

<b>J    Publication Plan</b>
------------------------------

Data will be made available as part of the MRTP application process to FDA.

**Appendix D: New Tobacco Product “Likelihood” Study: An Algorithm to Predict Usage of New Tobacco Products Prior to Market Launch**

**Attachment I: New Tobacco Product “Likelihood” Study:  
An Algorithm to Predict Usage of  
New Tobacco Products Prior to Market Launch  
Methodological Report**

January 29, 2013

Prepared for:  
**RAI Services Company**

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*Research conducted on behalf of RAIS’s Regulatory Oversight Department in anticipation of potential FDA requirements. Research shall only be used and/or disseminated for compliance-related activities.*

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## 1. STUDY BACKGROUND AND OBJECTIVES

### 1.1 Study Background

Under its new mandate to regulate the impact of tobacco on public health, the FDA requires manufacturers of tobacco products to demonstrate, prior to the launch of any new tobacco product, that the market entry of the new product will not increase “net harm” to the population by increasing net tobacco prevalence. The first step of this evaluation requires an independent and reliable projection of product use – overall and within key sub-populations.

### 1.2 Study Objectives

To provide the FDA with projected usage estimates for a tobacco product *before* it is launched, RAI Services Company commissioned research to create a ratings conversion algorithm. The algorithm converts 10-point survey rating data, measuring “likelihood of purchase with intent to try,” to projectable estimates of actual purchase for trial.

Marlboro Special Blend was chosen as the vehicle for algorithm development because the timing of product launch offered an opportunity to field the necessary pre-launch and post-launch waves of the research. This study compared pre-launch survey ratings (based on a Marlboro Special Blend “ad”) with actual (self-reported) purchase for trial *post*-launch, and created a conversion algorithm that will allow RAI Services Company to project purchase of *future* new products for trial based on pre-market survey ratings alone.



## 2. STUDY DESIGN

### 2.1 Sample Design

The relevant universe for this research is all adults (individuals age 18 (or minimum tobacco purchase age) to 75), regardless of current or prior tobacco use. The Research Now consumer panel, a nationwide, demographically balanced web-based consumer panel that contains over three million panelists from all 50 states across the US, was used to recruit respondents.

To provide a robust sample for algorithm modeling, more than 4,000 respondents were recruited from each of three tobacco behavior status groups – current regular tobacco users, former regular tobacco users, and never regular tobacco users (consumers who have never regularly used tobacco). This sample size was selected to provide:

- Balance on key demographics within each tobacco user group, allowing the sample to be weighted to population counts for all dimensions of interest
- Adequate statistical sensitivity to allow for measurement within a narrow band (i.e., confidence intervals smaller than  $\pm 2\%$  for the sample overall for survey as well as modeled data, and smaller than  $\pm 3\%$  within each tobacco user group)

Within those groups, respondents were quota-sampled to provide sufficient representation of key demographic groups that might not otherwise appear in sufficient numbers. The data were weighted to the U.S. adult population in order to support population-level generalizations (*see [Section 6](#) for population estimates used for this research*).

To minimize possible bias, residents of Massachusetts and Iowa were excluded because the product (Marlboro Special Blend) was not expected to be available in that state. Exclusion of these relatively small geographies does not impact the findings at a national level.

## 2.2 Survey Content/Pretest Process

In Wave 1, the following data were collected:\*

- (1) **Demographics (age, gender, race/ethnicity and education):** to ensure that key consumer groups are represented and that results can be weighted appropriately so that they are representative of the universe of consumers
- (2) **Current and past use of tobacco products:** to classify respondents into behavioral status groups (current vs. former vs. never regular user of tobacco, and user of smoked vs. non-smoked vs. both product types)
- (3) **Anticipated use of tobacco products nine months in the future:** to permit analysis of additional key sub-groups (those intending/not intending to quit tobacco use)
- (4) **Presentation of information about Marlboro Special Blend cigarettes, followed by a rating of likelihood of purchase with intent to try** to provide the foundation for a projected use model

In Wave 2, the following data were collected:

- (1) **Current (at the time of Wave 2) use of tobacco products:** to permit comparisons of predicted vs. actual tobacco use behavior (anticipated vs. actual continuing, quitting, starting, and re-starting tobacco use behavior)
- (2) **Purchase of Marlboro Special Blend for personal trial at any point in the previous nine months:** to provide required input to the model
- (3) **On-going use of Marlboro Special Blend:** to provide insights regarding post-trial persistence with the product

Prior to launch, an in-person pre-test was conducted with 12 consumers to ensure clarity of instrument and confirm survey length.

---

\* See [Section 6](#) of this report for survey instruments

### **2.3 Data Collection Timelines**

The research consisted of two survey waves with the same respondents, structured as “pre-launch/post-launch” data collection to compare *predicted* future product use in Wave 1 with *reported usage* in Wave 2.

Wave 1 was conducted from December 23, 2009 until 9am on January 6, 2010, to ensure field closed before consumers could have purchased or tried Marlboro Special Blend, which was expected to be launched on January 6, 2010. The Wave 2 follow-up survey was conducted approximately nine months later (September 16, 2010 through October 5, 2010).

### **2.4 Distribution of Completed Interviews**

For the initial fielding day, the invitations were issued to reach the first day goal of five percent completion in all quota groups, as a quality control check. After the successful “slow start,” invitations were issued every second or third day with the goal of reaching an additional 15-20% of the total goal in each quota group. This approach permitted control of the flow of survey invitations based on demographic and/or tobacco use, to account for differential response rates.

For Wave 1, a total of 15,393 consumers completed the survey. All Wave 1 respondents were eligible for, and invited to participate in, Wave 2.

**Table 1: Unweighted Sample Distribution  
- Demographics by Tobacco Status -**

		Tobacco Status		
		Current Regular User	Former Regular User	Never Regular User
(n) =		5,545	4,328	5,520
Northeast		994	806	1,047
Midwest		1,384	987	1,207
South		1,989	1,530	1,890
West		1,178	1,005	1,376
18-30		1,207	594	1,544
31-50		2,800	1,530	2,296
51-75		1,538	2,204	1,680
Male		3,179	2,224	2,474
Female		2,366	2,104	3,046
Hispanic		650	370	876
Non-Hispanic White		3,886	3,205	3,459
Non-Hispanic Black		619	483	706
Non-Hispanic Asian/Other		424	307	508
High School (or less)		1,124	509	876
Some College		3,662	2,876	3,362
Bachelor's Plus		759	943	1,282

### 3. NON-RESPONSE ANALYSIS AND WEIGHTING

#### 3.1 Analysis of Potential Non-Response Bias

Of the 15,393 people interviewed in Wave 1, a total of 8,328 responded to the second survey, a 54% recontact rate. This level of attrition was anticipated at the start of the research.

Wave 2 responders were compared to non-responders to determine if any bias was introduced through sample attrition. As shown below in Table 2a, the unweighted samples are almost identical with respect to tobacco status, suggesting that no bias was introduced.

