Flavor Theory and Sensory Evaluation of Peanut Products

Southern Peanut Growers & Peanut Butter Lovers | peanutbutterlovers.com

Peanuts and peanut butter are a delicious addition to many different dishes.

Packed full of healthy fats, protein and several other beneficial nutrients it can be added to a wide array of both savory and sweet food dishes.

Apart from oil, peanuts are widely used for production of peanut butter, confections, roasted peanuts, snack products, extenders in meat product formulation, soups and desserts..

Sensory Testing of Peanut Products

Food sensory testing involves the use of the human senses in the objective evaluation of food products. Characteristics such as appearance, texture, odor and taste are analyzed by testers to assess product quality.

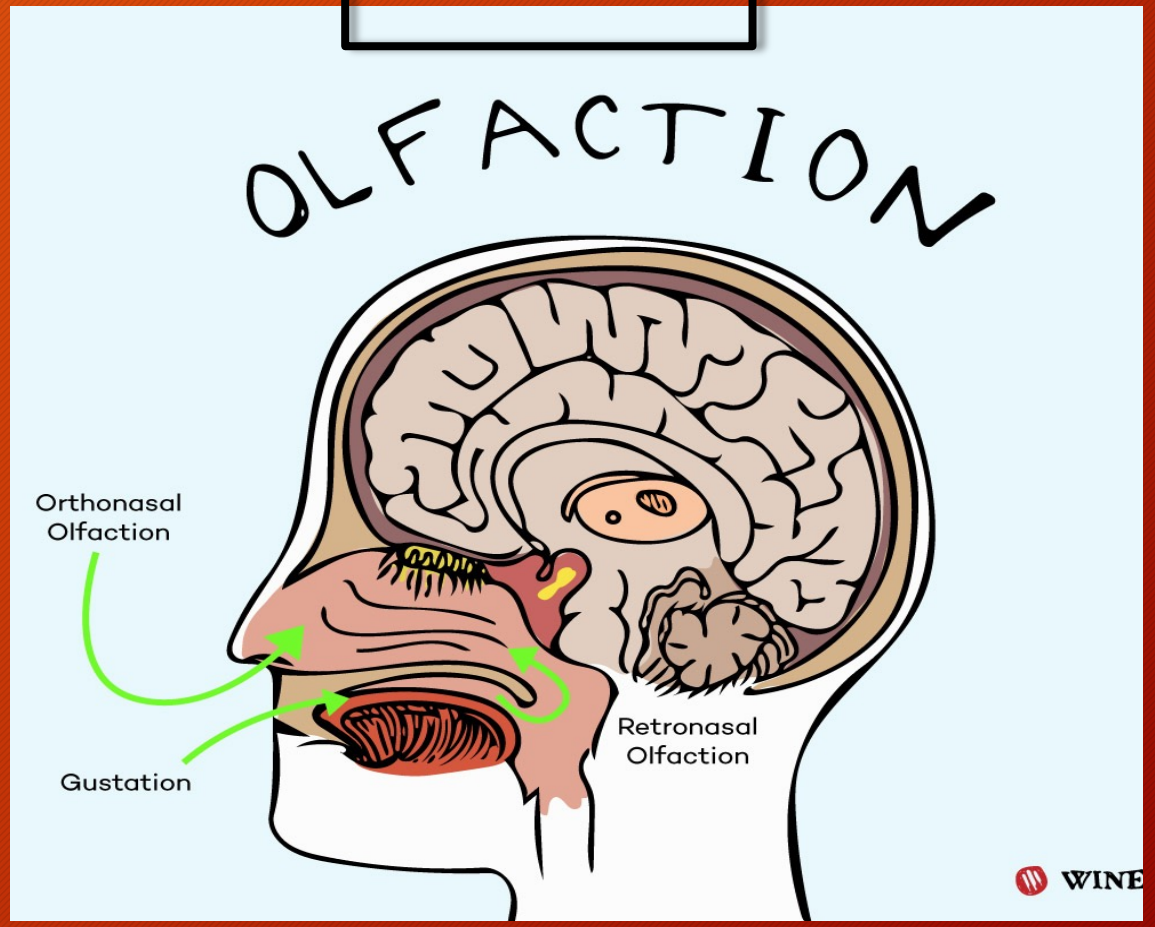
After going through this presentation, you will have acquired an understanding of the process to implement the sensory and flavor theory to complete a peanut product tasting evaluation.

