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SENSORY ANALYSIS OF OLIVE OIL

STANDARD

SENSORY ANALYSIS: GENERAL BASIC VOCABULARY

1. PURPOSE

The purpose of this standard is to assemble the general terms used in sensory analysis and to give their definitions.

2. VOCABULARY

2.1. General terminology

Acceptability (noun)

State of a product favourably received by an individual or population in terms of its organoleptic attributes.

Acceptance (noun)

The act of an individual or population of favourably accepting a product.

Aspect (noun)

Combination of organoleptic attributes perceived visually: size, shape, colour, conformation, turbidness, cleanness, fluidness, foam and effervescence.

This term is to be preferred to the term appearance.

Attribute (noun)

A perceptible characteristic.

Compensation (noun)

Result of the interaction of a combination of stimuli in such a way that each one is perceived with less intensity than if it acted alone.

Discrimination (noun)

The act of qualitative and/or quantitative differentiation between two or more stimuli.

Expert (noun)

(With regard to the examination of organoleptic attributes)

Taster who is specialised in the sensory analysis of a specific product and has a basic understanding of the preparation of the product and market preferences.

Harmony (noun)

Attribute of a product which gives rise to an overall pleasant sensation. This sensation is produced by the perception of the product components as olfactory, gustatory, tactile and kinaesthetic stimuli because they are present in suitable concentration ratios.

Organoleptic (adjective) (attribute)

Describes an attribute of a product, perceptible by the sense organs.

Panel

Group of assessors who have been specially selected and trained and who assemble to perform the sensory analysis of the product under controlled conditions.

Perception (noun)

Sensory awareness of external objects or events.

Sensation (noun)

Subjective phenomenon resulting from the stimulation of a sensory system. This phenomenon can be subjectively discriminated or objectively defined by the sense organ involved, depending on the nature or kind of stimulus, and its intensity.

Sensitivity (noun)

Ability to perceive quantitatively and qualitatively a stimulus of little intensity or small differences between stimuli by means of the sense organs.

Sensory analysis (noun)

Examination of the organoleptic attributes of a product by the sense organs.

Taster (noun)

Perspicacious, sensitive, person who is selected and trained to evaluate the organoleptic attributes of a food with the sense organs.

Tasting (noun)

Operation which involves perceiving, analysing and judging the organoleptic attributes, particularly the olfactory, gustatory, tactile and kinaesthetic attributes of a food product.

2.2 Physiological terms

Adaptation (noun)

Temporary modification of sensitivity in perceiving sensory stimuli due to continuous, repeated exposure to a given stimulus or one similar to it.

Body (noun)

Tactile sensation perceived in the mouth which gives a degree of density, viscosity, consistency or compactness to a product.

Compensation (noun)

Result of the interaction of a combination of stimuli in such a way that each one is perceived with less intensity than if it acted alone.

Contrast effect

Increase in response to differences between two simultaneous or consecutive stimuli.

Opposite of the convergence effect.

Convergence effect

Decrease in response to differences between two simultaneous or consecutive stimuli.

Opposite of the contrast effect.

Fragrance (noun)

Fresh, pleasant, delicious odour.

Gustatory (adjective)

Describes the attribute of a product which can stimulate the gustatory apparatus by awakening the sensations pertaining to one or more of the four primary tastes: sweet, salty, acid and bitter.

Inhibition (noun)

Lack of response by a sense organ or a part thereof, despite being subjected to the action of a suitable stimulus whose intensity is above the threshold.

Intensity (noun)

Magnitude of the energy of an attribute that can be measured in terms of a quantitative scale of values above the threshold.

Kinaesthesia

Sensations resulting from pressure on the sample produced by a movement in the oral cavity or with the fingers (for example: pressing cheese with fingers)

Objective (adjective)

- a) Describes that which gives a true, verifiable representation of the object by minimising the human factors (for instance, preference, habit, inclination).
- b) Describes the technique which, either by means of sensory or instrumental methods, minimises self-induced errors.

Note: Use of the term "instrumental" as a synonym is not advised.

Olfaction (noun)

Function of the olfactory apparatus to perceive and discriminate between the molecules that reach it, in gas form from an external environment, directly or indirectly via the nose.

Receptor (noun)

Specific structure of a sense organ that can be excited and is capable of receiving a stimulus and converting it into a nervous discharge.

Note: Receptors are classified in terms of the type of energy associated with the stimulus (light, heat, sound, etc.)

Response (noun)

Action whereby the sensory cells respond to the action of one or more stimuli related to a given sense organ.

Sensory fatigue

Specific form of sensory adaptation in which a decrease in sensitivity occurs.

To smell (verb)

(active sense applied to smell). Describes the act of perceiving an odour.