**Table 2a: Unweighted Sample Distribution**  
**- Tobacco Behavior Status by Wave 2 Participation Status -**

		Total Wave 1	Completed Wave 2	Did Not Complete Wave 2
	(n) =	15,393	8,328	7,065
<b><u>Tobacco Status:</u></b>				
<b>Current Regular User</b>		<b>36%</b>	<b>34%</b>	<b>38%</b>
<i>Cigarette</i>		<i>(78%)</i>	<i>(78%)</i>	<i>(78%)</i>
<i>Cigar/Cigarillo</i>		<i>(20%)</i>	<i>(20%)</i>	<i>(21%)</i>
<i>Snuff or snus</i>		<i>(16%)</i>	<i>(16%)</i>	<i>(17%)</i>
<i>Chewing Tobacco</i>		<i>(14%)</i>	<i>(14%)</i>	<i>(15%)</i>
<i>Pipe</i>		<i>(5%)</i>	<i>(5%)</i>	<i>(5%)</i>
<b>Former Regular User</b>		<b>28%</b>	<b>29%</b>	<b>27%</b>
<i>Cigarette</i>		<i>(94%)</i>	<i>(95%)</i>	<i>(94%)</i>
<i>Cigar/Cigarillo</i>		<i>(15%)</i>	<i>(14%)</i>	<i>(15%)</i>
<i>Snuff or snus</i>		<i>(4%)</i>	<i>(4%)</i>	<i>(5%)</i>
<i>Chewing Tobacco</i>		<i>(6%)</i>	<i>(6%)</i>	<i>(7%)</i>
<i>Pipe</i>		<i>(8%)</i>	<i>(9%)</i>	<i>(7%)</i>
<b>Never Regular User</b>		<b>36%</b>	<b>37%</b>	<b>35%</b>

Wave 2 responders and non-responder were also compared with respect to demographics. As shown in Table 2b below, the unweighted demographic data are similar for both groups – the key differences being a slightly higher rate of attrition among respondents age 18-30 and non-Hispanic Whites, which required a minor weighting adjustment to rebalance.

**Table 2b: Unweighted Sample Distribution  
- Demographics by Wave 2 Participation Status -**

	(n) =	Total Wave 1	Completed Wave 2	Did Not Complete Wave 2
<b><u>Region:</u></b>				
Northeast		19%	19%	18%
Midwest		23%	24%	22%
South		35%	34%	37%
West		23%	23%	23%
<b><u>Age:</u></b>				
18-30		22%	18%	26%
31-50		43%	42%	45%
51-75		35%	40%	29%
<b><u>Gender:</u></b>				
Male		51%	52%	51%
Female		49%	48%	49%
<b><u>Race/Ethnicity:</u></b>				
Hispanic		12%	10%	15%
Non-Hispanic White		68%	72%	64%
Non-Hispanic Black		12%	11%	13%
Non-Hispanic Other		8%	7%	8%
<b><u>Education:</u></b>				
Up to High School		16%	16%	16%
Some College		41%	39%	42%
Bachelor's Degree		24%	25%	23%
More than a Bachelor's Degree		19%	20%	19%

Table 2c below provides the unweighted distribution of ratings for “likelihood of purchasing Marlboro Special Blend with intent to try” (Wave 1 responses). The distribution of Wave 1



ratings were similar for individuals who did and did not respond in Wave 2, further minimizing concern about non-response bias.

**Table 2c: Unweighted Rating Distribution**  
**- Purchase Intent Ratings by Wave 2 Participation Status -**

		Total Wave 1	Completed Wave 2	Did Not Complete Wave 2
(n) =		15,393	8,328	7,065
<b>Definitely Would Not Purchase</b> ►	1	62%	63%	60%
	2	4%	5%	5%
	3	3%	3%	4%
	4	2%	2%	2%
	5	5%	5%	5%
	6	4%	4%	4%
	7	4%	4%	4%
	8	5%	5%	5%
	9	3%	3%	3%
<b>Definitely Would Purchase</b> ►	10	8%	7%	8%

### 3.2 Weighting

To account for quota-sampling, and thus support extrapolation to the universe of Current, Former, and Never regular tobacco users nationwide, a complex statistical weighting process was required. In preparation for weighting, population counts\* were developed, estimating the number of individuals in each cell represented by the intersection of geographic region, tobacco status and age (Table 3).

To account for possible differences in re-contact rates for Wave 2 among segments of the sample, separate weights were developed for each wave of the survey to represent the universe of consumers. The weighting process was identical for both waves, and consisted of a two-step approach.

#### Step 1. Development of Base Weights

First, base weights were created by dividing the number of completed interviews in the cells that represent the intersection of geographical region, tobacco use behavior status group, and age by the following population counts in those cells.

**Table 3: Population Estimates**  
**- Population Counts by Region, Tobacco Status and Age -**

		AGE		
		18-30	31-50	51-75
<b>Northeast</b>	Current Regular User	1,535,299	2,669,602	1,737,684
	Former regular User	628,455	2,287,085	3,879,997
	Never Regular User	6,188,629	8,856,635	6,845,356
<b>Midwest</b>	Current Regular User	2,666,523	4,346,810	2,812,432
	Former Regular User	1,145,679	2,741,039	4,859,317
	Never Regular User	7,535,954	10,642,870	8,109,569
<b>South</b>	Current Regular User	4,071,618	6,657,492	4,736,665
	Former Regular User	1,464,386	4,068,533	7,673,351
	Never Regular User	14,508,307	20,487,904	15,422,969
<b>West</b>	Current Regular User	2,194,904	3,179,379	2,196,272
	Former Regular User	1,022,016	2,861,253	4,883,656
	Never Regular User	10,365,597	14,180,452	9,633,430

\* The following sources were used to develop all population counts: Census website (<http://www.census.gov/>); the March 2010 Annual Social and Economic Supplement to the Current Population Survey; and the Tobacco Use Supplement to the Current Population Survey (from May 2006, August 2006, and January 2007)

## Step 2. Raking

Base weights were adjusted using a method called raking, to weight up to population counts in cells represented by the intersection of these parameters:

- Region, tobacco status and gender
- Region, tobacco status and ethnicity
- Region, tobacco status and education
- Region, tobacco status and age
- Region, age and ethnicity

“Raking” is a well-established weighting technique\* that allows a larger number of weighting dimensions to be considered without “nesting” them within all other dimensions of interest, which would create an unmanageable weighting grid. In this case, “nesting” all the dimensions of interest would have required 1,152 weighting cells – leaving insufficient sample to develop stable weights. A complete set of weighting targets appears in [Section 7](#).

The weighting process produced a Wave 2 sample that not only matched Wave 1 with respect to use of tobacco products ([Table 4a](#)), but was also perfectly aligned with demographics (*see Table 4b below*) and purchase intent ratings (*see Table 4c below*), giving us confidence that the algorithm is fully representative of the target universe.

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\* See “Practical Considerations in Raking Survey Data” by Michael P. Battaglia, David Izrael, David C. Hoaglin, and Martin R. Frankel, Survey Practice, June 2009

**Table 4a: Weighted Tobacco Use Distribution  
- Tobacco Status by Wave -**

		Total Wave 1	Completed Wave 2
	(n)* =	15,393	8,328
<b><u>Tobacco Status:</u></b>			
<b>Current Regular User</b>		<b>19%</b>	<b>19%</b>
<i>Cigarette</i>		<i>(83%)</i>	<i>(83%)</i>
<i>Cigar/Cigarillo</i>		<i>(18%)</i>	<i>(18%)</i>
<i>Snuff or snus</i>		<i>(14%)</i>	<i>(14%)</i>
<i>Chewing Tobacco</i>		<i>(11%)</i>	<i>(11%)</i>
<i>Pipe</i>		<i>(4%)</i>	<i>(4%)</i>
<b>Former Regular User</b>		<b>18%</b>	<b>18%</b>
<i>Cigarette</i>		<i>(94%)</i>	<i>(94%)</i>
<i>Cigar/Cigarillo</i>		<i>(14%)</i>	<i>(15%)</i>
<i>Snuff or snus</i>		<i>(5%)</i>	<i>(5%)</i>
<i>Chewing Tobacco</i>		<i>(7%)</i>	<i>(6%)</i>
<i>Pipe</i>		<i>(9%)</i>	<i>(9%)</i>
<b>Never Regular User</b>		<b>63%</b>	<b>63%</b>

\* Unweighted sample sizes (on which the weighted data are based) are shown.

