



What You Need to Know about Internal Product Evaluations

By Rossella Mazzucchelli

Introduction

Whether you are selecting the best flavor to impress a client or having to address a competitive threat... You will probably need more facts and data before taking action. Knowledge is power but at times like this, speed of response is just as critical. Balancing quality, cost and time for obtaining product and consumer insights has always been tricky. In order to compete effectively, we must look for new and better ways to accomplish our mission. We must find efficient methods and procedures to provide direction and feedback to product development, marketing and sales in a timely manner.

What's Missing from your Toolbox?

A fully outfitted toolbox would include consumer research techniques to supply consumer insights, as well as discrimination and descriptive techniques to provide product insights. A lot has been written about these great tools. But what about the less grandiose, day-to-day activities such as internal product evaluations? Throughout the years, product evaluations have been abused, underrated, even ignored. Is there an opportunity to instill some science, quality and objectivity into them?

What is a Product Evaluation?

A product evaluation (or product cutting) is the act of judging or assessing the sensory properties of a product (i.e., properties perceived through the sense of vision, hearing, taste, olfaction and touch).

Common Goals for Internal Product Evaluations

The goals for conducting a product evaluations are too numerous to be listed. Some common objectives are:

- Screening prototypes during product development
- Monitoring quality across multiple production facilities
- Assessing lot-to-lot variability of finished products or ingredients
- Documenting shelf life of a product or ingredient over time
- Selecting samples for consumer or sensory test
- Reviewing products with issues (consumer complaints, out of spec etc.)
- Reviewing products for ideation/brainstorming
- Reviewing data or test results
- Reviewing products prior to a client presentation.



Critical Components of a Well Executed Product Evaluation

Ultimately, the success of a product evaluation depends on the following five aspects: objectives, samples, attendees, execution and documentation.

1. Objectives

It's imperative to state clearly and concisely the objective of the evaluation and to define the desired outcomes (for example: the goal is to evaluate appearance, flavor and texture of 12 chili prototypes and to select 6 to be submitted to a consumer test). It's also helpful to briefly explain how the cutting will be conducted and what is expected from the attendees (for example: the chili samples will be evaluated hot and in random order. Attendees will be asked to fill out a short questionnaire and to discuss with the team in order to reach consensus).

2. Samples

A careful selection of samples is essential. It's usually a good idea to start with a broad selection and gradually narrow down the list of samples (have a preliminary session if necessary). Be aware of weeding out prototypes too early in the process, as you might lose potential "winners". This is especially true if you are selecting samples for a brainstorming session, a competitive review or a consumer test.

Acquiring Samples

In terms of acquiring the samples, you should ideally purchase multiple units and source multiple codes for each sample (if one of the samples is defective, open a new sample). The key is to obtain a fair representation of the product (i.e., representative of what consumers are buying). In a competitive setting, avoid comparing items produced in the pilot plant with items obtained from the store shelf, as processing and age differences will be too great.

Storing Samples

Once purchased, samples should be stored according to manufacturer's recommendations in their un-opened original packaging. All samples should be within shelf-life and the age should be representative.

Sample Preparation

The preparation of each product is obviously another critical step. Samples should be prepared according to the primary direction on the package itself. For samples that require heating, take special precautions in order to maintain hold times and temperatures consistent across the samples.

Presentation of the Samples

Sample presentation and serving are just as important. Whenever possible, samples should be presented as close as possible to the manufacturer's serving suggestions - provided that they do not involve the addition of ingredients that might affect their sensory properties.



Visual Evaluation of Samples

It's generally beneficial for the team to visually evaluate the whole sample (i.e., full can, full bottle, full frozen entrée etc.) before dividing it into individual portions (many visual differences are easier to detect and characterize on a full portion). For samples that are heterogeneous in nature, serve larger amounts in order to ensure consistency and representation.

Blinding each sample with a 3-digit code will ensure unbiased observations and ratings. All samples should be presented using clean, labeled, adequate containers.

