FDE443 SENSORY ANALYSIS

Lesson-3

Prof. Dr. Kezban Candoğan

E-mail: candogan@eng.ankara.edu.tr

Sensory Attributes-Odor/Aroma/Fragrance

- The odor of a product

  - Aroma is the odor of a food product
  - Fragrance is the odor of a perfume or cosmetic
  - Aromatics are the volatiles perceived by the olfactory system from a substance in the mouth.

Sensory Attributes-Odor/Aroma/Fragrance

- The amount of volatiles that escape from a product

- Volatility- the condition of a surface.

- Many odors are released only when an enzymic reaction takes place at a freshly cut surface (e.g., the smell of an onion).

- Odorous molecules must be transmitted by a gas

Sensory Attributes-Consistency and Texture

- Those perceived by sensors in the mouth, other than taste and chemical feelings.

  - Viscosity
  - Consistency
  - Texture
  - Tactile feel properties

Sensory Attributes-Consistency and Texture

Viscosity

- refers to the rate of flow of liquids under some force, such as gravity.

Consistency

- fluids like purees, sauces, juices, syrups, jellies, and cosmetics

Sensory Attributes-Consistency and Texture

Texture:

- Reaction to stress

- *Examples of the mechanical properties:* hardness/firmness, adhesiveness, cohesiveness, gumminess, springiness/resilience

Sensory Attributes-Consistency and Texture

Tactile feel properties:

- The tactile nerves in the surface of the skin of

    the hand, lips, or tongue

    - Geometrical properties: grainy, gritty, crystalline, flaky

gritty

flaky

grainy

crystalline

    - Moisture properties: wetness, oiliness, moistness, dryness

Sensory Attributes- Components of Texture

- ***Mechanical Properties:*** reaction to stress, measured kinesthetically

- ***Geometrical Properties:*** perception of particles (size, shape, orientation) measured by tactile means

- ***Moisture Properties:*** perception of water, oil, fat, measured by tactile means

Sensory Attributes- Components of Texture

Mechanical Properties

- *Hardness:* Firmness (compression), Hardness (bite)

- *Cohesiveness:* Cohesive, Chewy, Fracturable (crispy/crunchy), Viscosity

- *Adhesiveness:* Sticky (tooth/palate), Tooth pack

- *Denseness:* Dense/heavy, Airy/puffy/light

- *Springiness:* Springy/rubbery

Sensory Attributes- Components of Texture

Geometrical Properties

- *Smoothness*
- *Gritty*
- *Grainy*
- *Chalky/powdery*
- *Fibrous*
- *Lumpy/bumpy*

Sensory Attributes- Components of Texture

Moisture Properties

- *Moistness*

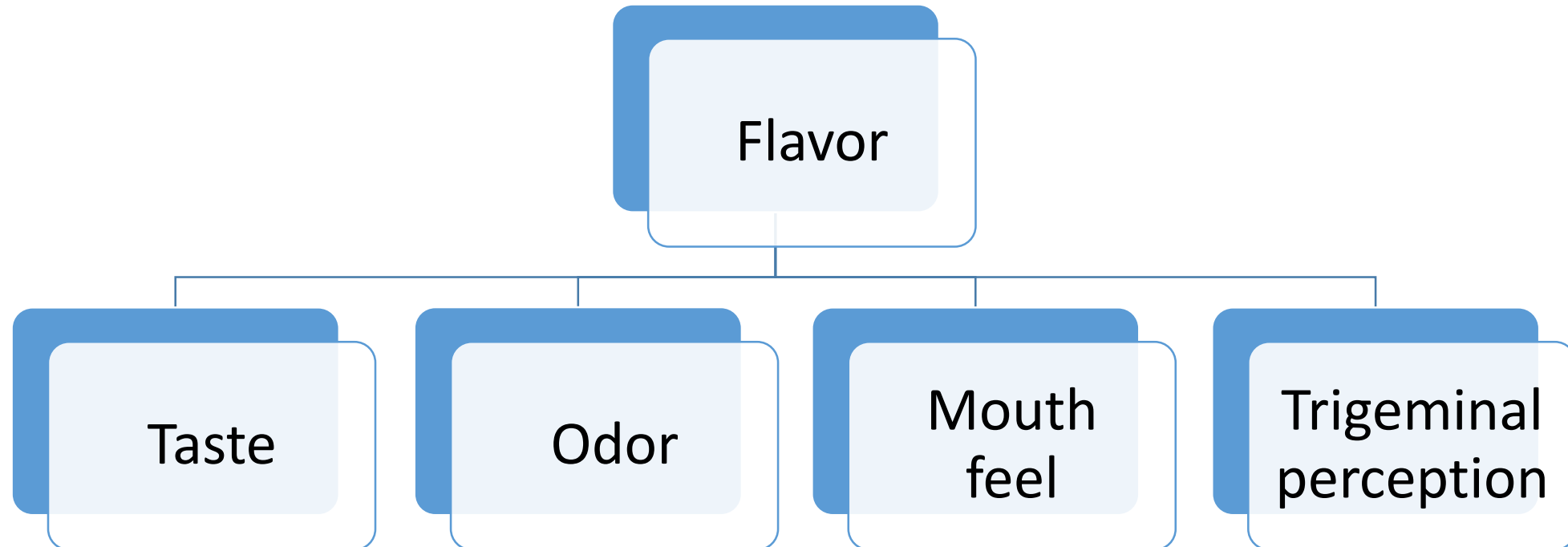- *Moisture release*

- *Oily*

- *Greasy*

Sensory Attributes- Flavor

- Flavor includes:

  - The aromatics

  - The tastes

  - The chemical feeling factors

Sensory Attributes- Flavor

- A combination of taste, odor, mouth feel and trigeminal perception

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                    ┌─────────┐
                    │ Flavor  │
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  ┌────┴───┐   ┌────┴───┐   ┌─────┴────┐  ┌──────┴──────┐
  │ Taste  │   │  Odor  │   │  Mouth   │  │ Trigeminal  │
  │        │   │        │   │  feel    │  │ perception  │
  └────────┘   └────────┘   └──────────┘  └─────────────┘
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Sensory Attributes- Noise

EATING SOUND!

• The noise produced during mastication of foods

• The pitch, loudness, and persistence of sounds produced by foods

• The duration or persistence of sound from a product