**Table 4b: Weighted Sample Distribution  
- Demographics by Wave -**

		<b>Total Wave 1</b>	<b>Completed Wave 2</b>
	(n)* =	15,393	8,328
<b><u>Region:</u></b>			
	Northeast	17%	17%
	Midwest	21%	21%
	South	38%	38%
	West	24%	24%
<b><u>Age:</u></b>			
	18-30	25%	25%
	31-50	40%	40%
	51-75	35%	35%
<b><u>Gender:</u></b>			
	Male	49%	49%
	Female	51%	51%
<b><u>Race/Ethnicity:</u></b>			
	Hispanic	15%	15%
	Non-Hispanic White	67%	67%
	Non-Hispanic Black	12%	12%
	Non-Hispanic Other	6%	6%
<b><u>Education:</u></b>			
	Up to High School	44%	44%
	Some College	29%	29%
	Bachelor's Degree	18%	18%
	More than a Bachelor's Degree	9%	9%

---

\* Unweighted sample sizes (on which the weighted data are based) are shown.

**Table 4c: Weighted Rating Distribution  
- Purchase Intent Ratings by Wave -**

		<b>Total Wave 1</b>	<b>Completed Wave 2</b>
	(n)* =	15,393	8,328
<b>Definitely Would Not Purchase ►</b>	1	72%	72%
	2	4%	4%
	3	2%	2%
	4	2%	2%
	5	4%	4%
	6	3%	3%
	7	2%	2%
	8	3%	3%
	9	2%	2%
<b>Definitely Would Purchase ►</b>	10	6%	6%
<b>Mean Rating</b>		2.5	2.5

---

\* Unweighted sample sizes (on which the weighted data are based) are shown.




## 4. ANALYSIS PLAN/ALGORITHM DEVELOPMENT

### 4.1 Purchase Intent vs. Actual Purchase

The objective of this study was to create a predictive algorithm that could be used to provide the FDA with projected usage (i.e., with purchase for trial as a proxy) estimates for a tobacco product *before* it is launched. The algorithm converts 10-point survey rating data, measuring “likelihood of purchase with intent to try,” to projectable estimates of actual purchase for trial.

Table 5a below provides the distribution of ratings for “likelihood of purchasing Marlboro Special Blend with intent to try” (Wave 1 responses) and the incidence of actual purchase for respondents who provided each rating (Wave 2). Data shown reflect only respondents who participated in both survey waves, providing both a Wave 1 rating and Wave 2 response regarding purchase of Marlboro Special Blend. A predictive algorithm was developed on the basis of these pre-post comparisons.

**Table 5a: Weighted Purchase Intent Ratings and Actual Purchase Rates**

		% Selecting Rating Value	% Purchased
(N) =		209,097,119	209,097,119
Definitely Would Not Purchase ►	1	72%	0.4 %
	2	4%	1.5%
	3	2%	1.5 %
	4	2%	3.0%
	5	4%	3.6 %
	6	3%	4.6 %
	7	2%	6.9 %
	8	3%	12.8%
	9	2%	18.2%
Definitely Would Purchase ►	10	6%	19.1%
Mean 		2.5	2.8%

## 4.2 Algorithm Development

The algorithm that was developed permits continuous ratings of intended purchase for personal use to be translated into purchase estimates, taking into account how different sub-groups of the population use the rating scale. For example, survey responses (*shown in Table 5b below*) indicate that an “8” is associated with a significantly higher rate of actual purchase among Current Regular Tobacco Users than among Former Regular Users or Never Regular Users. By accounting for differences in the way the scale is used by population sub-groups in the algorithm, the algorithm offers more accurate estimates of future purchase than simply using population level data.

**Table 5b: Weighted Purchase Intent Ratings and Actual Purchase Rates  
- By Tobacco Status -**

		Current Regular User		Former Regular User		Never Regular User	
		% Selecting Rating Value	Of those with Rating, % Purchased	% Selecting Rating Value	Of those with Rating, % Purchased	% Selecting Rating Value	Of those with Rating, % Purchased
(N) =		38,804,678		37,514,766		132,777,676	
Definitely Would Not Purchase ►	1	28%	2%	75%	1%	84%	0%
	2	5%	2%	4%	1%	4%	1%
	3	5%	3%	2%	4%	2%	0%
	4	3%	3%	2%	3%	2%	3%
	5	9%	7%	3%	2%	3%	1%
	6	7%	7%	2%	4%	2%	1%
	7	8%	8%	3%	6%	1%	5%
	8	10%	20%	3%	4%	1%	2%
	9	7%	26%	2%	7%	1%	0%
Definitely Would Purchase ►	10	18%	30%	5%	12%	3%	2%
Mean		5.3	11.7%	2.3	2.1%	1.7	0.4%

The basis for the algorithm development was a survey-weighted logistic regression model using “likelihood to purchase” ratings from Wave 1 and actual incidence of trial from Wave 2 to predict incidence of trial from likelihood ratings. The model includes main effects and interactions to account for different patterns of usage by various groups\* resulting in different predictive relationships between ratings and actual behavior. This type of statistical model takes advantage of the power of pooling information across demographic groups where similar patterns exist, while still customizing the model to include important sub-group-specific effects in demographic groups that exhibit unique patterns.

The following table lists the model coefficients for demographic groups that were significant predictors of trial:

**Table 6: Logistic Regression Results for Key Sub-groups**

<i>Model Inputs:</i>	Parameter/ Coefficient	Std. Err.	Wald Chi- Square	pr > ChiSq
Intercept	-6.4986	0.3319	383.2863	<.0001
Raw Rating Score (1-10)	0.3367	0.0315	114.5716	<.0001
Current Regular Tobacco User	1.7425	0.3509	24.662	<.0001
Current Regular Tobacco User Age 18-30	0.843	0.2718	9.6185	0.0019
Current Regular Tobacco User Age 31-50	0.5153	0.228	5.1084	0.0238
Former Regular Tobacco User Age 18-30	1.6292	0.5775	7.9578	0.0048
Former Regular Tobacco User Age 31-50	1.9444	0.4161	21.8334	<.0001

The net result is a highly predictive model with a C-statistic (which is a goodness of fit measure on a scale from .5 to 1) of 0.89.

Tables 7a and 7b (below) show estimated incidence of purchase for key analytic groups (i.e., demographic and tobacco behavior status sub-groups) when data from *all* Wave 1 respondents are submitted to the model, and compare those findings to the actual self-reported purchase incidence among Wave 2 responders.