Sample Evaluation

Evaluation procedure should mimic typical consumers' behavior (i.e., use spoon for soup but use fork for a stew etc.). To avoid flavor carry over from one sample to the next, use clean silverware, cleanse the palate and take a short break in between samples. Sensory fatigue can become a problem if not properly managed. Make sure to:

- Allow enough time for the product evaluation
- Start with milder flavors and then move on to the bolder flavors
- Break it down into sub-sessions (i.e., taste 6 samples, have a discussion, taste 6 more samples, have second discussion, etc.)
- Have suitable palate-cleansers available (i.e., water, unsalted crackers etc.)
- Provide ballots so that people don't rely solely on memory to recall each sample.
- Branding, price and packaging may be introduced only after the product evaluation is complete.

3. Attendees

Depending on the objectives, it might be beneficial having a multi-functional team present at a product cutting. This includes people actively working on the project and/or people who have history with the product category being evaluated. More importantly, one should make sure to have all key decision makers present.

Number of Attendees

Cuttings with 3-8 people generally run quickly and efficiently. Make sure all people are fully committed to the product cutting, including arriving on time and staying for the full session. For taste and flavor evaluations, it's recommended that attendees abstain from smoking and consuming strongly flavored foods for at least one hour prior to the session. Wearing fragrances should also be avoided as they will affect aroma and flavor perceptions.

Basic Evaluation Procedures

All attendees should follow the same evaluation procedures and form an opinion about each sample without biasing others.



The use of simple ballots is a valuable tool for attendees while judging the samples. Whenever possible, attendees should evaluate the samples in a different order to minimize position/order bias.

Individual vs. Consensus

Individual evaluations should precede the group discussion, which should be moderated by one person. Consensus judgments are useful because they allow the team to make decisions on the spot.

Product cuttings are typically an initial step, followed by more formal sensory, consumer and/or analytical testing. However, in smaller companies or in low-risk projects, final decisions may be taken at the cutting.

4. Execution

Cuttings should be conducted in areas with adequate space, lighting and air filtration. Depending on the product category, a kitchen nearby may be required.

Dedicated Administrator

Depending on the volume and the complexity of the product evaluations, it may be worthwhile to invest in a trained technician to manage them. His/her functions would include:

- Purchasing, receiving, logging and storing all samples
- Purchasing extra ingredients and supplies
- Coding and preparing each sample
- Scheduling, setting up and executing the cutting
- Clean-up
- Summarizing and documenting each product cutting.

5. Documentation

All five aspects of the product evaluation should be documented. Proper documentation is guaranteed to save time in the long run. Here is a short list of items that should be documented:

Products

Record product name, manufacturer, source, price, UPC code, expiration date, size and packaging. For very important product evaluations, take a digital picture of each sample. Each sample should be assigned a unique, 3-digit random number for identification.

Preparation directions

Document how each sample was prepared. The more specificity, the better. It should include time and temperature for cooking, hold times, appliance and utensils used. The key in this case is being able to replicate any sample at a later date, if necessary. In addition, observations recorded during the preparation may result useful later on.



Attendees

Document who was invited to the evaluation and who actually attended. It's important to identify in advance the key decision makers. If one or more are absent, consider postponing the product cutting.

Ballots

Evaluation ballots used during the cutting should be collected and filed. Individuals may request copies for their own use.

Conclusions and Next Steps

The team's decision and the rationale for that decision should be documented and an email should be sent to all attendees within 24 hours.

Communications

Important emails and other forms of communication pertaining to the planning, execution and conclusion of the product evaluation should be saved until completion of the project.

In Summary

Internal product evaluations are often not given the attention they deserve. However, in many cases product evaluations are vital to the decision making and the launch of successful new products. Ultimately, the success of a product cutting depends on the following five aspects: objectives, samples, attendees, execution and documentation.

When executed correctly, internal product evaluations are an effective tool for providing direction to product development, marketing and sales.

About the Author

Rossella Mazzucchelli, founder of Sensory Works, Inc. is an experienced sensory/consumer insights professional with 15 years of experience in leading companies including PepsiCo, ConAgra Foods Sensory Spectrum and Symrise Inc.

Rossella holds a B.S. Food Science degree from Michigan State University and a M.S. Food Science degree from the University of

California, Davis. She is a member of MRA, IFT, SED and SSP.

Visit her website at: www.sensory-works.com

