



FDE443 SENSORY ANALYSIS

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Development of Sensory Testing (*Meilgaard et al. 2006*)

- *Grading* wine, tea, coffee, butter, fish, and meat
- Pangborn (1964): the history of systematic “sensory” analysis

Development of Sensory Testing (*Meilgaard et al. 2006*)

- The book by Amerine, Pangborn, and Roessler (1965)
- New sensory testing methodology

The main uses of sensory analysis

- Quality control,
- Product development
- Research

Factors Affecting Sensory Analysis

1. Definition of the problem:

2. Test design:

3. Instrumentation:

4. Interpretation of results:

Tasters-Panelists as Measuring Instruments

- ✓ Tasters or panelists as measuring instruments are;
 - quite variable over time
 - very variable among themselves
 - very prone to bias



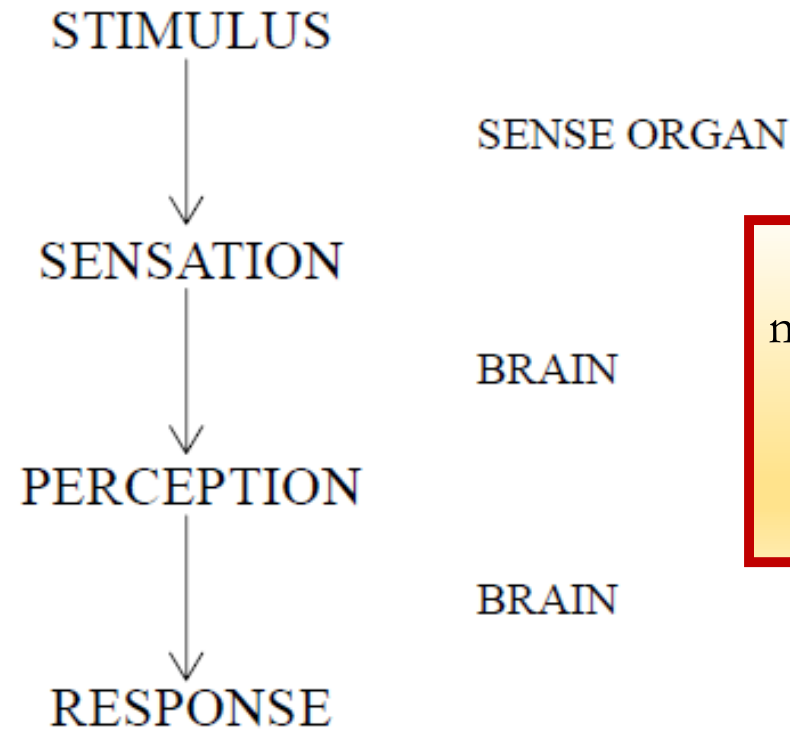
Tasters-Panelists as Measuring Instruments

- measurements be repeated
- enough subjects (often 20 to 50) are made available so that verdicts are representative
- the sensory analyst respects the many rules and hurdles which govern panel attitudes



The chain of sensory perception

1. The stimulus hits the sense organ and is converted to a nerve signal which travels to the brain.



2. With previous experiences in memory, the brain then interprets, organizes, and integrates the incoming sensations into perceptions.