---

\* Tobacco usage status, age, race/ethnicity, gender, education level, and region sub-groups

**Table 7a: Model Estimates vs. Actual Weighted Purchase Rates  
- For Key Demographic Sub-Groups -**

	<b>Model Estimate</b>	<b>95% Confidence Interval</b>	<b>Actual</b>
<b>Total</b>	2.8%	2.0% - 4.0%	2.8%
<b>Region:</b>			
Northeast	2.5%	1.8% - 3.6%	2.0%
Midwest	3.1%	2.2% - 4.4%	3.3%
South	3.0%	2.1% - 4.2%	3.1%
West	2.4%	1.7% - 3.5%	2.4%
<b>Age:</b>			
18 - 30	3.5%	2.4% - 5.1%	3.5%
31 - 50	3.4%	2.5% - 4.7%	3.6%
51 - 75	1.6%	1.1% - 2.4%	1.4%
<b>Gender:</b>			
Male	3.1%	2.2% - 4.4%	3.0%
Female	2.5%	1.8% - 3.6%	2.6%
<b><u>Race/Ethnicity:</u></b>			
Hispanic	2.4%	1.7% - 3.5%	3.0%
Non-Hispanic White	3.2%	2.2% - 4.4%	3.2%
Non-Hispanic Black	1.5%	1.0% - 2.3%	.9%
Non-Hispanic Other	2.5%	1.7% - 3.5%	1.9%
<b><u>Education:</u></b>			
Up to High School	3.7%	2.7% - 5.1%	3.7%
Some College	2.7%	1.9% - 3.9%	2.9%
Bachelor's Degree	1.7%	1.1% - 2.5%	1.4%
More than a Bachelor's Degree	1.1%	0.7% - 1.8%	1.3%

**Table 7b: Model Estimates vs. Actual Weighted Purchase Rates  
- For Key Tobacco Use Groups -**

	Model Estimate	95% Confidence Interval	Actual
Total	2.8%		2.8%
<b>Tobacco Status:</b>			
Current Regular Tobacco User	11.7%	8.8% - 15.3%	11.7%
<i>Plan to continue tobacco use (84%)</i>	12.1%		12.3%
<i>Plan to quit use of all tobacco (16%)</i>	9.6%		8.4%
Former Regular Tobacco User	2.0%	1.1% - 3.7%	2.1%
Never Regular Tobacco User	0.4%	0.2% - 0.7%	0.4%

The process of creating survey weights and applying predictions from the logistic regression model, therefore, combine to create an algorithm that accurately predicts purchase levels of a new product for nearly all key sub-groups.

Data suggest that Marlboro Special Blend appeal is greatest among Current Regular Tobacco Users, particularly those tobacco users who expected to still be using some type of tobacco use nine months later (84% of all Current Regular Tobacco Users).

Probabilities of Marlboro Special Blend use by Former and Never Regular Users suggest that availability of Marlboro Special Blend is *unlikely* to have a significant impact on rates of initiation or recidivism:

- Estimated use by those two groups appears to be well within the historically observed bounds of initiation and recidivism rates
- These same rates of initiation and recidivism are likely to be observed even without introduction of Marlboro Special Blend. Most Former and Never regular users who became “Tobacco Users” over the nine-month period did not purchase Marlboro Special Blend for trial (see [Table 7c](#) below).
- Furthermore, virtually all (1.9% of the 2.1%) “Former Regular Tobacco Users” who purchased the Marlboro Special Blend product for trial tried at least one other cigarette brand over the 9-month period of the study, and all of those initiating tobacco tried at least one other cigarette brand (see [Table 7c](#) below).

- Finally, these rates are likely to represent *maximum* use (i.e., trial rather than repeat or regular use). Only a subset of consumers who tried the product continued to use it\*\* (see Table 7c below).

**Table 7c: Weighted Self-reported Trial, Recidivism, Initiation,  
And Repeated Use Rates**

	Wave I "Current Regular Tobacco User"	Wave I "Former Regular Tobacco User"	Wave I "Never Regular Tobacco User"
(n)* =	2,864	2,438	3,039
% Classified as "Tobacco User" in Wave II	88.6%	16.3%	6.5%
% Purchased Marlboro Special Blend (trial)	11.7%	2.1%	.4%
% Purchased at least one other cigarette brand <i>in addition to</i> Marlboro Special Blend	11.3%	1.9%	.4%
% Continued use** of Marlboro Special Blend	7.1%	1.2%	.2%

\* Unweighted sample sizes (on which the weighted data are based) are shown.

\*\* Continued use is defined as "currently purchase for regular or occasional use" at time of the Wave II survey.

## 5. MODEL VALIDATION AND IMPLICATIONS

### 5.1 Model Validation

To understand how well this predictive algorithm fits data for other new products, RAI Services Company commissioned a follow-up validation study (a second two-wave survey) to estimate use of two Marlboro Special Blend line extensions that had not yet been launched (Blue and Black styles). The validation study compared modeled trial rates (likelihood ratings collected in a pre-launch survey fielded February 14, 2011 to March 4, 2011) with actual purchase for trial reported by consumers in a post-launch survey approximately nine months later (December 1, 2011 to January 3, 2012).

As detailed in the “Algorithm Validation” report (*for full details of study findings see [Attachment III: New Tobacco Product “Attractiveness” Study: Validation of an Algorithm to Predict Usage of New Tobacco Products Prior to Market Launch](#)*), the actual purchase rate (trial) of the new products was significantly *lower* than the rate predicted by the algorithm, overall, and for all demographic and tobacco status groups. The fact that the model significantly over-predicted required diagnostics to be performed to determine: a) if the proper inputs had been applied in developing the original model, and b) if those inputs had been properly weighted.

To address these questions, a separate, parallel model was built, applying the same methodology and procedures used to build the original model, but incorporating only the data from the second (validation) study. The goal in doing this was to validate the required inputs and associated coefficients.

In the second (validation) model, no new effects entered the model, and T-tests confirm that the effect coefficients are not significantly different between the models. Notably, the only difference that rose to statistical significance ( $p < .05$ ) is the intercept value. An exploration of the external factors surrounding the launch of the products in each study identified three key environmental differences that are believed to have contributed to an overall dampening effect in the validation study.



## 5.2 Implications

Data from the validation study support continued use of model inputs from this study and the associated coefficients and intercept. Results indicate, however, that this model is likely to predict *maximum* new product trial and that actual trial rates may be significantly lower than those predicted.

## 5.3 Data from additional studies

The following table shows the performance of the model in the validation study and two additional studies, and illustrates that the model:

- Consistently over-predicts purchase behavior (i.e., prediction is higher than actual)
- Shows the same pattern of performance across three types of tobacco users (current is numerically higher than former, which is numerically higher than never)
- Shows the same pattern of effect for cigarettes (Marlboro Special Blend Blue and Black, Pall Mall Menthol Black and White, and Newport Smooth) and smokeless tobacco (Camel Dissolvables and Camel SNUS Frost Large)

	Validation Study: Marlboro Special Blend Blue and Black (n = 13,178)		Pall Mall Menthol Black and White (n = 14,731)		Newport Smooth (n = 13,681)		Camel Dissolvables (n = 3,498)		Camel SNUS Frost Large (n = 13,748)	
	Purchase Rate		Purchase Rate		Purchase rate		Purchase rate		Purchase rate	
	Predicted	Actual	Predicted	Actual	Predicted	Actual	Predicted	Actual	Predicted	Actual
Total Sample	2.7%	0.5%	1.5%	0.6%	1.8%	0.6%	2.1%	0.2%	1.2%	0.2%
Current Regular Users	11.8%	2.2%	6.9%	3.0%	8.3%	2.1%	8.8%	0.9%	4.9%	0.7%
Former Regular Users	1.5%	0.3%	1.2%	0.5%	1.4%	1.0%	1.4%	0.4%	1.2%	0.4%
Never Regular Users	0.4%	0.1%	0.3%	0.1%	0.3%	0.2%	0.3%	0.0%	0.3%	0.0%

## 6. SURVEY INSTRUMENTS

### Wave 1: Product Usage Survey - Final Screener –

Thank you for visiting our survey site to answer a few qualifying questions. This survey is strictly for research purposes only. It is our policy to keep all survey responses anonymous.

