



EAS 36:2010
ICS 65.140

EAST AFRICAN STANDARD

Honey — Specification

EAST AFRICAN COMMUNITY

Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in East Africa. It is envisaged that through harmonized standardization, trade barriers which are encountered when goods and services are exchanged within the Community will be removed.

In order to meet the above objectives, the EAC Partner States have enacted an East African Standardization, Quality Assurance, Metrology and Test Act, 2006 (EAC SQMT Act, 2006) to make provisions for ensuring standardization, quality assurance, metrology and testing of products produced or originating in a third country and traded in the Community in order to facilitate industrial development and trade as well as helping to protect the health and safety of society and the environment in the Community.

East African Standards are formulated in accordance with the procedures established by the East African Standards Committee. The East African Standards Committee is established under the provisions of Article 4 of the EAC SQMT Act, 2006. The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

Article 15(1) of the EAC SQMT Act, 2006 provides that "Within six months of the declaration of an East African Standard, the Partner States shall adopt, without deviation from the approved text of the standard, the East African Standard as a national standard and withdraw any existing national standard with similar scope and purpose".

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

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Introduction

Honey is a nutritious gift of nature to mankind's tables. In the early times it comprised a major proportion of energy and other vital nutrient sources for human diets. Even today honey plays an important role in the diets of many people, especially those living in arid and thick forest areas where cultivation is not practised.

Honey is our only natural sweetener that goes directly to the market with little or no alteration from the time of its production by the bees. The naturalness of honey is its main selling point and every effort must be made to maintain the delicate flavour and aroma found in newly extracted honey.

In the preparation of this East African Standard, the following sources were consulted extensively:

KS 344:2009, *Honey — Specification*

CODEX STAN 12:1981(Rev. 2:2001), *Standard for Honey*

IS 4941:1994(R2002), *Extracted Honey — Specification*

Codex Alimentarius website: http://www.codexalimentarius.net/mrls/pestdes/jsp/pest_q-e.jsp

USDA Foreign Agricultural Service website: <http://www.mrlatabase.com>

USDA Agricultural Marketing Service website: <http://www.ams.usda.gov/AMSV1.0/Standards>

USDA Plant Inspectorate Service website: http://www.aphis.usda.gov/import_export/plants

European Union: http://ec.europa.eu/sanco_pesticides/public

Assistance derived from these sources is hereby acknowledged.

Honey — Specification

1 Scope

This East African Standard applies to all honey produced by honeybees and covers all styles of honey presentation which are offered for direct consumption.

The Standard also covers honey which is packed in non-retail (bulk) containers and is intended for re-packing into retail packs.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CAC/GL 21, *Principles for the establishment and application of microbiological criteria for foods*

CAC/RCP 1, *Recommended international code of practice — General principles of food hygiene*

CAC/GL 30, *Principles and guidelines for the conduct of microbiological risk assessment*

CAC/GL 31, *Guidelines for the sensory evaluation of fish and shellfish in laboratories*

CAC/GL 48, *Model certificate for fish and fishery products*

CAC/RCP 52:2003(Rev. 4:2008), *Code of practice for fish and fishery products*

CAC/GL 53, *Guidelines on the judgement of equivalence of sanitary measures associated with food inspection and certification systems*

EAS 38, *Labelling of prepackaged foods — Specification*

3 Definitions and description

3.1 Description

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

3.2 Definitions

3.2.1 honey

honey is the natural sweet substance produced by honey bees from the nectar of plants or from secretions of living parts of 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

3.2.2 colour

the colour of honey varies from near colourless (water white) to dark brown (amba) depending on the source

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3.2.3

consistency

the small consistency either is fluid, viscous or partly or entirely crystallized

3.2.4

flavour and aroma

the flavour and aroma vary but derive from plant origin

3.2.5

blossom honey or nectar honey

this is the honey, which derived mainly from nectarines of flowers

3.2.6

honeydew honey

is the honey which comes mainly from excretions of plant sucking insects (*Hemiptera*) on the living parts of plants or secretions of living parts of plants. Its colour varies from very light brown or greenish to dark brown

3.2.7

extra floral honey

Honey that is derived mainly from nectarines situated on parts of the plant other than the flowers e.g. at the base of petiole, back of leaves etc.

3.2.8

fruit and plant juices honey

Honey made by bees from sweet substances such as juices and sap from fruits and plant phloem.

3.2.9

extracted honey

honey only obtained by centrifuging decapped broodless combs

3.2.10

pressed honey

honey obtained by pressing broodless combs with or without the application of moderate heat

3.2.11

drained honey

honey obtained by drawing decapped broodless combs

3.3 Presentation styles

Honey, which meets all these compositional, and quality criteria of Clause 4 of this standard may be presented as follows

- a) Honey which is honey in liquid or crystalline state or 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) Chunk Honey, which is, honey containing one or more pieces of comb honey;
- d) Crystallised or Granulated honey which is honey that has undergone a natural process of solidification as a result of glucose crystallization;
- e) Creamed (or Creamy or Set) honey is honey which has a fine crystalline structure and which may have undergone a physical process to give it that structure and to make it easy to spread.

4 Essential composition and quality factors

4.1 Flavour and aroma

Honey sold as such shall not have added to it any food ingredient, including food additives, nor shall any other additions be made other than honey. Honey shall not have any objectionable matter, flavour, aroma, or taint absorbed from foreign matter during its processing 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 inorganic or organic matter.