Stimulus (noun)

Physical or chemical agent which specifically produces the response of the external or internal sensory receptors.

Subjective (adjective)

Describes that which produces a perception that is influenced not only by the stimulus but also by our way of thinking and feeling.

Synergic

Joint effect or action of given substances in which the intensity of the organoleptic attributes resulting from the combination is in excess of the sum of the intensities of each attribute taken separately.

Taste (noun) (Sense of taste)

Sense whose receptors are located in the mouth, particularly on the tongue, and which are activated by various compounds in solution.

Threshold (noun)

Absolute threshold

Minimum value of a sensory stimulus which gives rise to:

- the appearance of a sensation (stimulus threshold or detection threshold).
- or the identification of the sensation (recognition threshold).

Difference threshold

Minimum value of a sensory stimulus which gives rise to a perceptible difference in the intensity of the sensation.

Preference threshold

Minimum quantitative value of a stimulus or critical supra-threshold value of that stimulus at which an attraction or rejection response appears in relation to a neutral stimulus, for example, in the choice between a sugared solution and water.

Note: A distinction should be drawn between an absolute preference threshold and a differential preference threshold.

Sub-threshold (adjective)

Below the absolute threshold.

Supra-threshold (adjective)

Above the absolute threshold.

Terminal threshold

Maximum value of a stimulus above which an increase in intensity is not perceived.

2.3. Terminology related to organoleptic attributes

Acid (adjective)

- a) Describes the primary taste produced by dilute aqueous solutions of most acid substances (for example, citric acid, lactic acid, tartaric acid).
- b) Describes the attribute of pure substances or mixtures which produces this taste.

The corresponding noun is acidity.

After-taste; residual taste (noun)

Combination of sensations perceived after the stimulus has disappeared from the mouth and which differs from the sensations perceived beforehand.

Aroma (noun)

- a) Pleasant sensations perceived indirectly by the olfactory organ when tasting a food.
- b) In perfumery and non-specialised language, this term is also applied to the same sensations perceived directly through the nose.

Aromatic (adjective)

- a) Describes the attribute of pure substances or mixtures which when tasted produce the sensations known as aroma.
- b) Describes the products which when examined directly via the nose produce sensations of fragrance and freshness.

Astringent (adjective)

- a) Describes the complex sensation produced in the mouth by a dilute aqueous solution of products such as some tannins (for example, kaki tannins and sloe tannins).
- b) Describes the attribute of pure substances or mixtures which produces this taste.

The corresponding noun is astringency.

Bitter (adjective)

- a) Describes the primary taste produced by dilute aqueous solutions of various substances such as quinine, caffeine and given alkaloids.
- b) Describes the attribute of pure substances or mixtures which produces this taste.

The corresponding noun is bitterness.

Flavour (noun)

"Flavour" means the combination of olfactory-gustatory-tactile and kinaesthetic sensations which enable an assessor to identify a food and establish a multi-level, favourable or unfavourable criterion.

Mouthwash (verb)

Action whereby a food present in the mouth comes into contact with all the sensitive areas of the mouth so that the buccal sensations it produces can be perceived.

Odour (noun)

- a) Combination of sensations perceived by the olfactory organ on sniffing given volatile substances.
- b) Attribute of the specific sensation produced by any one of the above substances.

Primary taste (noun)

Any one of the distinctive tastes of which there are held to be four: sweet, salty, acid, bitter.

Salty (adjective)

- a) Characteristic sensation perceived by the sense of taste, the most typical example of which is produced by a sodium chloride solution.
- b) Describes the attribute of pure substances or mixtures which produces this taste.

The corresponding noun is saltiness.

Sour (adjective)

Describes the olfactory-gustatory sensation in which acids generally produced by fermentation are predominant, as well as the foodstuffs that produce this sensation.

Some factors that contribute to this sensation are related to the fermentation, for example the lactic or acetic fermentation, of a food product.

Sweet (adjective)

- a) Describes the primary taste produced by aqueous solutions of various substances such as sucrose.
- b) Describes the attribute of pure substances or mixtures which produces this taste.

The corresponding noun is sweetness.

Taste (noun)

- a) Sensations perceived when the gustatory papillae are stimulated by some soluble substances.
- b) Attribute of the specific sensation produced by such substances.

Texture (noun)

Characteristics of the solid or rheological state of a product, the combination of which can stimulate the mechanical receptors during tasting, particularly those located in the mouth.

Note: This term refers solely to the objective attributes, not to the sensations produced which are designated by general terms such as consistency, fibrousness, greasiness, etc.

Note: This vocabulary may be enlarged by consulting ISO standards 5492, Parts I-V and other publications such as that by J.L. Magnen entitled "Les cahiers techniques du Centre National de Coordination des Etudes et Recherches sur la Nutrition et l'Alimentation", etc.