What senses do we use to experience the flavor of food?

What is TASTE?

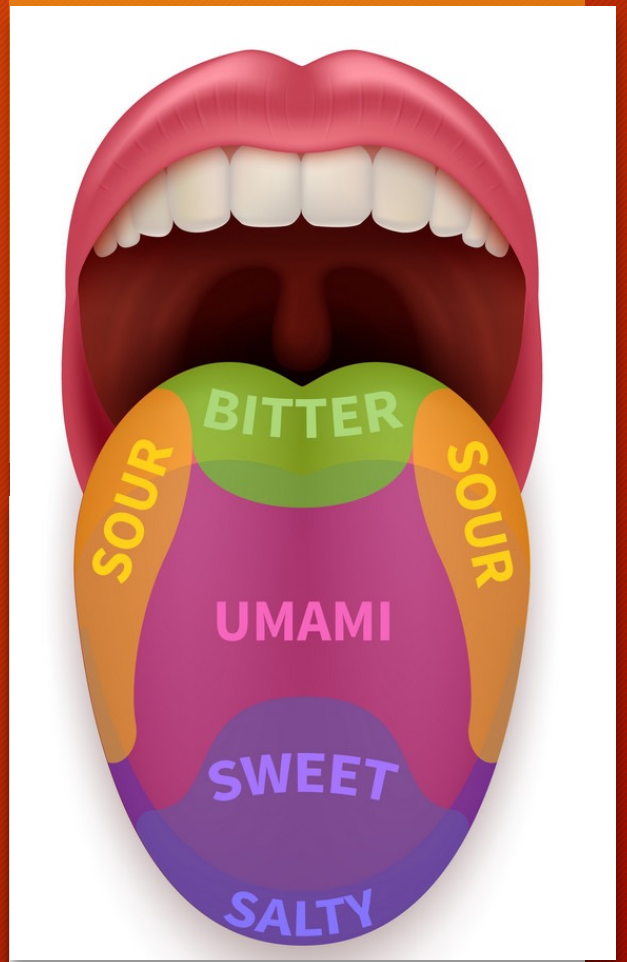
- The word **taste, or gustation,** to give its full name, refers to what is detected by the taste cells, located on the front and back of the tongue and on the sides, back and roof of the mouth.
- The way our brains perceive these stimuli is what **we refer to as taste**, with there being five recognized basic tastes: **salty, bitter, sweet, sour and umami.**

Our sense of smell is responsible for about 80% of what we taste.



