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Bee bread — Specification

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In order to match with technological development and to keep continuous progress in industries, standards are subject to periodic review. Users shall ascertain that they are in possession of the latest edition

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Foreword

Rwanda Standards are prepared by Technical Committees and approved by Rwanda Standards Board (RSB) Board of Directors in accordance with the procedures of RSB, in compliance with Annex 3 of the WTO/TBT agreement on the preparation, adoption and application of standards.

The main task of technical committees is to prepare national standards. Final Draft Rwanda Standards adopted by Technical committees are ratified by members of RSB Board of Directors for publication and gazettment as Rwanda Standards.

RS 568 was prepared by Technical Committee RSB/TC 027, *Beekeeping and beekeeping products*.

Committee membership

The following organizations were represented on the Technical Committee on *Beekeeping and beekeeping products* (RSB/TC 027) in the preparation of this standard.

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Jambo Honey Rwanda

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DRS for public review

Introduction

Bee bread also called ambrosia is a unique product for humans and bees. It is formed from pollen, honey and secretions of bees' salivary glands which are packed by the bees into the honeycomb and covered with wax and honey. During the preservation, the content is submitted to lactic fermentation caused by bacteria and yeast in the bee nest medium thus resulting in bee bread which has a caramel colour, a tangy taste which is given by its citrus, flowers or other fruit flavours. Bee bread is the protein basis of food in the beehive and an important source of different compounds (mainly phenolics) which present antioxidant, antimicrobial, antitumor and neuroprotective activity.

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Bee bread — Specification

1 Scope

This Rwanda Standard specifies the requirements, sampling and test methods for bee bread intended for 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.

CAC/GL 50, *General guidelines on sampling*

AOAC 920.85, *Fat (crude) or ether extract in flour*

AOAC 978.04, *Nitrogen (Total) (Crude protein) in plant*

EAS 38, *Labelling of pre-packaged foods — General requirements*

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

RS EAS 804, *Claims on food — General requirements*

RS EAS 805, *Use of nutrition and health claims — Requirements*

ISO 1666, *Starch — Determination of moisture content — Oven-drying method*

ISO 4833-1, *Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 degrees C by the pour plate technique*

ISO 6579-1, *Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of salmonella — Part 1: Detection of Salmonella spp*

ISO 6888-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 2: Technique using rabbit plasma fibrinogen agar medium*

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 standard, the following terms and definitions apply.

3.1

bee pollen

the result of the agglutination of pollens collected by worker bees from flowers, with nectar (and/or honey) and salivary substances

3.2

bee bread

combination of honey, bee saliva, and bee pollen that is fermented and used to feed the hive.

3.3

impurities

any material which is not characteristic to the product including bee stings, bee wings, sand and stones etc

3.4

food grade material

Material made of substances which are safe and suitable for their intended use and which will not alter the quality, safety or organoleptic properties of the product

4 Requirements

4.1 General requirements

Bee bread shall:

- a) have characteristic appearance, colour, taste, odour and flavour depending on floral source; and
- b) not contain impurities such as moulds, live or dead insects, larvae or eggs, propolis, wax, plant particles, soil, sand or any other matter which is not characteristic to the product.

4.2 Specific requirements

Bee bread shall comply with the specific requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for bee bread

S/N	Parameter	Requirement	Test method
i)	Moisture, m/m, max%	20	ISO 1666
ii)	pH	4-5	ISO 24382
iii)	Carbohydrates, m/m, %, min.	72	ISO 10520
iv)	Fat content, m/m, %, min.	5	AOAC 920.85
v)	Protein content, m/m, %, min.	18	AOAC 978.04
vi)	Ash content, m/m, %, max		AOAC 920.85
	-Total ash	342	
	-Acid insoluble ash	0.3	

5 Contaminants

5.1 Heavy metals

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

5.2 Residues of pesticides and veterinary drugs

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

6 Hygiene

Bee bread 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 bee bread

S/N	Micro-organism	Limit	Test method
i)	Total viable Count, cfu/g, max.	10 ³	ISO 4833-1
ii)	Yeast and moulds, cfu/g, max.	10 ²	ISO 21527-2
iii)	<i>Escherichia coli</i> , cfu/g,max	Absent	ISO 16649-2

iv)	<i>Staphylococcus aureus</i> cfu/g	Absent	ISO 6888-2
v)	<i>Salmonella spp.</i> , per 25 g	Absent	ISO 6579-1

7 Packaging

Bee pollen shall be packaged in 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 “Bee bread”;
- b) name and address of the processor
- c) warning: “This product may cause allergic reactions”; and
- d) date of harvest.

9 Nutritional and health claims

Any nutritional and health claims associated with this product shall be in accordance with RS EAS 805 and shall follow nutritional labelling concepts in accordance with RS EAS 804.

10 Sampling

Sampling of bee pollen shall be done in accordance CAC/GL 50.

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Price based on **nnn** pages