3. A response is formulated based on the subject's perceptions

Food quality control and sensory evaluation

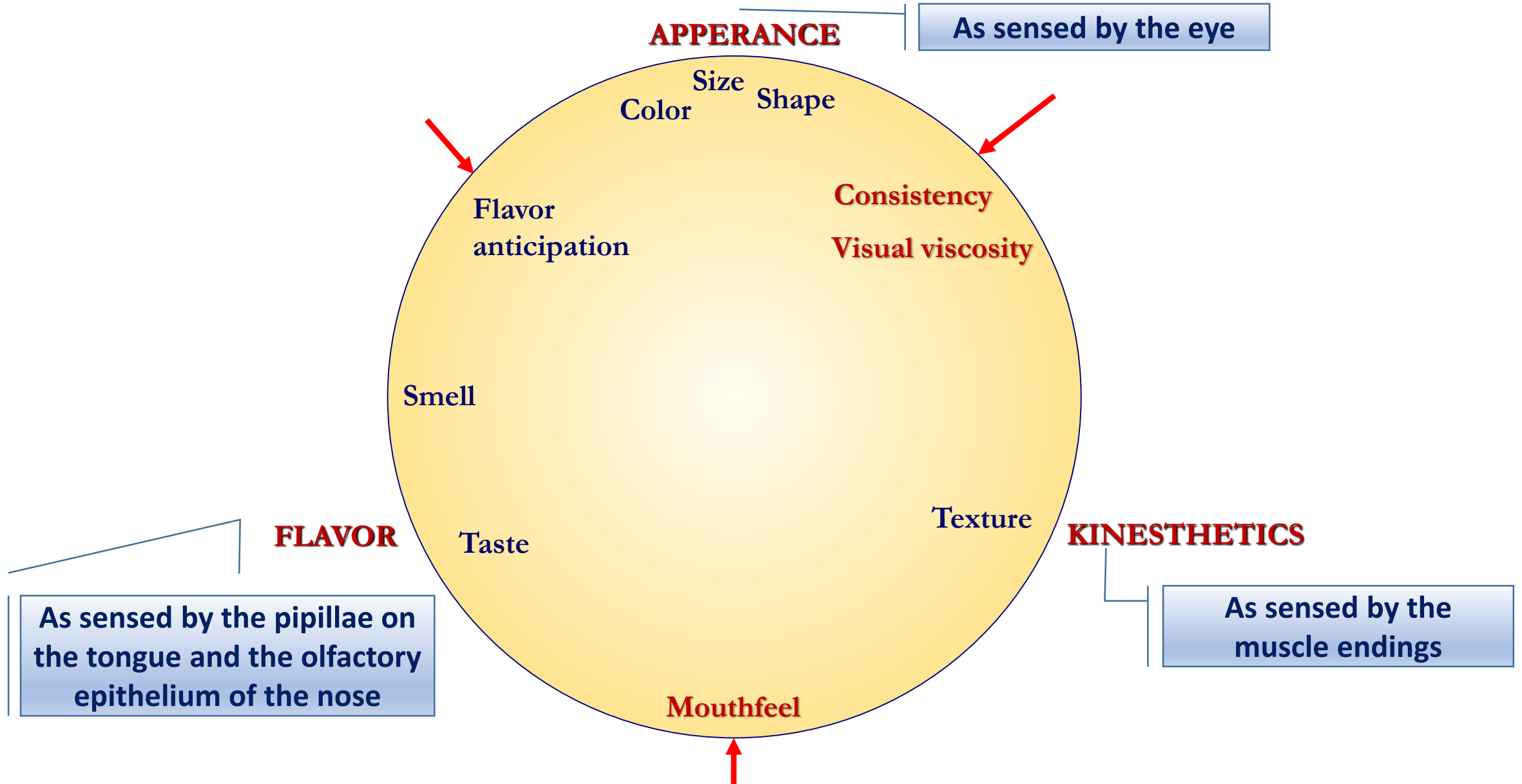
- ✓ Sensory analysis: an interdisciplinary science that uses human panelists' sensory perception to measure the sensory characteristics and the acceptability of food products
- ✓ *There is no one instrument that can replicate or replace the human psychological and emotional response*



Quality Concept for Food

- ✓ The extent to which all the established requirements relating to the characteristics of a food are met
 - degree of excellence, a value of products, fitness for use/ consumption

Sensory Quality Characteristics of Foods-Kramer's Sensory Circle, 1973)



Sensory Attributes

- Consumers tend to perceive the attributes of a food item in the following order:
 - Appearance
 - Odor/aroma/fragrance
 - Consistency and texture
 - Flavor (aromatics, chemical feelings, taste)
- In the process of perception, most or all of the attributes overlap.
 - Without training he or she (panelist) will not be able to provide an independent evaluation of these attributes.

Sensory Attributes-Appearance

General appearance characteristics;

- ***Color***
- The evenness of color
- Deterioration of food -- a color change.

Sensory Attributes-Appearance

General appearance characteristics;

- *Size and shape*
- *Surface texture*



dull

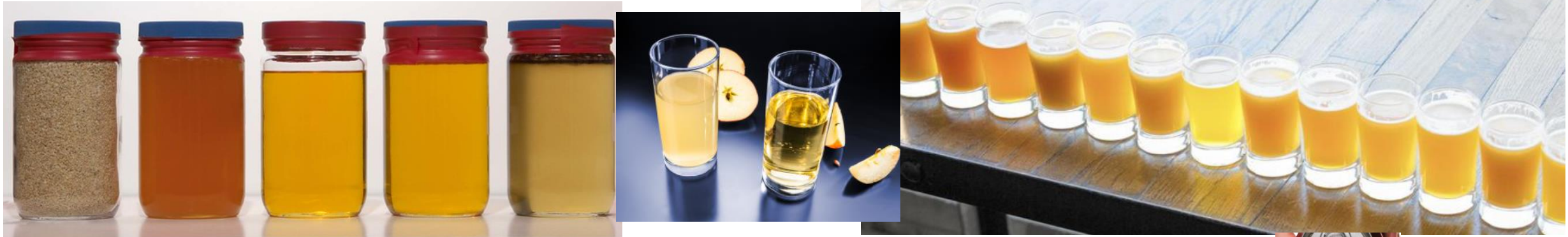


shiny

Sensory Attributes-Appearance

General appearance characteristics;

- **Clarity:**



- **Carbonation:**

