

# Is Tasting Believing? The Effect Of Peel-And-Taste Advertising On Product Feelings And Likelihood Of Purchase

R. Nicholas Gerlich, West Texas A&M University, USA  
Leigh Browning, West Texas A&M University, USA  
Lori Westermann, West Texas A&M University, USA

## ABSTRACT

*Scratch-and-sniff product samples have been used as surrogate methods of inducing product trial since the 1990s, but to date tasting a product required either in-store or in-home interactions with actual products. Peel-and-Taste flavor strips were introduced in 2007 as a means of putting product sample substitutes in the hands of many by virtue of being attached to advertising pieces in magazines, newspaper blow-ins, and direct mail. This study utilized a sample of female consumers (the targeted recipients of the ads) to allow them to interact with advertising samples using Peel-and-Taste, and measuring various resulting attitudes. Results showed that ratings of flavor pleasantness and the Peel-and-Taste method itself were positive significant predictors of Feelings Toward the Product (FTP), and that FTP and the participant's resulting mood state were positive significant predictors of Likelihood To Purchase (LTP) the product. In aggregate, though, FTP was modest at best, and LTP was virtually indifferent. It was concluded that the Peel-and-Taste method, while favorably linked to FTP and LTP, was not so strong as to be a significant stimulus to purchase the product.*

**Keywords:** Product trial, product sampling, advertising, attitudes, mood, brand

## INTRODUCTION

Scratch-and-sniff advertisements appeared in large number in the 1990s, relying on printing technology that made it possible for consumers to interact with a product and a salient attribute in an inexpensive (for the marketer) and non-threatening (for the consumer) manner. In so doing, marketers utilizing this method were effectively seeking to create a surrogate means of product trial. The literature supports the conclusion that a favorable evaluation of scent can result in a transfer to the evaluation of a particular product. Recently, peel-and-taste advertisements appeared in the media and in mailboxes, utilizing dissolvable flavor strips that purport to allow consumers to sample a product without ever physically interacting with it. The purpose of this study is to evaluate the effectiveness of these flavor strips in influencing consumer feelings toward the product as well as likelihood to purchase the product.

## THEORETICAL BACKGROUND

Product trial has been shown to influence the formation of belief and attitudes toward that product. Furthermore, direct experience with the product has been shown to be a much more reliable and powerful predictor of buyer behavior than mere exposure to product advertising alone (Smith & Swinyard 1982; Fazio & Zanna 1978; Smith 1993). Interaction with the physical product, thus, is of greater value than advertising alone; seeing and using are believing. Exposure to advertising alone yields belief strength, intentions to buy, confidence, and attitudes that

are not as strong as those recorded when participants are allowed to actually try the product.

But what if the advertisement is the product trial? Research has shown that a pleasant scent in an advertisement and a participant's resulting mood state can positively influence attitudes toward the product (Ellen and Bone 1998) and can affect judgments of unrelated focal objects (Isen and Shalcker 1982; Petty et al. 1993). While executional cues such as scent (olfactory), pictures (visual), and sound (aural) have been studied and shown to affect physical and emotional states, there is need to study whether taste, particularly in a surrogate form, can likewise influence consumer feelings toward products, and ultimately their likelihood of buying the product.

The majority of studies examining product trial have focused on simple easily consumed and functional products such as coffee, soft drinks, and snack foods (Olson and Dover 1979; Smith and Swinyard 1988; Smith 1993). Kempf (1999) and Kempf and Smith (1998) add the notion of trial diagnosticity, which is the perceived usefulness of the trial for forming one's evaluations of the product. This diagnosticity is a function of whether the product's salient attributes can be ascertained during the product trial. That product taste can be ascertained from a surrogate method is the assumption made by advertisers using the Peel-and-Taste flavor strip. Furthermore, it is assumed by these advertisers that this surrogate will serve sufficiently as a product trial, and influence consumer feelings toward the product and cause them to purchase the product in its natural form.

