

PROPOSED STANDARD FOR TROPICAL HONEY

1. Scope:

This standard applies to all honeys produced by honey bees and stingless bees and covers all styles of raw honey intended for direct consumptions.

2. Description

2.1 Definition

Honey is a natural sweet substance produced by bees from the nectar of plants or from secretions of living plants or excretions of plant sucking insects on the living parts of plants, which the bees collect, transform by combining with specific substances of their own, deposit, dehydrate, store and leave in the honey comb to ripen and mature.

2.1.1 Blossom Honey or Nectar Honey is the honey which comes from nectars of plants.

2.1.2 Honeydew Honey is the honey which comes mainly from excretions of plant sucking insects (Hemiptera) on the living parts of the plants or secretions of living parts of plants.

2.2 Description

Honey consists essentially of different sugars, predominantly fructose and glucose, as well as other substances such as water, organic acids, enzymes and solid particles derived from honey collection. The colour of honey varies from nearly colourless to dark brown depending on nectar sources. The consistency can be fluid, viscous or partly to entirely crystallized. The flavor and aroma vary, but are derived from plant origin.

3. Essential Composition and Quality Factors

3.1 Honey sold as such shall not have added to it any food ingredient, including food additives, nor shall any additions be made other than honey. Honey shall not have any objectionable matter, flavor, aroma, or taint absorbed from foreign matter during its processing stage and storage. The honey shall not have begun to ferment or effervesce. No pollen or constituent particular to honey may be removed except where this is unavoidable in the removal of foreign organic and inorganic matter.

3.2 Honey shall not be heated or processed to such an extent that its essential composition is changed or impaired.

3.3 Chemical or biochemical treatments shall not be used to influence honey crystallization.

3.4 Moisture Content

(a) Honey gathered by the bee species not listed below - not more than 20%

(b) Wild honey – not more than 23%

(c) Honey gathered by stingless bee – not more than 30%

3.5 Sugar Content

3.5.1 Fructose and glucose content (sum of both)

- (a) Honey not listed below - not less than 60 g/100 g
- (b) Honey dew honey, blends of honeydew honey with blossom honey – not less than 45g/100g

3.5.2 Sucrose Content

- (a) Honey not listed below -not more than 5g/100g
- (b) *Citrus* spp., *Cassia* spp., *Erythrina* spp., *Musa* spp., *Annanas comusus* - not more than 15g/100g

3.6 Water Insoluble Solids Content

- (a) Honeys other than pressed honey -not more than 0.1 g/100g
- (b) Pressed honey -not more than 0.5 g/100g

4. Contaminants

4.1 Heavy Metals

Honey shall be free from heavy metals in amounts which may represent a hazard to human health. The products covered by this standard shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission.

4.2 Residues of Pesticides and Veterinary Drugs

The products covered by this standard shall comply with those maximum residue limits for honey established by the Codex Alimentarius Commission.

5. Hygiene

5.1 The products covered by the provisions of this standard should be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice-General Principles of Food Hygiene (CAC/RCP 1-1969).

5.2 The products should comply with any microbiological criteria established in accordance with the Principles for Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

6. Labeling

Labeling should be consistent with the provisions of the Codex General Standard for the Labeling of Pre-packaged Foods (CODEX STAN 1-1985)

6.1 The Name of the Food

6.1.1 Products conforming to the standard shall be designated as “honey”

6.1.2 For products described in 2.1.1, the name of the food may be supplemented by term “blossom” or “nectar”.

6.1.3 For products described in 2.1.2 the word “honeydew” may be placed in close proximity to the name of the food.

6.1.4 For mixtures of the products described in 2.1.1 and 2.1.2 the name of the food may be supplemented with the words “ a blend of honeydew honey with blossom honey”.

6.1.5 Honey may be designated by the name of the geographical or topographical region if the honey was produced exclusively within the area referred to in the designation.

6.1.6 Honey may be designated according to floral or plant source if it comes wholly or mainly from that particular source and has the organoleptic, physicochemical and microscopic properties corresponding with that origin.

6.1.7 Where honey has been designated according to floral or plant source (6.1.6) then the common name or the botanical name of the floral source shall be in close proximity to the word “honey”.