The Tongue can Detect Five Different Tastes

- Sweet
- Salty
- Bitter
- Sour
- Umami

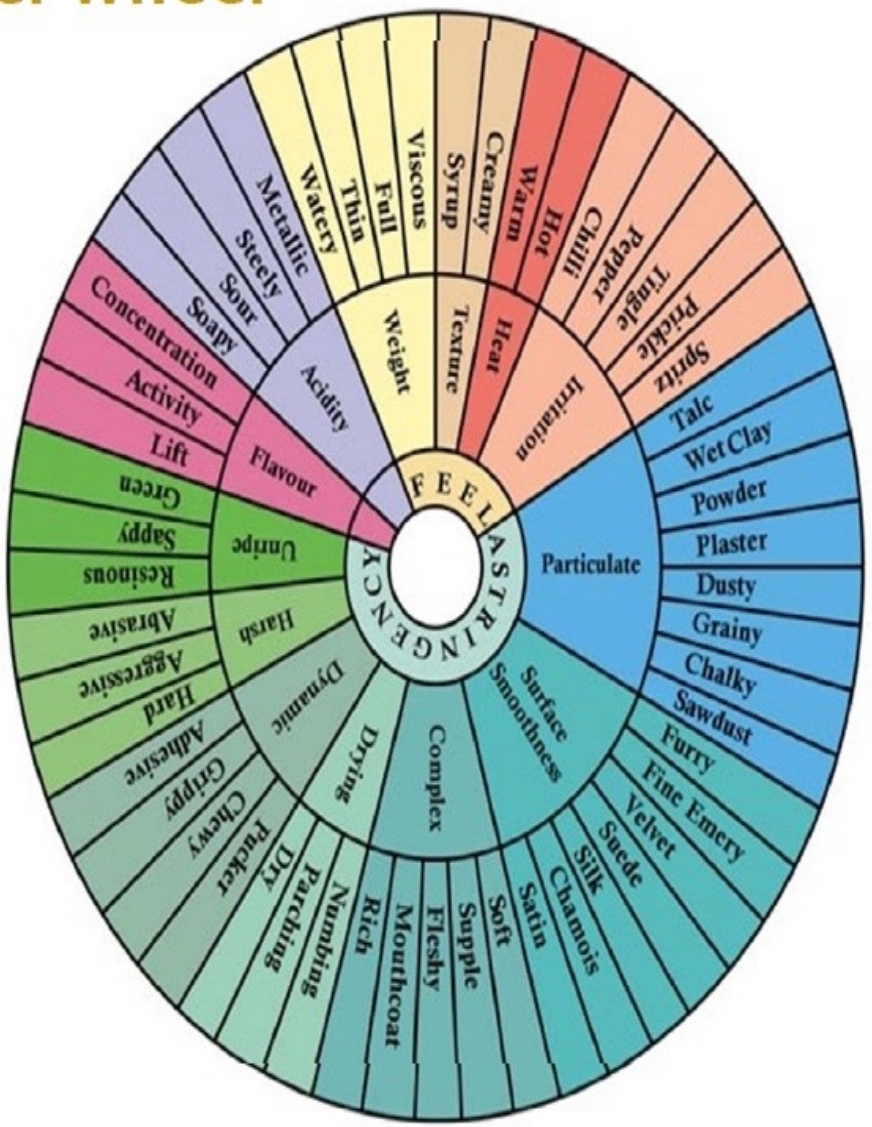


The Sense of Taste: How Does It Work?

Texture/ Mouthfeel:

- Texture can have a number of effects on taste!!
- Texture, or mouthfeel, is, quite literally, how food feels in our mouth as we eat it.
- Texture can be assessed through touch. When food is placed in the mouth, the surface of the tongue and other sensitive skin reacts to the feel of the surface of the food. The sensation is also known as mouthfeel.
- It encompasses texture, moisture level, fluidity, temperature, chewiness, greasiness, astringency, and any other tactile experience we get while chewing or swallowing.

Mouthfeel Wheel



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- **Smell/ Odor:** The nose detects volatile aromas released from food. An odor may be described by association with a particular food, e.g. herby, cheesy, fishy. The intensity can also be recorded. Odor and taste work together to produce flavor

- **Sight/Appearance: Our eyes** have been **conditioned** to see certain foods in a particular way and while **some colors stimulate the taste buds**, others can kill the appetite. Appearance is therefore vitally important if you want your food to be eaten and enjoyed.

- Sound: When noise is added to an eating experience, it can affect the levels of sweetness, bitterness, or sourness people perceive from their food. Sound is a potent manipulator of flavor.

The Smell, Sight, and Sound on the Flavor of Food

Descriptive Words

- **Useful words to describe appearance/color:**
  stringy, firm, dry, heavy, flaky, crumbly, flat, crisp lumpy, fizzy, fluffy, smooth, crystalline, hard, mushy, sticky, fragile, dull
- **Useful words to describe flavor/taste:**
  sweet, cool, bitter, umami, zesty, warm, hot, tangy, sour, sharp, rich, salty, bland, rancid, tart, acidic, strong, citrus, mild, savory, spicy, tainted, weak
- **Useful words to describe smell/odor:**
  aromatic, pungent spicy, floral, bland tainted, perfumed, rancid, savory, rotten, tart, citrus, acrid, strong, mild, musty, weak, scented, fragrant
- **Useful words to describe texture:**
  Brittle, rubbery, short, gritty, clammy, bubbly, grainy, fibrous, sandy, tacky, tender, waxy, open, soft, firm, flaky, crisp, fluffy, dry, crumbly, lumpy, smooth, hard, mushy, sticky, chalky

Sensory and Flavor Theory of Peanut Products

- Each student will taste six different peanut products.
- Evaluate each product and record your responses on the sensory evaluation form
- Compile data with groups to present results back to the class.

References

Arya, S. S., Salve, A. R., & Chauhan, S. (2016). Peanuts as functional food: a review. *Journal of food science and technology*, *53*(1), 31–41. https://doi.org/10.1007/s13197-015-2007-9

Larson, S. (2021, September 30). *How culinary students explore flavor profiles*. Escoffier. Retrieved February 1, 2022, from https://www.escoffier.edu/blog/culinary-arts/how-culinary-students-explore-flavor-profiles/

Additional Video Resource:
Sound may affect your sense of taste