Prior studies involving scent show that experiencing a pleasant or unpleasant scent can be transferred to associated objects (Ehrlichman and Halpern 1988). Bone and Jantrania (1992) explored the relationship between scent cues and product quality. Thus, if a consumer encounters a pleasing scent, the related object is likely to also be perceived as pleasing and/or of high quality. This may also be true for consumers experiencing a pleasant taste.

Scents are often linked to specific objects, events, and persons in a consumer's memory. Great variability can occur, though, between consumers, with one scent evoking a positive memory for one person, and a negative memory for another (Engen 1972). The same may be true for taste. Thus, it is possible that a scent or taste stimulus could influence consumer attitudes, but as Kirk-Smith (1994) argues, the associations that consumers make to the stimulus could be very dependent on the context of prior exposure, as well as the circumstances of that exposure.

This contribution of this study is to examine the Peel-and-Taste phenomenon as a consumer-controlled method of taste and thus product trial, and to determine the resulting effects on consumer feelings toward the product and their likelihood to purchase it. By utilizing measures designed to assess pleasantness of a taste sample, along with measures that report consumer attitudes toward various aspects of the advertisement, brand, and the Peel-and-Taste method in particular, we calculated a predictive model of consumer Feelings Toward the Product. Then, by calculating the consumer's mood following their experience with the Peel-and-Taste advertisement, we calculated a predictive model of consumer Likelihood to Purchase.

## **METHODOLOGY AND MEASURES**

A volunteer sample of adult female university students, faculty, and staff was recruited at a medium-sized regional state university. A total of 151 usable responses were collected over a two-week period. Authentic advertising samples were provided by the corporate developer of the advertising medium, sufficient to provide each participant with three examples of peel-and-taste advertisements then currently in use: a two-page magazine ad for a grape juice drink, a card stock blow-in newspaper insert for an apple juice beverage, and a direct mail piece for a flavored vodka drink.

In all three cases the products were national brands with widespread distribution, each containing a dissolvable flavor strip sealed in a foil pouch. The intended application is for consumers to peel open the pouch and place the strip on their tongue. Flavor transference then occurs, and is assumed to be a surrogate for actual product trial.

Women were utilized exclusively in this project because of their overall superior sensory capabilities as compared to men (Laird 1932; Myers-Levy 1989). In all cases, the target market for the ad was women, as verified

by the maker of the peel-and-taste medium. Ellen and Bone (1998) similarly relied solely upon female participants in their study of scratch-and-sniff advertisements, supported by the findings of Cain (1982) and Doty, et al. (1985). The use of women only is thus consistent with the literature and prior work.

The study was conducted one-on-one with a participant and researcher in conferences rooms. Participants could thus not see what other participants were doing during the study, nor were they affected by extraneous influences. Those waiting to participate were held in a separate area apart from those exiting the study in order to control for accidental feedback loops. In all cases, participants were recruited under the premise of evaluating a new method of advertising, and were not informed that only females were included in the study.

Once in the conference room, participants were provided a portfolio with one each of the three ads. They were randomly assigned and told to focus on one of the three ads (for the purpose of answering follow-up questions), but were also told they were free to examine all three and interact with the ads as they wished. Participants were provided up to five minutes to examine and interact with the ads, after which time they were provided a laptop computer to complete an online survey. All advertising materials were removed as the participant moved to the computer.

The online portion of the study included basic recall, including the specific product they were asked to focus on, its flavor, the type of advertising medium (e.g., magazine, newspaper insert, etc.), and the primary product claim made in the advertisement.

Participants were then polled whether they had actually tasted the flavor strip of the product on which they were told to focus. If they did use the strip, they were asked to rate the pleasantness of the taste, using the sum of three 9-point semantic differential scales developed by Ellen and Bone (1998), agreeable/disagreeable, pleasant/unpleasant, and good/bad. Scores on this *flavor* variable could range from 3 to 27, with low sums being most positive and high scores being most negative

Attitudes toward the advertisement, the brand, and the peel-and-taste method were then measured with separate batteries of summed scores on semantic differential scales. *A(ad)* was measured with six 7-point items that covered the totality of the advertising piece on which they were told to focus: interesting/not interesting, good/bad, likable/not likable, not irritating/irritating, pleasant/unpleasant, and enjoyable/not enjoyable. Scores could range from 6 to 42, with low scores being most positive and high scores being most negative (Madden, et al. 1988, Ellen and Bone 1998).