6.1.8 Where honey has been designated according to floral , plant source, or the name of a geographical or topological region, then the name of the country where the honey has been produced shall be declared.

6.1.9 The subsidiary designations listed in 6.1.1.10 may not be used unless the honey conforms to the appropriate description contained therein. The styles in 6.1.11 (b) and (c) shall be declared.

6.1.10 Honey may be designated according to the method of removal from the comb.

(a) Extracted honey is the honey obtained by centrifuging decapped broodless combs.

(b) Pressed honey is the honey obtained by pressing broodless combs.

(c) Drained honey is honey obtained by draining decapped broodless combs.

6.1.11 Honey may be designated according to the following styles:

(a) Honey which is honey in liquid or crystalline state of a mixture of the two;

(b) Comb Honey which is honey stored by bees in the cells of freshly built broodless combs and which is sold in sealed whole combs or sections of such combs.

(c) Cut comb honey or chunk honey which is honey containing one or more pieces of comb honey.

6.1.12 Honey which has been filtered in such a way as to result in the significant removal of pollen shall be designated as **filtered honey**.

6.2 Labeling of Non-Retail Containers

6.2.1 Information on labeling as specified in The General Standard for the Labelling of Pre-packaged Foods and in Section 6.1 shall be given either on the container or in accompanying documents, except that the name of the product, lot identification and the and the name and address of the producer, processor or packer shall appear on the container.

7 Methods of Sampling Analysis

The methods of sampling and analysis to be employed for the determination of the compositional and quality factors include but is not limited to those detailed below:

7.1 Sample Preparation

Samples should be prepared in accordance with the AOAC 920.180.

7.2 Determination of Moisture Content

AOAC 969.38 B/ J. Assoc. Public Analysts (1992) 28 (4) 183-187

7.3 Determination of Sugar Content

7.3.1 Fructose and Glucose Content (sum of both)

7.3.2 Sucrose Content

7.4 Determination of Water-Insoluble Solids Content

J. Assoc. Public Analysts (1992) 28 (4) 189-193/MAFF Validated Method V22 for Water insoluble solids in honey

7.5 Determination of Electrical Conductivity

7.6 Determination of Sugars Added to Honey (Authenticity)

AOAC 977.20 for sugar profile

AOAC 991.41 Internal Standard for SCIRA (Stable Carbon Isotope Ratio Analysis)

ANNEX

This text is intended for voluntary application by commercial partners and not for application by governments.

1. Additional Composition and Quality Factors

Honey may have the following compositional and quality factors:

1.1 Free Acidity

The free acidity of honey may be not more than 50 milliequivalents acid per 1000 g.

1.2 Diastase Activity

The diastase activity of honey, determined after processing and /or blending, in general not less than 8 Schade units and in the case of honeys with a low natural enzyme content not less than 3 Schade Units.

1.3 Hydroxymethylfurfural Content (HMF)

The hydroxymethylfurfural content of of honey after processing and/or blending shall not be more than 40 mg/kg. However, in the case of honey of declared origin from countries or regions with tropical ambient temperatures, and blends of these honeys, the HMF content shall not be more than 80mg/kg

1.4 Electrical Conductivity

- (a) honey not listed under (b) and (c) and blends of these honey - not more than 0.8 mS/cm
- (b) Honeydew and chestnut honey and blends of these except those listed under (c) - not less than 0.8 mS/cm
- (c) Exceptions: *Eucalyptus* spp, *Tilia* spp. *Melaleuca* spp.

2. Methods of Sampling and Analysis

The methods of sampling and analysis to be employed for the determination of the additional compositional and quality factors set out in Section 1 of this Annex are detailed below:

2.1 Sample Preparation

The method of sample preparation is described in Section 7.1 of the Standard. In the determination of diastase activity (2.2.2) and hydroxymethylfurfural content (2.2.3), samples are prepared without heating.

2.2 Methods of Analysis

2.2.1 Determination of Acidity

J. Assoc. Public Analysts (1992) 28 (4) 171-175/MAFF validated method V19 for acidity in honey

22

2.2.2. Determination of Diastase Activity

AOAC 958.09

2.2.2 Determination of hydroxymethylfurfural

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