

# SENOSRY EVALUATION

- Methods

# What is Sensory Evaluation?

- A scientific discipline used to evoke, measure, analyze and interpret those responses to products that are perceived by the senses of sight, smell, touch, taste and hearing.
- Sensory analyses are used in industry and discover details on:
  - Flavor and taste
  - Texture
  - Appearance – color, shape, size
  - Smell/Aroma
  - Sounds

# Which senses are used in the analysis

- **Sight** – Appearance
- **Smell and taste** – Aroma and flavor
- **Touch** – Texture and mouth feel
- **Sound** – Noise



# Why is Sensory Evaluation Used?

- It reduces uncertainty and risks in decision making
- It ensures a cost-efficient delivery of new products with high consumer acceptability
- Human observers are good measuring instruments
- People can sometimes detect odorants at levels lower than what can be detected by an instrument
- Instruments cannot measure liking

# Principles of Good Practice

## **1. Facilities should be well designed**

- White or off-white color
- Lighting should be controlled
- There should be good ventilation

## **2. Samples should be prepared properly**

- Temperature should be controlled and the same for all samples
- Volume served should be equal for all samples
- Samples should be served at equivalent shelf-life or time since cooking/preparation

## **3. Experimental design considerations**

- Samples should be labeled with random 3-digit codes to avoid bias
- Samples should be served in random or counterbalanced order

# Counterbalancing



# Types of methods

## There are 3 methods

### 1. Qualitative

- Triangle Test
- Paired comparison Test
- Duo trio Test

### 2. Quantitative

- Line Scaling
- Category Scaling
- Ratio Scaling

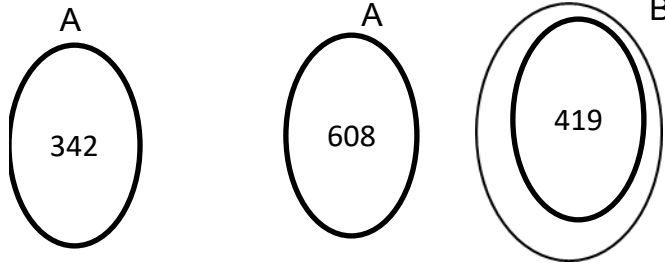
### 3. Affective

- Paired Comparison Preference Test
- Hedonic Scaling
- Ran
- Ranking

# Qualitative Test

## Triangle Test

Choose the sample that is the most different

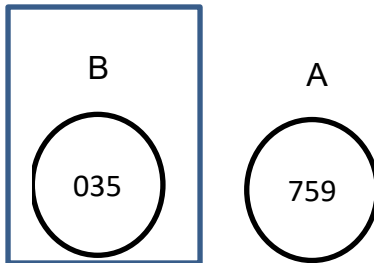




# Qualitative Test

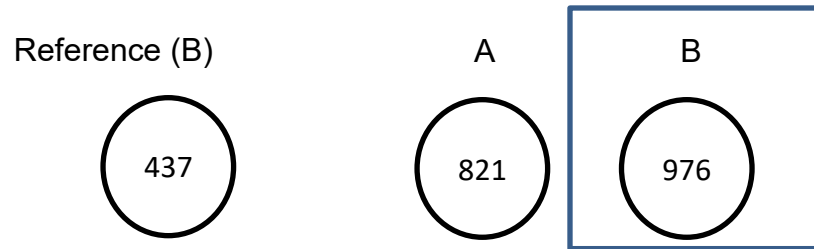
## Paired Comparison Test

- Which sample is sweet



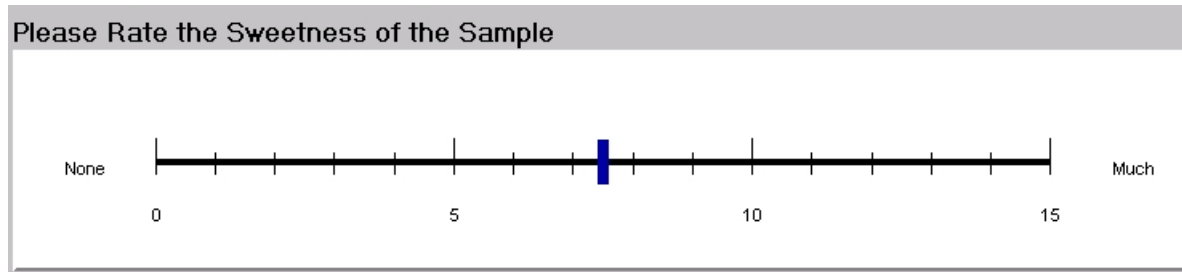
# Qualitative Test

## Duo-Trio Test



# Descriptive Test

## Line Scaling



# Descriptive Test

## Category scaling

**Category  
scale**



# Descriptive Test

## Ratio Scaling

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### QUESTIONNAIRE FOR RATIO MEASUREMENTS (DESCRIPTIVE)

PRODUCT:

NAME \_\_\_\_\_ DATE \_\_\_\_\_

Please evaluate the sweetness of the given Jam samples. Rate the first sample listed on the questionnaire first, and then score other samples in relation to the first sample.

*Samples*

761  
937  
846

*Sweetness*

2  
4  
\_\_\_\_\_  
\_\_\_\_\_

Comments:

# Affective Test

## Paired Comparison Preference Test

### QUESTIONNAIRE FOR PAIRED COMPARISON PREFERENCE TEST (HEDONIC)

PRODUCT:

NAME \_\_\_\_\_ DATE \_\_\_\_\_

Evaluate the two Jam samples in the following order:

*461*                      *537*

Which sample do you prefer? You must make a choice.

Indicate the sample you prefer \_\_\_\_\_

Comments:

# Affective Test

## Hedonic Scaling

<b>Grade</b>	<b>Score</b>
Like extremely	9
Like very much	8
Like moderately	7
Like slightly	6
Neither like nor dislike	5
Dislike slightly	4
Dislike moderately	3
Dislike very much	2
Dislike extremely	1

Source: [15]

# Affective Test

## Hedonic Scaling

### Scorecard - Hedonic Rating Scale

Tray number .....

Name .....

In front of you is a coded sample. Taste the sample and tick ✓ how much you like or dislike it. You can taste the sample more than once.

	Appearance/colour	Taste/Flavour	Smell/Odour	Texture/Mouthfeel
like extremely				
like very much				
like moderately				
like slightly				
neither like nor dislike				
dislike slightly				
dislike moderately				
dislike very much				
dislike extremely				



# Affective Test

## Ranking

**Ranking test**

Name.....

Date.....

Product.....

- Please rank the samples in numerical order according to your preference or intensity of aroma/taste characteristic of the product.

Intensity/preference	sample code
1	_____
2	_____
3	_____
4	_____

Signature