



Sensory Evaluation



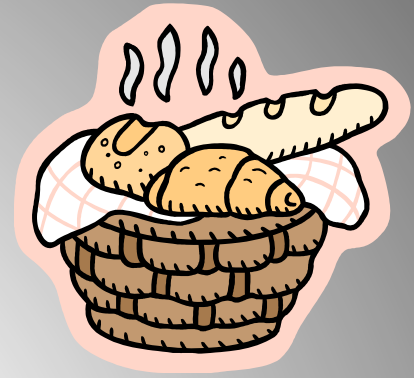
Why is it that when...

- You walk past the caf when you are hungry and your mouth waters from the smells...

- You see the steam coming out of a cup of hot chocolate and you begin to think of warming your self up with one...

- You are watching TV with your friends, and you see a commercial for Wendy's. The next thing you want to do is hop in the car and grab a Bacon double cheeseburger. ..

What is SENSORY EVALUATION?



- The human analysis of the _____, _____, _____, _____ and _____ of food.
- We use our senses to evaluate everything around us every minute of the day.
 - Why do you think that humans are built to respond to smells and tastes?
- Although there are tools that can be used to measure _____ and _____ of food, no tools exist that can measure whether people will like or dislike a food. That's where _____ come in!

What Does This Mean to Us?



- As consumers and future members of the food science work force 😊, it is important to understand how food is marketed.
- Almost all foods are evaluated for _____. People get hired to taste foods so companies can get a real world feel for what people like and dislike.
- The reason that some foods “make it” and others don’t is based on preferences. Let’s see some examples!

Sensory Evaluation is used by companies....

- To improve the sensory _____ of a product
- To ensure _____ between batches
- To understand how sensory characteristics influence consumer preferences
- To understand how their product performs against _____ products
- To determine whether or not consumers can detect _____ between products (e.g. changes in the product due to recipe modifications)
- To influence product listings with retailers
- To assist in the determination of the shelf-life of products (in conjunction with microbiological testing)



Influences on our tastes

- Certain factors add up to define foods as...
 - Typical “American” foods:
 - Pizza, sandwiches, burgers, salads, pasta, steak, chicken...
 - Typical foods that are ENJOYED in other parts of the world:
 - Snails, snake, horse, dog, raw fish eyes, bugs, seaweed...

*****Opinions about food are
_____ - meaning they are
affected by our personal views and
backgrounds*****

Biological Influences on Preferences

- People inherit slightly different body chemistries, and this affects people's perceptions of _____.
 - PTC Taste test strips - one person dislikes, the other can't taste a thing (~75% of the population dislikes the taste of PTC)
 - Colorblindness vs. _____

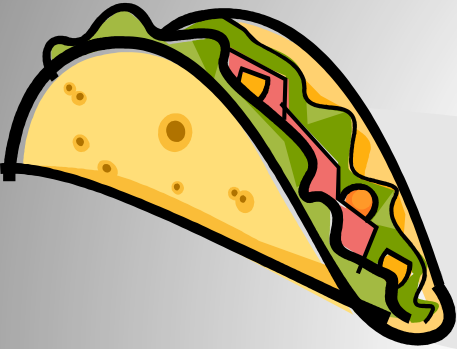


Your body's genetic makeup determines how well you can taste things!

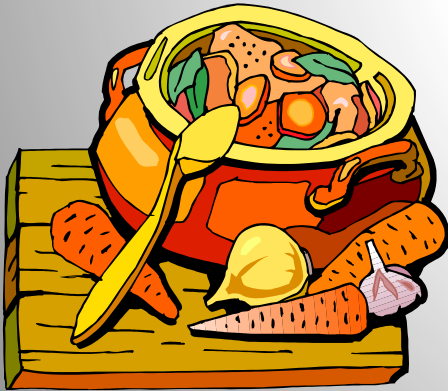
Biological Influences Con't

- Factors that play a role in ability to detect flavors-
 - Number of taste buds, _____, health, _____
- Three categories of tasters based on tastebuds-
 - Non-tasters - 40 tastebuds per square centimeter
 - Tasters - 200-500 tastebuds per square centimeter
 - _____ - Have as many as 1,100 tastebuds per square centimeter!!!

Psychological Influences on Preferences



- Food often becomes linked to _____ memories as children, and we grow up to detest that food
 - What foods can you not eat because of a bad childhood experience?
- Scientists believe that we “learn” to dislike foods that may have brought us harm or discomfort in the past.



Psychological Influences Con't

- - The resulting bias that we develop when we have either good or bad experiences with food.
- Other biases- We are often biased toward or against one brand. Advertising, _____, and setting influence this type of bias



Cultural Influences on Preferences

- Parts of culture that can influence food preferences - Region, _____, lifestyle, and _____
- Examples of how culture can influence what people like???
 - Grits
 - Oysters
 - Horse
 - Bugs



EnVironmental Influences

- People are most likely to eat what is readily available and _____ based on their environment



Sensory Characteristics of Food Products

- Three main characteristics of food products:

- _____

- _____

- _____

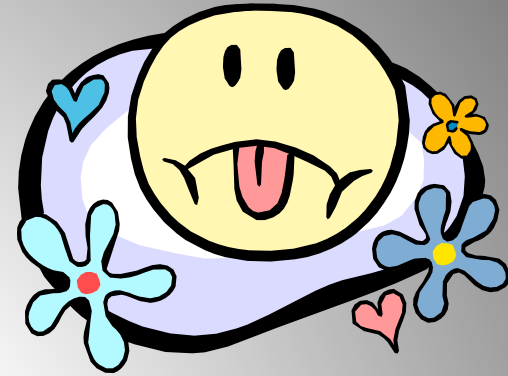


Appearance of Food

Color- can be measure scientifically using a colorimeter which measure the intensity and hue of the food. Bias is often avoided by using _____ in taste test panels.
(Your eyes have trouble distinguishing between colors in red light).

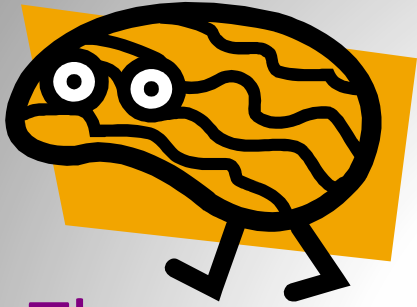


Flavor



- Flavor- The combined effect of _____ and _____.
 - Taste starts in the mouth with how your tastebuds perceive information.
 - Each region of the tongue responds to different tastes: _____, _____, _____, _____, and _____??
 - How does this work????
 - Each food carries molecules that create the flavor. When the flavor molecule reached the tastebuds, if fits into the “correct” hole, you sense that taste.

How does smell impact flavor?



- The _____, or AROMA, of food impacts the flavor almost as much as the taste.
- Liking or disliking odors is related to our past experiences and genetic makeup.
- The brain registers the flavor of food as a combination of its aromas and the sweet, sour, bitter, and salty tastes that it carries.

Texture



- Texture: How the food feels to the tongue, fingers, _____, and _____.
- Some examples of texture:
 - Chewiness, firmness, graininess, brittleness, consistency.
- Food texture can be measured objectively by measuring its resistance to force.

Blind Taste Test

- <https://www.youtube.com/watch?v=T2axfJKda84>
- (~10 minute video – Hell's Kitchen)