*A(brand)* was measured by asking participants to evaluate the brand on which they were asked to focus, using four 7-point items (Ajzen and Fishbein 1980, Ellen and Bone 1998), including good/bad, wise/foolish, favorable/unfavorable, and beneficial/harmful). Scores could range from 4 to 28, along the same anchors used above.

*A(method)* was measured by asking participants to consider the peel-and-taste method itself, using the identical set of semantic differential items used to measure *A(brand)*. Given the newness of the peel-and-taste method, a separate measure for its impact on consumers was deemed prudent. Scores once again could vary between 4 and 28.

A fifth variable, *mood*, was gathered via six 9-point semantic differential scales (Mehrabian and Russell 1974). Participants were asked to report their mood state after having experienced the advertisement. Mood thus captures the participant's general frame of mind following exposure to the advertisement. The presence of odors has been associated with mood states (Ehrlichman and Bastone 1992; Parasuraman 1984; Torri et al. 1988), and has been shown to affect judgments of stimuli (Isen and Shalcker 1982; Petty et al. 1993). It is thus plausible that a favorable flavor could likewise affect judgments of a marketing stimulus.

Participants were then asked to rate on 5-point Likert scales the impact the peel-and-taste flavor strip had on their overall feelings about this product, and then the effect the test strip had on their likelihood to purchase the product. These two dependent variables serve as indicators of the effect of the peel-and-taste method, and can serve

as predictors of ultimate purchase. Furthermore, favorable results would indicate that marketers may be able to sidestep the time and expense of promoting consumer product trial by instead using advertisements employing peel-and-taste methods.

## **HYPOTHESES AND RESULTS**

Composite scores were calculated by summing the individual scores in the various subscales, resulting in these variables:

|                    |  |
|--------------------|--|
| <i>flavor</i> :    | mean = 9.95 on a scale of 3 to 27, indicating the overall attitude toward flavor   |
| <i>A(adv)</i> :    | mean = 13.49 on a scale of 6 to 42, indicating the overall attitude toward the advertisement (e.g., type of ad, message, claims, etc.) |
| <i>A(brand)</i> :  | mean = 9.08 on a scale of 4 to 28, indicating the overall attitude toward the brand  |
| <i>A(method)</i> : | mean = 10.64 on a scale of 4 to 28, indicating the overall attitude toward the Peel-and-Taste method                                   |
| <i>Mood</i> :      | mean = 14.73 on a scale of 6 to 54, indicating the participant's overall mood after exposure to the ad                                 |

In all cases, the four scales reflect Most Positive scores being lowest, and Most Negative scores being highest. The first four variables were Independent Variables in Model 1 below, while the mood variable was included in Model 2.

Two separate regression equations were calculated for the two Dependent Variables, Feeling Toward the Product (FTP) and Likelihood to Purchase (LTP), based on the relationships below:

**Model 1:**  $FTP = a + B1a(flavor) + B2a(adv) + B3a(brand) + B4a(method) + B5a(mood) + e$

**Model 2:**  $LTP = a + B1b(flavor) + B2b(adv) + B3b(brand) + B4b(method) + B5b(mood) + e$

FTP is thus a function and composite of the summed subscale scores, and provides a global attitude toward the entire product. LTP is an indicator of purchase likelihood given FTP as well as the composite mood score.

Based on Ellen and Bone (1998) and the antecedent developers of the subscales used both in this study and in Ellen and Bone, the following hypotheses are proposed:

### **Model 1:**

**H1a:** *flavor* is positively and significantly related to Feelings Toward the Product

**H2a:** *A(adv)* is positively and significantly related to Feelings Toward the Product

**H3a:** *A(brand)* is positively and significantly related to Feelings Toward the Product

**H4a:** *A(method)* is positively and significantly related to Feelings Toward the Product

**H5a:** *Mood* is positively and significantly related to Feelings Toward the Product

### **Model 2:**

**H1b:** *flavor* is positively and significantly related to Likelihood to Purchase the Product

**H2b:** *A(adv)* is positively and significantly related to Likelihood to Purchase the Product

**H3b:** *A(brand)* is positively and significantly related to Likelihood to Purchase the Product

**H4b:** *A(method)* is positively and significantly related to Likelihood to Purchase the Product

**H5b:** *Mood* is positively and significantly related to Likelihood to Purchase the Product

The mean score of FTP was 2.45 on a scale of 1 (Strongly Favorable) to 5 (Strongly Unfavorable). The mean score of LTP was 2.93 on a scale of 1 (Strongly Favorable) to 5 (Strongly Unfavorable). Thus, in the aggregate, feelings toward the product were more favorable (modestly so) than the aggregate likelihood of purchase (indecisive).

Tables 1 and 2 below illustrate the findings of the regression analyses. Model 1 produced an  $R^2 = 0.241$  with  $A(flavor)$  and  $A(method)$  being significant predictors at the  $p = 0.05$  level. H1a and H4a were thus retained. Model 2 produced an  $R^2 = 0.482$ , with  $A(flavor)$  and  $A(method)$  again being significant predictors at the  $p = 0.05$  level. H1b and H4b were retained. The resulting fit of Model 2 is double that of Model 1, as evidenced by the  $R^2$  values. In both models the hypotheses pertaining to  $A(adv)$ ,  $A(brand)$  and  $Mood$  were rejected.

**Table 1**  
Coefficients(a)

| Model |            | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|
|       |            | B                           | Std. Error | Beta                      |        |      |
| 1     | (Constant) | 1.446                       | .259       |                           | 5.590  | .000 |
|       | flavor     | .041                        | .018       | .231                      | 2.337  | .021 |
|       | A(adv)     | -.037                       | .022       | -.217                     | -1.649 | .102 |
|       | A(brand)   | .009                        | .026       | .038                      | .351   | .726 |
|       | A(method)  | .096                        | .021       | .477                      | 4.572  | .000 |
|       | mood       | -.008                       | .015       | -.044                     | -.501  | .617 |

a Dependent Variable: FTP

**Table 2**  
Coefficients(a)

| Model |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|-------|------|
|       |            | B                           | Std. Error | Beta                      |       |      |
| 1     | (Constant) | .644                        | .259       |                           | 2.482 | .014 |
|       | flavor     | .083                        | .018       | .379                      | 4.670 | .000 |
|       | A(adv)     | .005                        | .022       | .022                      | .206  | .837 |
|       | A(brand)   | .019                        | .026       | .065                      | .736  | .463 |
|       | A(method)  | .083                        | .021       | .339                      | 3.956 | .000 |
|       | mood       | .020                        | .015       | .093                      | 1.280 | .203 |

a Dependent Variable: LTP

Interestingly,  $A(adv)$  and  $Mood$ , while not significant at the  $p=0.05$  level in either model, were inversely related to Feelings Toward the Product, but positively related to Likelihood to Purchase. This suggests that purchase likelihood functions apart from product feelings, further complicating the disparity noted above between FTP and LTP.

**DISCUSSION AND CONCLUSIONS**

The introduction of the peel-and-taste method signals a new direction for product advertising in general, and product trial in particular. The general results of this study indicate that Feelings Toward the Product were only modestly favorable, and that Likelihood to Purchase was indecisive at best. While these findings suggest that the Peel-and-Taste method may not produce favorable results for advertisers, its use as a surrogate method of product trial must be studied under more diverse scenarios and product categories. Other limitations of the study are noted below.

This research was conducted in an area with strong religious values and restricted access to alcoholic beverages. Some of the respondents told to focus on the vodka beverage indicated they were not drinkers, thus

resulting in zero likelihood of purchase. Approximately one-third of the participants were told to focus on the flavored vodka product, and no effort was made *a priori* to screen participants for alcohol consumption and/or religious beliefs. Future studies may find such a screening useful.

While there is abundant research in the field of scents and their effect on consumer attitudes toward advertisements and brands, there is a paucity of research in the emerging medium of flavor strips. The results of this study may not be generalizable across all consumable products or product types. Furthermore, given the study's focus on female consumers, it is possible that male consumers may respond differently across the board.