All questions on each screen must be answered before you move to the next screen, so please be sure you have answered every question before trying to move forward. On the next few screens you will be asked a few questions to see if you qualify for this study. If you qualify, the survey itself should take less than 5 minutes to complete.

---

**PROGRAMMER: INSERT STANDARD INSTRUCTION SCREEN**

**FIELD OPS: RECRUIT RESPONDENTS FROM eRewards PANEL; HAVE RECRUITERS DRAW SAMPLE...**

- 4) ACCORDING TO MINIMUM PURCHASE AGE IN STATE (SEE S7 INSTRUCTIONS)**
- 5) ACCORDING TO QUOTA (SEE FINAL PAGE OF SURVEY)**

---

In this survey we are interested in the opinions of people who have been, or are, regular users of certain products, as well as people who have never used them.

- S1a. Would you consider yourself to be – or to have been at any time in the past – a “regular user” of any of the following products? We leave it to you to define regular use.

*Select “yes” or “no” for each row.*

	Yes I am – or was – a regular user	No, have never been a regular user
Beer or malt-based beverages?	<input type="radio"/>	<input type="radio"/>
Bottled water (still or carbonated)?	<input type="radio"/>	<input type="radio"/>
Nutritional supplements/vitamins?	<input type="radio"/>	<input type="radio"/>
Tobacco products?	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

- 2) DISPLAY ROWS IN RANDOM ORDER**
-

- S1b. Focusing only on the present, how would you currently describe yourself, relative to each of the following categories?

*Select one response for each row.*

	Current Non-user	Current Occasional User	Current Regular User
Beer or malt-based beverages?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bottled water (still or carbonated)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nutritional supplements/vitamins?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tobacco products?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

**2) DISPLAY ONLY ROWS ANSWERED AS “Yes” IN S1a, IN SAME ORDER AS IN S1a**

**CLASSIFY AS:**

**A) Current Regular Tobacco User: S1b “Tobacco product” IS “Infrequent” or “Regular” (col 2 or 3)**

**B) Former Regular Tobacco User: S1b “Tobacco product” IS “Non-user” AND S1a “Tobacco product” IS “Yes”**

**C) Never Regular Tobacco User: S1a “Tobacco product” IS “No”**

- S2. What is your current age?

\_\_\_\_\_ Years

**PROGRAMMER:**

**3. RANGE IS 10-99**

**4. IF < 18 OR IF > 75, TERMINATE NOW**

- S3. What is your gender?

Male	<input type="radio"/>
Female	<input type="radio"/>

- S4. What is the highest grade you have completed in school? *(Select one)*

High school or less	<input type="radio"/>
Some college or technical/vocational training	<input type="radio"/>
Four years of college (Bachelor’s degree)	<input type="radio"/>
More than Bachelor’s degree	<input type="radio"/>

S5a. Do you consider yourself to be of Hispanic, Latino, or Spanish origin?

Yes	<input type="radio"/>
No	<input type="radio"/>

S5b. What do you consider to be your race? *(Select all that apply)*

White	<input type="checkbox"/>
African American / Black	<input type="checkbox"/>
Asian	<input type="checkbox"/>
Other	<input type="checkbox"/>

**PROGRAMMER:**

**2. DISPLAY S5a AND S5b ON SAME SCREEN**

---

S6. Which of the following best describes your total household income?

Under \$25,000	<input type="radio"/>
\$25,000 to \$49,999	<input type="radio"/>
\$50,000 to \$74,999	<input type="radio"/>
\$75,000 to \$99,999	<input type="radio"/>
\$100,000 or more	<input type="radio"/>

---

S7. In what state do you currently reside?

**[SHOW POP UP LIST OF STATES]**

**PROGRAMMER:**

- 1. IF STATE IS ALABAMA, ALASKA, NEW JERSEY OR UTAH AND S2= 18, TERMINATE NOW  
(minimum age for tobacco purchase in these states is 19)**
  - 2. IF STATE IS IOWA OR MASSACHUSETTS, TERMINATE AT END OF SCREENER**
-

- S8. Earlier you indicated that you [currently use tobacco products./have used tobacco products on a “regular basis” in the past, but that you no longer do.] Which of the following types of tobacco products [do you currently use/did you use regularly]? *(Select all that apply)*

Cigarette	<input type="checkbox"/>
Cigar/cigarillos	<input type="checkbox"/>
Pipe	<input type="checkbox"/>
Chewing tobacco	<input type="checkbox"/>
Snuff or snus	<input type="checkbox"/>

**PROGRAMMER:**

4. ASK IF CLASSIFIED AS “Current” or “Former” Regular Tobacco User
5. IF S1b “Tobacco product” IS “Infrequent” OR “Regular,” USE FIRST TEXT IN BRACKETS, ELSE USE 2<sup>ND</sup> TEXT
6. CHECK QUOTAS, BUT DO NOT TERMINATE ANY RESPONDENT OF ELIGIBLE AGE WHO SELECTS ROW 4 OR 5 (Chewing tobacco, snuff or snus) IN S8

---

“You have qualified for our survey, and we’d like to invite you to participate. The survey will require less than five minutes to complete, and we ask for your undivided attention once you begin it. If you do not have five minutes right now, please click “stop,” and return any time during the next 24 hours when you have an uninterrupted five minutes.”

---

**Wave 1: Product Usage Survey**  
– Final Survey –

- 1a. Earlier you indicated that you used to use tobacco products on a “regular basis,” but that you no longer do. When did you stop using the following types of tobacco products?

*Select one column for each product shown below.*

	Less than 6 months ago	6 months to 1 year ago	Over 1, but less than 2 years ago	Over 2, but less than 5 years ago	More than 5 years ago
Cigarette	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cigar/cigarillos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pipe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chewing tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Snuff or snus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

1. ASK IF CLASSIFIED AS “Former” Regular Tobacco User
  2. SHOW ONLY PRODUCTS SELECTED IN S8
- 

- 1b. Earlier you indicated that currently use tobacco products. About how long have you been using the following types of tobacco products? *Select one column for each product shown below.*

	Less than 6 months	6 months to 1 year	Over 1, but less than 2 years	Over 2, but less than 5 years	More than 5 years
Cigarette	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cigar/cigarillos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pipe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chewing tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Snuff or snus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

1. ASK IF CLASSIFIED AS “Current” Regular Tobacco User
2. SHOW ONLY PRODUCTS SELECTED IN S8



2. Now please think ahead to nine months from now. Based on your experience, product preference, and goals, do you expect that you will be using the following types of products nine months from now?

Select “yes” or “no” for each row.

	Yes	No
Cigarette	<input type="radio"/>	<input type="radio"/>
Cigar/cigarillos	<input type="radio"/>	<input type="radio"/>
Pipe	<input type="radio"/>	<input type="radio"/>
Chewing tobacco	<input type="radio"/>	<input type="radio"/>
Snuff or snus	<input type="radio"/>	<input type="radio"/>

---

The final section of this survey focuses on a new tobacco product. Please note that everyone is asked all of the questions in this survey, regardless of the products they currently use or their in-going expectations about future use.

