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DRAFT EAST AFRICAN STANDARD

Industrial honey — Specification

EAST AFRICAN COMMUNITY

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Foreword

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

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. 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 Principles and procedures for development of East African Standards. XXXXXX.

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.

The committee responsible for this document is Technical Committee EASC/TC 011, *Apiary and apiary products*

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Introduction

Natural honey may undergo some changes as a result of unintentionally induced natural bioprocesses such as fermentation or changes during processing stages of the honey (such as overheating during warming to sieve the honey) This often results into a low quality honey but whose physco-chemical attributes are not substantially different from those of natural honey.

It is common practice that this honey is not wasted but used as a raw material to produce other food products after suitable processing. The Industrial Honey Specification is developed in order to facilitate trade as well as to ensure the quality of this product. The product, since it is of low quality, is emphatically not meant for direct human consumption but rather for industrial use. This product can be used as a raw material or an ingredient in the food industry in baked products, confectionery, breakfast cereals, beverages, milk products and many preserved products

Industrial honey — Specification

1 Scope

This Draft East African Standard specifies the requirements, sampling and test methods for honey produced by honeybees of genus *Apis* used as a raw material for industrial purposes but not for direct human consumption.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

AOAC 920.181, *Ash of honey*

AOAC, 920.183, *Sugars (reducing) in honey*

AOAC 920.184, *Sucrose in honey*

AOAC 958.09, *Determination of diastase activity*

AOAC 962.19, *Determination of acidity (free, lactone, and total). Titrimetric method*

AOAC 969.38b, *Determination of moisture content*

AOAC 980.23, *Determination of hydroxymethylfurfural (HMF) content*

EAS 38, *Labelling of pre-packaged foods — Specification*

EAS 39, *Hygiene in the food and drink manufacturing industry — Code of practice*

CAC/GL 50, *General guidelines on sampling*

ISO 4831, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of coliforms — Most probable number technique*

ISO 21527-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 2: Colony count technique in products with water activity less than or equal to 0.95*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1 honey
natural sweet substance produced by honeybees of genus *Apis* from the nectar of blossoms or from secretions of living parts of plants or excretions of plant sucking insects on the living parts of the plants, which honeybees collect, transform and combine with specific substances of their own, deposit, dehydrate, store and leave in the honey comb to ripen and mature.

3.2 industrial honey
honey that may have either been subjected to some kind of processing, treatment or not but having undergone some physical or organoleptic characteristics used as a raw material or an ingredient for processing other honey value added products such as syrups, bakeries ,breweries e.t.c

3.3 foreign matter
organic or inorganic matter other than honey

4 Requirements

4.1 General requirements

Industrial Honey shall:

- a) not have added food ingredient, including food additives, nor shall any other additions be made other than;
- b) not have any objectionable matter, flavour, aroma, or taint absorbed from foreign matter during its processing and storage;
- c) not have pollen or constituent particular to honey removed except where this is unavoidable in the
- d) removal of foreign inorganic or organic matter;
- e) not be chemically or biochemically treated to influence honey crystallization;
- f) have the characteristic colour of the product;
- g) have the consistency of fluid, viscous, partly or entirely crystallized; and
- h) be free from to be free from foreign matter.

4.2 Specific requirements

Industrial honey shall comply with the specific quality requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for industrial honey

S/N	Characteristic	Requirement	Test method
i	Reducing sugar, as invert sugar, min, %	50	AOAC 920.183
ii	Moisture, max, %	25	AOAC 969.38b
	Sucrose, max, %	7	AOAC 920.184
iii	Water insoluble solids;	0.5	Annex A
iv	Total ash, %m/m, max.	0.6	AOAC 920.181
v	Acidity as meq acid per kg, max.	80	AOAC 962.19
vi	Diastase activity, min	8	AOAC 958.09
vii	Hydroxymethyl furfural (HMF), max, mg/kg	80	AOAC 980.23

5 Contaminants

5.1 Heavy metal contaminants

The product covered by this standard shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission.

5.2 Pesticide residues and veterinary drugs

The product shall comply with pesticides and veterinary drugs maximum residue limits for honey established by the Codex Alimentarius Commission.

6 Hygiene

Industrial Honey shall be processed and handled in hygienic manner in accordance with the EAS 39 and shall comply with the microbiological limits given in Table 2 when tested in accordance with test methods specified therein.

Table 2 — Microbiological limits for Industrial honey

S/N	Microorganism	Limits	Test method
i	Coliforms, MPN/g,	Absent	ISO 4831.-3
ii	Yeast and mould, cfu/g	<10	ISO 21527-2

7 Packaging

Industrial Honey shall be packaged in a food grade material that protects the integrity and safety of the product.

8 Labelling

In addition to the labelling requirements given in EAS 38, the package shall be legibly and indelibly labelled with the following information:

- a) name of the product; as Industrial honey;
- b) date of packaging and best before; and
- c) disclaimer: "For industrial purposes only ".

9 Sampling

Sampling of honey shall be done in accordance with CAC/GL 50.

Annex A (normative)

Gravimetric determination of water-insoluble solids content (Type II method)

A.1 Sampling

A.1.1 Liquid or strained honey

If sample is free from granulation, mix thoroughly by stirring or shaking; if granulated, place closed container in water-bath without submerging, and heat 30 min at 60 °C; then if necessary, heat at 65 °C until liquefied. Occasional shaking is essential. Mix thoroughly and cool rapidly as soon as sample liquefies. Do not heat honey intended for hydroxymethylfurfural or diastatic determination. If foreign matter, such as wax, sticks, bee's particles or comb, etc., is present, heat sample at 40 °C in water-bath and strain through cheesecloth in hot-water-funnel before sampling.

A.1.2 Comb honey

Cut across top of comb, if sealed, and separate completely from comb by straining through a sieve the meshes of which are made by so weaving wire as to form square opening of 0.500 mm by 0.500 mm when portions of comb or wax pass through sieve, heat sample as in A.1.1 and strain through cheesecloth. If honey is granulated in comb, heat until wax is liquefied; stir, cool and remove wax.

A.2 Procedure

A.2.1 Preparation of test sample

Weigh 20 g of honey and dissolve in a suitable quantity of distilled water at 80 °C and mix well.

A.2.2 Gravimetric determination

The test sample is filtered through a previously dried and weighed fine sintered glass crucible (pore size 15.40) and washed thoroughly with hot water (80 °C) until free from sugars (Mohr test). The crucible is dried for one hour at 135 °C, cooled and weighed to 0.1 mg.

A.2.3 Expression of results

The result is expressed as percent water insoluble solids (m/m).

