
Sensory Evaluation of Chocolate Products

Small to mid-size companies can maintain the quality of their signature products by defining their attributes and tasting daily.

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Last year, arguably one of the toughest years confectionery has seen in quite a while, there still were successful companies and products. The consumer still had a willingness to splurge on indulgent treats with which they felt a connection.

Your product or company has a unique story, which should be used to connect with the consumer. This story may be what is keeping a confectioner in business. It is all about differentiation in the marketplace. Give customers a reason to select your product off the store shelf or drive to your store. Some ways to do this are to tell your *company* story or a particular *product* story. If your company has an interesting history or path to a product introduction, tell it. Most confectionery companies have at least one quirky character, usually the founder, who makes for an interesting story.

Besides your company story, there is a product story. How was this product invented? Was it by accident? Was it ingenuity to use aging milk to produce a unique milk chocolate with which we are all famil-

iar? It all comes down to a product's flavor or sensory experience to tell the story. The words used to describe and define individual products are the words we use to write our product story. Does your company have the story (or words) that describe your product formally recorded so that it can be preserved and passed on to posterity? If you want your company and its products to continue, you need to identify and capture your story or description of your product and evaluate current production against these key attributes.

We will review why tasting your product is so important, who should do it and how to get started or expand the program that is already in place. We will be concentrating on the small to mid-size confectioner, since most of the large confectioners may have whole departments to oversee this function. I respect the product guidance that these groups provide, but there are lot of companies that need basic information that works on the plant floor. We will focus on sensory evaluation at its most basic level. ➤



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Taste your product to ensure product quality and stick to your story!

DO WE REALLY NEED TO TASTE OUR PRODUCT?

No matter what the size of your company, the final flavor of your finished product as it goes into the box, and what it delivers from the box or bag, are the keys to your survival. If you lose sight of this and a product that does not represent your brand well makes it out the door, it will not matter if you met your production goals, the product passed micro and you shipped the product on time. Odds are, about 90 percent of your resources are focused on everything but the final flavor.

Sensory evaluation should not be something that is extra and done “when we get to it.” Tasting the raw materials as they come in and your finished product as it goes out is integral to your bottom line. Sensory is core to your business survival. We are not talking old-school “significantly different” statistics, but whether the raw materials coming in taste like they should and the product going out the same.

A lot of errors can be prevented by tasting raw materials upon receipt before they are put into your tank or dry inventory. An example would be to give your receivers the task of taking a sample from a liquid tanker upon receipt and tasting for a disaster check. This can be done on any receiving shift and, if a question arises, the shift supervisor or laboratory personnel can serve as backup to confirm results. Retained samples can be kept to share with the quality manager. No fancy training needed, just experience on the job. The recordkeeping can be as simple as signing the bill of lading.

Many mechanical problems can be detected by tasting a product before they

can be physically measured. An example of this could be a very small leak in a water-jacketed product vessel. In a chocolate sample, an experienced tongue can tell by the flavor and texture and color that water may be leaking into the product. These differences will be picked up by a person before the actual equipment may indicate that there is a problem. The sooner you know about a problem, the sooner it can be corrected and less product is lost.

WHO SHOULD TASTE THE PRODUCT?

The short answer is anyone who comes in contact with it. Your best tasters are probably out on the plant floor and may not be in the lab or boardroom. You will not know this unless you stimulate a culture that provides input from all of your employees. It is dangerous to have one person be “the” taster. It is now known that there are genetic differences that influence our ability to taste bitter and sweet. If you have just one person taste the product and he or she is a genetic anomaly, it could be problematic. Therefore, it is best to encourage those on the line to taste what is being made while staying within the confines of good manufacturing practices (GMPs). This may mean tasting the products they produce when they bring their retained sample into the laboratory or allowing them to take some products off the line and taste them in the break room.

Everybody in your organization has the ability to positively or negatively affect your flavor. It could be the person who schedules your trucking and their attention to acceptable previous-cargo requirements. Do you want all your candy pieces to taste like mint from the previous haul? Purchasing must be made mindful that it does matter that the Easter grass for your gift baskets does not impart an odor. ➤

The more people tasting, the better. Taste early and taste often to minimize the effects of any off-product, such as troubleshooting time and rework generated. This being said, a core group of people should meet every day to do a concentrated tasting of products being produced, either on an audit basis or a lot-to-lot release.

It is suggested that tastings be conducted in the morning or first half of the shift. A time should be selected to ensure maximum participation. If quality, production and management already get together daily to discuss the activities of that day, taste immediately after this discussion. If it is possible to include employees from the production line, conduct the tastings when they have personnel coverage and can stop by the designated area on their way to the break room.

Most likely, if there are no specific sensory personnel, a person from the quality department should gather the representative products to present to the cross-departmental group to taste together. Results can be gathered and discussed immediately so that any necessary action

can be communicated instantly. The level of interest in tasting is perhaps as critical as actual tasting ability (Figure 1).

HOW DO WE GET STARTED?

Most companies know that there are a few items or particular flavors in their product line—their signature products—that differentiate them from their competitors. These are the items that tell your story. These products need to be defined on paper (or electronically) as to what key attributes need to be met to know that they meet the criteria that your customers expect. Record these key attributes of a particular product's story.