Please take your time and read the information closely so that you will be able to answer the questions that follow.

---

Please carefully read the profiles below. Take as much time as you need.



**New Marlboro Special Blend**

Premium, non-menthol cigarettes from Marlboro...

...made with a new special blend of fine tobaccos.

**Special Price**  
\$1 off per pack  
\$10 off per carton

**SURGEON GENERAL'S WARNING:** Quitting Smoking Now Greatly Reduces Serious Risks to Your Health.

3. Assuming the product were available today, how likely would you be to purchase the Marlboro Special Blend product so that you could try it?

Definitely Would <u>Not</u> Purchase it (to Try) ↓					Definitely Would Purchase It (to Try) ↓				
1	2	3	4	5	6	7	8	9	10
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. If you decided to try the Marlboro Special Blend product and found that you liked it enough to continue using it, please predict as best you can how you would imagine using it. *Select one row.*

<i>I would imagine that I would use the new product . . .</i>	
<b><u>In place of</u></b> some or all of my use of my current brand(s) ( <u>no</u> net increase in tobacco use)	<input type="radio"/>
<b><u>In addition to</u></b> my use of my current brand(s) (leading to some potential increase in tobacco use)	<input type="radio"/>

**PROGRAMMER:**

3. ASK IF “CLASSIFIED AS CURRENT REGULAR USER” AND Q3 > 1

Earlier you indicated that you do not currently use tobacco products. Please note that the goal of this survey is only to assess how interesting the new tobacco product is to people from many different backgrounds, and it is **not** intended to encourage you or anyone else to start using tobacco products.

- Individuals should consider the conclusions of the U.S. Surgeon General, the Centers for Disease control, and other public health and medical officials when making decisions regarding smoking.
- The best course of action for tobacco users concerned about their health is to quit. Adults who continue to use tobacco products should consider the reductions of risks for serious diseases associated with moving from cigarettes to the use of smoke-free tobacco or nicotine products.
- Minors should never use tobacco products and adults who do not use or have quit using tobacco products should not start.
- Adults who smoke should avoid exposing minors to secondhand smoke, and adult smokers should comply with rules and regulations designed to respect the rights of other adults.

**PROGRAMMER:**

- 1. DISPLAY IF CLASSIFIED AS Never Regular Tobacco User OR AS Former Regular Tobacco User**
- 

THANK YOU SCREEN

**QUOTAS:**

	Current Regular Tobacco User	Former Regular Tobacco User	Never Regular Tobacco User
<b>OVERALL QUOTA:</b>	<b>5,000</b>	<b>5,000</b>	<b>5,000</b>
Northeast	700 - 1000	700 - 1000	700 - 1000
Midwest	900 - 1300	900 - 1300	900 - 1300
South	1500 - 2000	1500 - 2000	1500 - 2000
West	900 - 1300	900 - 1300	900 - 1300
18-30	1300 - 1600	600 - 800	1300 - 1600
31-50	1900 - 2200	1600 - 1900	1900 - 2200
51-75	1300 - 1600	2300 - 2600	1300 - 1600
Male	2250 - 2750	2250 - 2750	2250 - 2750
Female	2250 - 2750	2250 - 2750	2250 - 2750
Hispanic	650 - 850	650 - 850	650 - 850
Non-Hispanic - White	3000 - 3500	3000 - 3500	3000 - 3500
Non-Hispanic - Black	500 - 700	500 - 700	500 - 700
Non-Hispanic - Asian/Other	350 - 500	350 - 500	350 - 500
Up to High School	2400 - 2700	1700 - 2000	1600 - 1900
Some College	1300 - 1600	1300 - 1600	1200 - 1500
Bachelor's Plus	800 - 1100	1500 - 1800	1700 - 2000

Northeast	Midwest	South	West
Connecticut	Indiana	Alabama	Alaska
Maine	Illinois	Arkansas	Arizona
Massachusetts	Iowa	Delaware	California
		District of	
New Hampshire	Kansas	Columbia	Colorado
Rhode Island	Michigan	Florida	Hawaii
New Jersey	Minnesota	Georgia	Idaho
New York	Missouri	Kentucky	Montana
Pennsylvania	Nebraska	Louisiana	Nevada
Vermont	North Dakota	Maryland	New Mexico
	Ohio	Mississippi	Oregon
	South Dakota	North Carolina	Utah
	Wisconsin	Oklahoma	Washington
		South Carolina	Wyoming
		Tennessee	
		Texas	
		Virginia	

West Virginia  
**Wave 2: Product Usage Survey**  
- Final Screener –

Thank you for visiting our survey site. This survey is strictly for research purposes only. It is our policy to keep all survey responses anonymous.

All questions on each screen must be answered before you move to the next screen, so please be sure you have answered every question before trying to move forward.

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**PROGRAMMER: INSERT STANDARD INSTRUCTION SCREEN**

**FIELD OPS: ALL RESPONDENTS SHOULD BE FROM eRewards PANEL – ONLY RESPONDENTS WHO COMPLETED THE SURVEY IN DECEMBER 2009/JANUARY 2010 ARE ELIGIBLE FOR SCREENING**

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**[NOTE: Q0 DESCRIPTORS WILL NOT BE RE-ASKED IN WAVE II, SO FOR DUE-DILIGENCE WE ARE ASKING RESPONDENTS TO VALIDATE THAT THEY ARE THE PERSON WHO ANSWERED IN WAVE I]**

S0. We are trying to re-contact individuals who completed one of our surveys through eRewards in late December 2009 or in early January 2010.

Someone connected with this e-mail address completed the survey, and at that time indicated that **[he/she]** was:

- A **[S2]** year old **[S3]**
- **[S5a “Yes” = Of/”No” = Not of]** Hispanic, Latino, or Spanish origin
- Who completed **[S4 with lower-case first letter]**

Are you this person?

Yes	<input type="radio"/>
No	<input type="radio"/>

**PROGRAMMER:**

1. e.g.: A 53 year old male  
Of Hispanic, Latino, or Spanish origin  
Who completed some college or technical/vocational training
  2. REPLACE “he/she” WITH “he” IF S3 IS “male,” AND WITH “she” IF S3 IS “female”
  3. IF S0 IS “No, TERMINATE NOW
-

**[NOTE: S1 IS IDENTICAL TO THE QUESTION IN WAVE I; ASKED TO CAPTURE CHANGES IN CLASSIFICATION WHICH MAY BE A NECESSARY INPUT TO THE MODEL]**

- S1. Focusing only on the present, how would you currently describe yourself, relative to each of the following categories? We leave it to you to define regular use.