Another concern is that an out-of-context taste may not substitute for the real thing. In other words, is a flavor strip a viable surrogate for product trial? Furthermore, can a flavor strip sufficiently convey the product's true flavor? Finally, in the process of eating, there are four dimensions: sight, smell, texture, and taste. The Peel-and-Taste strip is trying to sidestep the first three steps, and using a surrogate for the latter. While scratch-and-sniff advertisements address only one sensory aspect, Peel-and-Taste is more multidimensional in scope.

It is also possible that the sample is too culture-bound. Given the aftermath of the 9-11 bombings and anthrax scares, as well as overall fears of product safety, it is conceivable that attitudes toward the Peel-and-Taste could be quite different in other cultures. An interesting extension of this research would be to collect data in different nations, or at minimum, among recent immigrant or international college student arrivals before they have become acculturated to US norms.

#### **AUTHOR INFORMATION**

**R. Nicholas Gerlich**, Ph.D. is Professor of Marketing and Director of Continuous Improvement at West Texas A&M University. He received his Ph.D. from Indiana University, and joined the faculty of WTAMU in 1989. Dr. Gerlich has played a significant role in the development of online courses in the College of Business, and has been teaching in this format since 1997. He has twice won the Distance Learning Innovation Award during this time. His recent research has focused on music piracy as well as assessment-related issues.

**Leigh Browning**, Ph.D. Five years after her graduation from West Texas A&M University, Dr. Browning joined the WTAMU faculty and now serves as director of broadcasting, coordinator of Maroon Productions, an on-campus student production company, and faculty adviser for KWTS, 91.1 FM, the campus radio station. She received the Outstanding Graduate Assistant Award from Kansas State University where she earned a Masters Degree, Best Faculty Member at Ottawa University in 1989 and WT's most prestigious teaching award, the University Teaching Excellence Award in 1995. Dr. Browning has been named Advisor of the Year at WT four different times. She most recently received a doctorate from the University of Southern Mississippi in Mass Communication where she served as a visiting professor. Dr. Brownings student groups at WT have won more than 44 National Championships in audio and video production, scriptwriting, web design and commercial production. Dr. Browning brings real world mass media experience to the classroom as she has worked in commercial radio as a News Director and Morning Show host, a television anchor and freelance reporter for CNN and Philips Recordings Studios in Tokyo, Japan, and served on the production staff of four major motion pictures. In 2004 she was given the highest honor from the National Broadcasting Society by being named Advisor of the Year. She was also given this award in 2007. As of the year 2007 the WTAMU Broadcasting Program has won more than 50 national titles for audio and video production, script writing, web design and community service.

**Lori Westermann**, M.A. received a B.A. in mass communication from Mississippi College and an M.A. in mass communication from Southwestern Theological Seminary. Her industry career includes positions with network affiliates, the cable industry, advertising agencies and corporate public relations efforts. She helped create *The Eternal Flame*, the University year-in-review publication and serves as the faculty adviser for the student chapter of the American Advertising Federation and the Texas Public Relations Society. Westermann received an Emmy Award for her work on the documentary *China: Walls & Bridges* and is the most recent recipient of the AAF 10<sup>th</sup> District Advertising Educator of the Year.