Most likely, if you put the CEO, whose grandfather started the business, in a room with a few of the long-time employees and asked them to list the key attributes of a certain product, they could tell you.

In order to ensure the integrity of your brand and pass it on to new employees and new generations it is important to capture this information.

Make a concerted effort to have a core group of at least six people sit down with your most important pieces and come up with the key attributes that define them. Is it that the outside and the center melt at exactly the same time? Is it the crunch that is important? Is it a very distinctive color? Is it the intensity of the lemon flavor? Is it the order in which the flavors present themselves? Is it the sweetness upfront and the heat at the end?

Develop a specific ballot that includes these key attributes for each different piece. This is a form of descriptive analysis at its most basic level (Figure 2).

Talk about the intensity of these attributes, and provide a sample scale (Figure 3). It doesn't matter what the scale is as long as it is defined and there is agreement and

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Taste Panelist Tips

Guidelines

- No food or drink 30 minutes prior to tasting
- All tasters should taste samples in same order
- Take your time
- Sample same amount of each sample
- Rinse mouth between samples
- Time lapse between samples should be equal
- Taste samples away from production odors

Logistics

- Taste first half of shift
- Before breaks or before lunch
- Include a cross-section of participants
- 6 to 8 people ideal—sitting down
- Use a control—paper or actual
- Record results

Figure 1

Taste in a thoughtful manner every day. The more you taste, the more familiar you are with what is normal for a particular product.

Once you have the attributes and intensity, this is your paper control. This is the written story that defines your product. This paper control can be used to scale all production lots from this point forward. It is also prudent to freeze or preserve a sample of production that your group feels typifies the important attributes of that piece.

Your designated group should taste daily in a thoughtful manner. Do it in the morning while sitting down. You can determine the most productive time for this. The most important part is to do it every day for experience.

Intensity Scale

Number Scale	
0	Not present, no attributes detected
1	Threshold, just barely perceptible, below recognition
2	Threshold to slight, just recognizable
3	Slight; apparent and recognizable—low level
4	Slight to moderate; apparent and recognizable
5	Moderate/obvious, clearly noticeable
6	Moderate to strong/fominant, nearly overpowering
7	Strong/overpowering and dominating

difference ballot while always being mindful of the key attributes that are definitive for that product.

To get started you may enlist in-house expertise or go to an outside consultant or to your suppliers for help.

Start somewhere. Do not be intimidated by tasting. Just do it.

Taste in a thoughtful manner every day. The more you taste, the more familiar you are with what is normal for a particular product. Define who is going to be accountable for the taste of your product and define what key attributes characterize your signature products and quantify them so that your quality is maintained. Record the story of each product key to your brand. Your unique story of your company and products is what differentiates you in the marketplace from your competitors.

Sensory evaluation should be a core function at every confectionery plant to preserve your quality, your brand and your bottom line. ☐

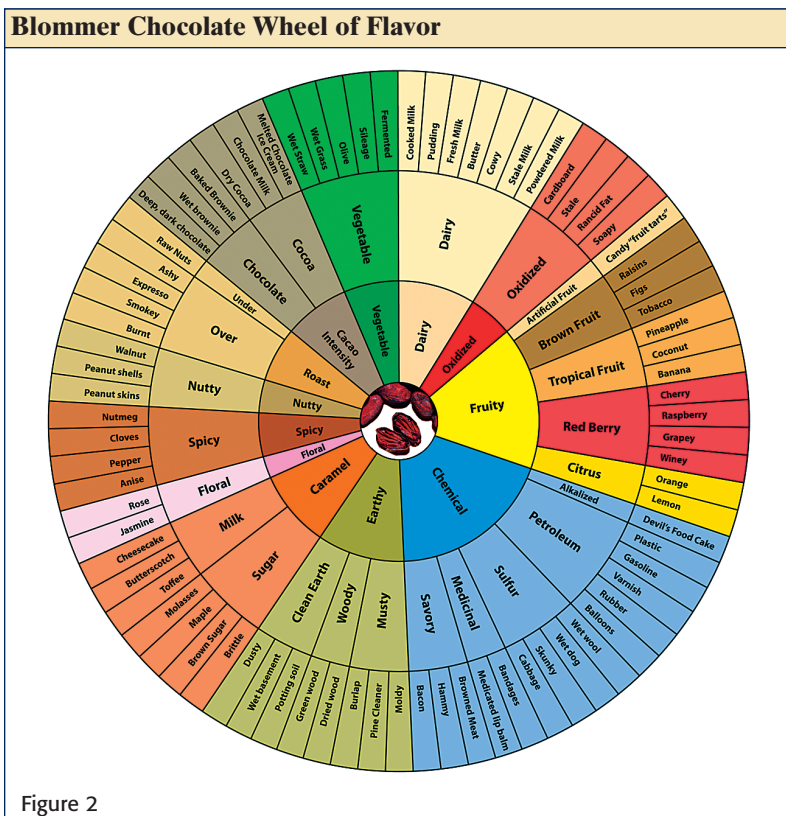


Figure 2