*Note that your answers to this question do not need to match those in the prior survey – we are asking this question again because we recognize that your status may have changed since then. Please select one response for each row.*

	Current Non-user	Current Occasional User	Current Regular User
Beer or malt-based beverages?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bottled water (still or carbonated)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nutritional supplements/vitamins?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tobacco products?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

**3) DISPLAY ROWS IN RANDOM ORDER**

**CLASSIFY AS:**

**A) Current Tobacco User: S1b “Tobacco product” IS “Occasional” or “Regular” (col 2 or 3)**

**B) Current Non Tobacco User: S1b “Tobacco product” IS “Non-user”**

---

[NOTE: S2 “purchase for personal use” LANGUAGE MIRRORS WAVE I “LIKELIHOOD” SCALE; NECESSARY MODEL INPUT. NOTE THAT WE ASK THIS QUESTION OF ALL RESPONDENTS; “NON-USER” IS REALLY “NON-REGULAR” USER, AND COULD HAVE PURCHASED FOR SHORT-TERM OR SINGLE PERSONAL USE]

S2. When, if ever, was the most recent time that you purchased the following products for personal use (either regular or occasional use)? *Select one column for each product shown below.*

	Some time this calendar year (between January 1, 2010 and today)	Some time in 2009	Some time <u>before</u> 2009 (and NOT since then)	Have not purchased any of this product for personal use
Beer or malt-based beverages?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bottled water (still or carbonated)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nutritional supplements/vitamins?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tobacco products?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

**1. IF “Tobacco products” IS COL 2, 3, OR 4 (Some time in 2009 or earlier), TERMINATE NOW**

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“You have qualified for our survey, and we’d like to invite you to participate. The survey will require less than five minutes to complete, and we ask for your undivided attention once you begin it. If you do not have five minutes right now, please click “stop,” and return any time during the next 24 hours when you have an uninterrupted five minutes.”

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## Wave 2: Product Usage Survey

– Final Survey –

**[NOTE: THE ONLY RESPONDENTS ENTERING THE SURVEY ARE THOSE WHO PURCHASED TOBACCO IN SOME FORM OVER THE PAST 9 MONTHS. Q1 AND Q2 IDENTIFY THOSE WHO PURCHASED CIGARETTES IN THE PAST 9 MONTHS.]**

1. Which of the following types of tobacco products have you ever purchased for personal use (either regular *or* occasional use)? *(Select all that apply)*

Cigarette	<input type="checkbox"/>
Cigar/cigarillos	<input type="checkbox"/>
Pipe	<input type="checkbox"/>
Chewing tobacco	<input type="checkbox"/>
Snuff or snus	<input type="checkbox"/>

### PROGRAMMER:

1. ASK ALL
- 

2. When, if ever, was the most recent time that you purchased the following types of tobacco products for personal use? *Select one column for each product shown below.*

	Some time this calendar year (between January 1, 2010 and today)	Some time in 2009	Some time <u>before</u> 2009 (and NOT since then)	Have not purchased any of this type of tobacco for personal use
Cigarette	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cigar/cigarillos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pipe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chewing tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Snuff or snus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### PROGRAMMER:

1. SHOW ONLY PRODUCTS SELECTED IN 1  
2. IF “Cigarette” IS COL 2, 3, OR 4 (2009 OR EARLIER), SKIP TO FINAL “WARNING” SCREEN (POST Q6) AND CHECK LOGIC FOR DISPLAY
-

[Q3 PROVIDES THE BASIS FOR Q4 AND Q5 MARLBORO SPECIAL BLEND DRILL-DOWN. Q3/Q4 IDENTIFY RESPS WHO HAVE EVER PURCHASED MARLBORO SPECIAL BLEND; Q5 IDENTIFIES RESPS WHO CURRENTLY PURCHASE MARLBORO SPECIAL BLEND]

3. [Even though you no longer use cigarettes,] Which of the following cigarette brands have you purchased for personal use in the past nine months (since January 1, 2010)? *Select “yes” or “no” for each row.*

<i>Have you purchased...</i>	Yes	No
American Spirit?	<input type="radio"/>	<input type="radio"/>
Basic?	<input type="radio"/>	<input type="radio"/>
Benson and Hedges (B&H)?	<input type="radio"/>	<input type="radio"/>
Camel?	<input type="radio"/>	<input type="radio"/>
Capri?	<input type="radio"/>	<input type="radio"/>
Carlton?	<input type="radio"/>	<input type="radio"/>
Doral?	<input type="radio"/>	<input type="radio"/>
Dunhill?	<input type="radio"/>	<input type="radio"/>
Eclipse?	<input type="radio"/>	<input type="radio"/>
GPC?	<input type="radio"/>	<input type="radio"/>
Kent?	<input type="radio"/>	<input type="radio"/>
Kool?	<input type="radio"/>	<input type="radio"/>
Lucky Strike?	<input type="radio"/>	<input type="radio"/>
Marlboro?	<input type="radio"/>	<input type="radio"/>
Merit?	<input type="radio"/>	<input type="radio"/>
Misty Slims?	<input type="radio"/>	<input type="radio"/>
Newport?	<input type="radio"/>	<input type="radio"/>
Pall Mall?	<input type="radio"/>	<input type="radio"/>
Parliament?	<input type="radio"/>	<input type="radio"/>
Salem?	<input type="radio"/>	<input type="radio"/>
USA Gold?	<input type="radio"/>	<input type="radio"/>
Vantage?	<input type="radio"/>	<input type="radio"/>
Virginia Slims?	<input type="radio"/>	<input type="radio"/>
Winston?	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

1. ASK IF Q2 “Cigarette” IS COL 1 (PAST 9 MONTHS)
2. INSERT TEXT THAT IS IN BRACKETS IF CURRENTLY CLASSIFIED AS “Current Non Tobacco User”

4. [Again, even though you no longer use cigarettes,] Which of the following Marlboro cigarette products have you purchased for personal use in the past nine months (since January 1, 2010)?

*Select “yes” or “no” for each of the following Marlboro products.*

<i>In the past 9 months, have you purchased Marlboro...</i>	Yes	No
Red Pack (Full Flavor)	<input type="radio"/>	<input type="radio"/>
Red Label (Medium)	<input type="radio"/>	<input type="radio"/>
Gold Pack (formerly Lights)	<input type="radio"/>	<input type="radio"/>
Silver Pack (formerly Ultra Lights)	<input type="radio"/>	<input type="radio"/>
Blend No. 27	<input type="radio"/>	<input type="radio"/>
Virginia Blend	<input type="radio"/>	<input type="radio"/>
Special Blend Red	<input type="radio"/>	<input type="radio"/>
Special Blend Gold	<input type="radio"/>	<input type="radio"/>
Menthol	<input type="radio"/>	<input type="radio"/>
Menthol Blue Pack (formerly Milds)	<input type="radio"/>	<input type="radio"/>
Menthol Gold Pack (formerly Lights)	<input type="radio"/>	<input type="radio"/>
Menthol Silver Pack (formerly Ultra Lights)	<input type="radio"/>	<input type="radio"/>
Menthol Blend No. 54	<input type="radio"/>	<input type="radio"/>
Menthol Smooth	<input type="radio"/>	<input type="radio"/>

**PROGRAMMER:**

1. ASK IF Q3 “Marlboro” IS “Yes”
  2. INSERT TEXT THAT IS IN BRACKETS IF CURRENTLY CLASSIFIED AS “Current Non Tobacco User”
  3. DISPLAY PICTURES OF RELEVANT PRODUCTS IN EACH ROW
  4. DISPLAY MESSAGE IF NO ROW IS “Yes” “Earlier you indicated that you have purchased a Marlboro cigarette product in the past nine months. Please review your answers to this question, selecting the Marlboro product that you purchased, or click the “Back” button to revise your earlier answer.
-

5. Which, if any, of the following types of Marlboro cigarette products do you currently purchase on an occasional *or* on a regular basis?