**REFERENCES**

1. Ajzen, Icek and Martin Fishbein (1980), *Understanding Attitudes and Predicting Social Behavior*, Englewood Cliffs, NJ: Prentice Hall.
2. Bone, Paula Fitzgerald and Swati Jantrania (1992), Olfaction as a Cue for Product Quality,” *Marketing Letters*, 3 (3), 289-296.
3. Cain, William S. (1982), Odor Identification by Males and Females: Predictions vs. Performance,” *Chemical Senses*, 7 (2), 129-142.
4. Doty, Richard L., Steven Applebaum, Hiroyuki Zusho and R. Gregg Settle (1985), Sex Differences in Odor Identification Ability: A Cross-Cultural Analysis,” *Neuropsychologia*, 23 (5), 667-672.
5. Ehrlichman, Howard and Linda Bastone (1992), “The Use of Odour in the Study of Emotion,” in *Fragrance: The Psychology and Biology of Perfume*, S. Van Toller and G.H. Dodd, eds., London: Elsevier Applied Science, 143-159.
6. Ellen, Pam Scholder and Paula Fitzgerald Bone (1998), “Does It Matter If It Smells? Olfactory Stimuli As Advertising Excecutional Cues,” *Journal of Advertising*, 27 (4), 29-39.
7. Engen, Trygg (1972), “The Effect of Expectation on Judgments of Odor,” *Acta Psychologica*, 36, 450-458.
8. Fazio, R.H. And M.P. Zanna (1978), “On the Predictive Validity of Attitudes: The Roles of Direct Experience and Confidence,” *Journal of Personality*, 46, 228-243.
9. Isen, Alice and Thomas Shalker (1982), “The Effect of Feeling State on Evaluation of Positive, Neutral and Negative Stimuli: When You 'Accentuate the Positive,' Do You 'Eliminate the Negative'?” *Social Psychology Quarterly*, 45 (1), 58-63.
10. Kempf, DeAnna S. and R.E. Smith (1998), “Consumer Processing of Product Trial and the Influence of Prior Advertising: A Structural Modeling Approach,” *Journal of Marketing Research*, 35, 325-338.
11. Kempf, DeAnna S. (1999), “Attitude Formation from Product Trial: Distinct Roles of Cognition and Affect for Hedonic and Functional Products,” *Psychology & Marketing*, 16 (1), 35-50.
12. Kirk-Smith, M.D. (1994), “Cultural and Olfactory Communication,” in *Ethological Roots of Culture*, R. Allen Gardner et al., eds., Boston: Kluwer, 385-406.
13. Laird, Donald A. (1932), “How the Consumers Estimate Quality by Subconscious Sensory Impressions: With Special Reference to the Role of Smell,” *Journal of Applied Psychology*, 16 (June), 241-246.
14. Madden, Thomas J., Chris T. Allen and Jacquelyn Twible (1988), “Attitude Toward the Ad: An Assessment of Diverse Measurement Indices Under Different Processing 'Sets',” *Journal of Marketing Research*, 25 (August), 242-252.
15. Mehrabian, A. and J.A. Russell (1974), *An Approach to Environmental Psychology*, Cambridge, MA: MIT Press.
16. Meyers-Levy, J. (1989), “Gender differences in Information Processing: A Selectivity Interpretation,” in *Cognitive and Affective Responses to Advertising*, P. Cafferata and A. Tybout, eds., Lexington, MA: Lexington Books, 219-260.
17. Olson, J.C. and P. A. Dover (1979), “Disconfirmation of Consumer Expectations Through Product Trial,” *Journal of Applied Psychology*, 64, 179-189.
18. Parasurman, Raja (1984), “The Psychobiology of Sustained Attention,” in *Sustained Attention in Human Performance*, J.S. Warm, ed., Chichester, UK: Wiley, 61-101.
19. Petty, Richard E. and John T. Cacioppo (1986), *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*, New York: Springer-Verlag.
20. Smith, R. E. (1993), “Integrating Information From Advertising and Trial: Processes and Effects on Consumer Response to Product Information,” *Journal of Marketing Research*, 30, 204-219.
21. Smith, R. E. and W. R. Swinyard (1982), “Information Response Models: An Integrated Approach,” *Journal of Marketing*, 46, 81-93.
22. Smith, R. E. and W. R. Swinyard (1988), “Cognitive Response to Advertising and Trial: Belief Strength, Belief Confidence and Product Curiosity,” *Journal of Advertising*, 17 (3), 3-14.
23. Torii, S., H. Fukuda, H. Kanemoto, R. Miyanchi, Y. Hamuzu and M. Kawasaki (1988), Contingent Negative Variation (CNV) and the Psychological Effects of Odour,” in *Perfumery: The Psychology and Biology of Fragrance*, S. Van Toller and G. H. Don, eds., New York: Chapman and Hall, 107-120.

NOTES