4.2 Honey shall not be heated to such an extent that its essential composition and/or its quality is impaired. Chemical or biochemical treatments shall not be used to influence honey crystallisation.

4.3 Apparent reducing sugar content, calculated as invert sugar — not less than 65 %.

4.4 Moisture content — not more than 22 %

4.5 Sugars content

4.5.1 Fructose and glucose content (sum of both)

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

4.5.2 Sucrose content

- a) Honey not listed below — not more than 5 g/100g
- b) Alfalfa (*Medicago sativa*), Citrus spp., False Acacia (*Robinia pseudoacacia*), French Honeysuckle (*Hedysarum*), Menzies Banksia (*Banksia menziesii*), Red Gum (*Eucalyptus camaldulensis*), Leatherwood (*Eucryphia lucida*), *Eucryphia milligani* — not more than 10 g/100g
- c) Lavender (*Lavandula spp.*), Borage (*Borago officinalis*) — not more than 15 g/100g

4.6 Water insoluble solids

- a) For honeys other than pressed honey — not more than 0.1%
- b) Pressed Honey — Not more than 0.5%

4.7 Mineral content (ash) — Not more than 1.0%

4.8 Acidity — Not more than 40 multi equivalents acid per 1000 grams or when expressed as formic acid percent by mass not more than 0.2 %.

4.9 Distaste activity

Determination after processing and blending — not less than 3.

4.10 Hydroxymethylfurfural (HMF) content — not more than 80 mg/kg.

4.11 Fructose — glucose ratio not less than 1.

4.12 Fieche's test shall be negative.

4.13 Aniline chloride number shall not exceed 50 (to be performed in case Fieche's test is found to be positive)

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4.14 Organoleptic requirements

4.14.1 Honey shall have the characteristic colour, flavour and appearance.

4.14.2 The colour shall vary from nearly colourless to dark brown.

4.14.3 The flavour and aroma shall be that derived from the plant origin. Honey shall not be heated, handled or stored in such a way as to alter its taste, colour, smell or flavour.

4.14.4 When visually inspected, the honey shall be free from foreign matter such as bees, dirt, scum, beeswax or any other extraneous matter.

4.14.5 Honey shall not show any signs of fermentation or effervescence.

4.14.6 Honey shall not contain natural plant toxins which may constitute a health hazard.

Table 1 — Specific requirements for honey

SI No	Characteristic	Requirements	Test methods (Ref: annexes)
i)	Relative density (S.G.), min.	1.37	A
ii)	Moisture, % by mass, max.	20	B
iii)	Total reducing sugars, % by mass, min.	(60)	C
iv)	Sucrose, % by mass, max.	5	D
v)	Total ash, % by mass, max.	0.5	E
vi)	a) Acidity, expressed as gluconic acid, per cent by mass, max. b) Expressed as milli equivalent acid/kg honey, max.	0.2 (50)	F
vii)	Fieche's test	Negative	G
viii)	Pollen content	Be comparable with the standard	H
ix)	Diastase activity and hydroxymethyl furfural (HMF)	^a	J
x)	Total water insoluble solids content, per cent by mass, max.	Processed honey 0.5 (0.1) others	K
xi)	Aniline chlorine number (to be performed in case Fieche's test is found positive), max.	50	L

^a Determined after processing and blending. Diastase figure on Gothe scale shall be not less than 8 provided the HMF content is not more than 40 mg/kg. Honey with low natural enzyme content, e.g. citrus shall have a diastase figure on Gothe scale of not less than 3, provided the HMF content is not more than 14 mg/kg.

5 Food additives

5.1 Honey shall not contain any added substances either in the form of additions or additives.

5.2 Honey acidity shall not be changed artificially.

5.3 Honey shall comply with the requirements prescribed in Table 1.

6 Contaminants

6.1 Heavy metal contaminants

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.

In particular, the levels of heavy metallic contaminants in honey shall not exceed limits as follows.

Table 2 — Limits for metal contaminants

Metal		Maximum level mg/kg (ppm)	Test methods
i)	Arsenic	0.1	EAS 41
ii)	Lead	0.1	
iii)	Copper	0.1	
iv)	Zinc	5.0	
v)	Tin	5.0	
*EAS 41, <i>Fruits, vegetables and derived products — Sampling and methods of test</i>			

6.2 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.

7 Hygiene

7.1 It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of EAS 39, *Hygiene in the food and drink manufacturing industry — Code of practice*, and EAS 151, *Hazard analysis critical control points (HACCP)*.

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

7.3 Honey shall be free from visible mould and as far as practicable, be free from inorganic or organic matter foreign to its composition, such as insects, insect debris, brood or grains of sand, or soil, when the honey is offered for sale or is used in any product for human consumption.

7.4 Honey shall not contain toxic substances arising from micro-organisms or plants in an amount, which may constitute a hazard to health.

8 Labelling

In addition to the relevant sections of EAS 38, *Labelling of prepackaged foods — Specification*, the following specific provisions shall also apply:

8.1 The Name of the product

8.1.1 The product conforming to this standard shall be designated "honey".

8.1.2 For products described in 3.2.5 the name of the food may be supplemented by the term "blossom" or "nectar".

8.1.3 For products described in 3.2.6 the word "honeydew" may be placed in close proximity to the name of the food.

8.1.4 For mixtures of the products described in 3.2.5 and 3.2.6 the name of the food may be supplemented with the words "a blend of honeydew honey with blossom honey".

8.1.5 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.