*Select “yes” or “no” for each of the following Marlboro products.*

<i>Do you currently purchase Marlboro ...</i>	Yes	No
Red Pack (Full Flavor)	<input type="radio"/>	<input type="radio"/> 1
Red Label (Medium)	<input type="radio"/>	<input type="radio"/> 2
Gold Pack (formerly Lights)	<input type="radio"/>	<input type="radio"/> 3
Silver Pack (formerly Ultra Lights)	<input type="radio"/>	<input type="radio"/> 4
Blend No. 27	<input type="radio"/>	<input type="radio"/> 5
Virginia Blend	<input type="radio"/>	<input type="radio"/> 6
Special Blend Red	<input type="radio"/>	<input type="radio"/> 7
Special Blend Gold	<input type="radio"/>	<input type="radio"/> 8
Menthol	<input type="radio"/>	<input type="radio"/> 9
Menthol Blue Pack (formerly Milds)	<input type="radio"/>	<input type="radio"/> 10
Menthol Gold Pack (formerly Lights)	<input type="radio"/>	<input type="radio"/> 11
Menthol Silver Pack (formerly Ultra Lights)	<input type="radio"/>	<input type="radio"/> 12
Menthol Blend No. 54	<input type="radio"/>	<input type="radio"/> 13
Menthol Smooth	<input type="radio"/>	<input type="radio"/> 14

**PROGRAMMER:**

1. ASK IF “Current Tobacco User” AND Q3 “Marlboro” IS “Yes”
  2. DISPLAY PICTURES OF RELEVANT PRODUCTS IN EACH ROW
  3. DISPLAY ONLY ROWS SELECTED AS “Yes” IN Q4
-

**[Q6 IS INTENDED TO HELP US UNDERSTAND TYPE OF SPECIAL BLEND USE – REPLACEMENT VS. ADDITION]**

6. Please think back to the point in time just before you started using Marlboro Special Blend. Relative to that point in time would you say that you use Marlboro Special Blend...

*Select one row.*

<b><u>In place of</u></b> some or all of your use of the tobacco products you used at that time ( <u>no</u> net increase in tobacco use)	<input type="radio"/>
<b><u>In addition to</u></b> your use of the tobacco products you used at that time (leading to some increase in tobacco use)	<input type="radio"/>

**PROGRAMMER:**

1. **ASK IF CLASSIFIED AS “Current Tobacco User” AND Q5 “Marlboro Spec. Blend” (ROW 7 OR 8) IS “Yes”**

---

Earlier you indicated that you do not currently use tobacco products. Please note that the goal of this survey is only to understand use of tobacco product among people from many different backgrounds, and it is **not** intended to encourage you or anyone else to start using tobacco products.

- Individuals should consider the conclusions of the U.S. Surgeon General, the Centers for Disease control, and other public health and medical officials when making decisions regarding smoking.
- The best course of action for tobacco users concerned about their health is to quit. Adults who continue to use tobacco products should consider the reductions of risks for serious diseases associated with moving from cigarettes to the use of smoke-free tobacco or nicotine products.
- Minors should never use tobacco products and adults who do not use or have quit using tobacco products should not start.
- Adults who smoke should avoid exposing minors to secondhand smoke, and adult smokers should comply with rules and regulations designed to respect the rights of other adults.

**PROGRAMMER:**

1. **DISPLAY IF CLASSIFIED AS “Current Non Tobacco User”**

---

THANK YOU SCREEN

**WAVE 1 QUOTAS:**

	Current Regular Tobacco User	Former Regular Tobacco User	Never Regular Tobacco User
<b>OVERALL QUOTA:</b>	<b>5,000</b>	<b>5,000</b>	<b>5,000</b>
Northeast	700 - 1000	700 - 1000	700 - 1000
Midwest	900 - 1300	900 - 1300	900 - 1300
South	1500 - 2000	1500 - 2000	1500 - 2000
West	900 - 1300	900 - 1300	900 - 1300
18-30	1300 - 1600	600 - 800	1300 - 1600
31-50	1900 - 2200	1600 - 1900	1900 - 2200
51-75	1300 - 1600	2300 - 2600	1300 - 1600
Male	2250 - 2750	2250 - 2750	2250 - 2750
Female	2250 - 2750	2250 - 2750	2250 - 2750
Hispanic	650 - 850	650 - 850	650 - 850
Non-Hispanic – White	3000 - 3500	3000 - 3500	3000 - 3500
Non-Hispanic – Black	500 - 700	500 - 700	500 - 700
Non-Hispanic - Asian/Other	350 - 500	350 - 500	350 - 500
Up to High School	2400 - 2700	1700 - 2000	1600 - 1900
Some College	1300 - 1600	1300 - 1600	1200 - 1500
Bachelor's Plus	800 - 1100	1500 - 1800	1700 - 2000

Northeast	Midwest	South	West
Connecticut	Indiana	Alabama	Alaska
Maine	Illinois	Arkansas	Arizona
Massachusetts	Iowa	Delaware	California
		District of	
New Hampshire	Kansas	Columbia	Colorado
Rhode Island	Michigan	Florida	Hawaii
New Jersey	Minnesota	Georgia	Idaho
New York	Missouri	Kentucky	Montana
Pennsylvania	Nebraska	Louisiana	Nevada
Vermont	North Dakota	Maryland	New Mexico
	Ohio	Mississippi	Oregon
	South Dakota	North Carolina	Utah
	Wisconsin	Oklahoma	Washington
		South Carolina	Wyoming
		Tennessee	
		Texas	
		Virginia	
		West Virginia	

## 7. WEIGHTING TARGETS

### WEIGHTING TARGETS BY CELL

	Northeast			Midwest			South			West		
	Current Regular User	Former Regular User	Never Regular User	Current Regular User	Former Regular User	Never Regular User	Current Regular User	Former Regular User	Never Regular User	Current Regular User	Former Regular User	Never Regular User
Male	3,220,841	3,554,154	10,102,318	5,289,888	4,749,589	11,994,988	8,592,717	7,471,931	22,478,791	4,436,032	4,949,378	16,014,223
Female	2,721,744	3,241,383	11,788,302	4,535,876	3,996,446	14,293,406	6,873,058	5,734,339	27,940,390	3,134,522	3,817,547	18,165,257
Hispanic	542,087	377,109	3,081,389	362,891	229,180	1,685,282	1,503,372	1,120,642	8,659,586	1,354,579	1,309,486	10,119,784
Non-Hispanic White	4,526,412	5,803,408	14,122,882	8,140,018	7,794,077	20,446,553	10,961,082	10,133,928	28,864,382	5,031,141	6,502,909	17,687,747
Non-Hispanic Black	643,054	436,616	2,888,550	997,741	532,484	3,067,746	2,415,606	1,534,598	10,460,632	412,984	259,137	1,740,856
Non-Hispanic Other	231,032	178,404	1,797,799	325,114	190,295	1,088,813	585,715	417,102	2,434,581	771,850	695,394	4,631,092
Up to Highschool	3,520,889	2,909,061	8,673,426	5,869,580	3,754,508	9,890,005	9,424,944	5,759,618	21,444,255	3,859,875	3,038,035	13,291,056
Some College	1,532,001	1,738,218	5,573,622	2,932,215	2,726,662	7,933,981	4,263,691	3,925,101	13,809,200	2,600,140	3,080,571	10,091,309
Bachelor's Degree	663,558	1,334,679	4,704,257	818,129	1,466,968	5,536,936	1,354,874	2,327,684	9,832,246	847,296	1,744,024	7,282,202
More than a Bachelor's Degree	226,136	813,579	2,939,315	205,839	797,898	2,927,471	422,265	1,193,868	5,333,480	263,244	904,296	3,514,912