EAST AFRICAN STANDARD

Faba beans — 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.

In order to achieve this objective, the Community established an East African Standards Committee mandated to develop and issue East African Standards.

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.

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.

EAS 763:2013 was prepared by Technical Committee EAS/TC 014, Cereals, Pulses and related products
Introduction

This standard has been developed to take into account:

a) the needs of the market for the product;

b) the need to facilitate fair domestic, regional and international trade and prevent technical barriers to trade by establishing a common trading language for buyers and sellers;

c) the structure of the CODEX, UNECE, USA, ISO and other internationally significant standards;

d) the needs of the producers in gaining knowledge of market standards, conformity assessment, commercial cultivars and crop production process;

e) the need to transport the product in a manner that ensures keeping of quality until it reaches the consumer;

f) the need for the plant protection authority to certify, through a simplified form, that the product is fit for cross-border and international trade without carrying plant disease vectors;

g) the need to promote good agricultural practices that will enhance wider market access, involvement of small-scale traders and hence making farming a viable means of wealth creation; and

h) the need to ensure a reliable production base of consistent and safe crops that meet customer requirements.
Faba beans — Specification

1 Scope

This East African Standard specifies the requirements and methods of sampling and test for faba beans of cultivated varieties (cultivars) grown from *Vicia faba* L. intended for human consumption.

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.

EAS 38, Labelling of pre-packaged foods — Specification

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

EAS 79, Cereals and pulses as grain — Methods of sampling

EAS 217, Methods for the microbiological examination of foods

ISO 605, Pulses — Determination of impurities, size, foreign odours, insects, and species and variety — Test methods

ISO 13690, Cereals, pulses and milled products — Sampling of static batches

ISO 16050, Foodstuffs — Determination of aflatoxin *B*<sub>1</sub>, and the total content of aflatoxin *B*<sub>1</sub>, *B*<sub>2</sub>, *G*<sub>1</sub> and *G*<sub>2</sub> in cereals, nuts and derived products — High performance liquid chromatographic method

ISO 24557, Pulses — Determination of moisture content — Air-oven method

CODEX Stan 193, Codex general Standards for contaminants and toxins in food and feed

3 Terms and definitions

For the purpose of this standard, the following terms and definitions shall apply.

3.1 **faba beans**

dry mature seeds of *Vicia faba* L.

3.2 **broken**

pieces of faba beans that are less than three-quarters the size of a whole seed

3.3 **foreign matter**

any extraneous matter than faba beans or other food grains comprising of:
a) “inorganic matter” includes metallic pieces, shale, glass, dust, sand, gravel, stones, dirt, pebbles, lumps or earth, clay, mud and animal filth etc; and

b) “organic matter” consisting of detached seed coats, straws, weeds and other inedible grains etc.

3.4
heated-damaged kernels
Faba beans which are materially discoloured as a result of heating or roting. Seed coats appear dark brown to black. The cotyledon tissue of dissected beans appears tan or brown (see damage).

3.5
poisonous, toxic and/or harmful
Seed which, if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as Jimson weed — datura (D. fastuosa Linn and D. stramonium Linn.) corn cokle (Agrostemma githago L., Machai Lallium remulenum Linn.) Akra (Vicia species), Argemone mexicana, Khesari and other seeds that are commonly recognized as harmful to health.

3.6
splits
Pieces of faba beans that are not damaged, each of which consists of three-fourths or less of the whole faba beans and include any sound faba beans the halves of which are held together loosely.

3.7
food grade material
Packaging material, made of substances which are safe and suitable for their intended use and which will not impart any toxic substance or undesirable odour or flavour to the product.

4  Quality requirements

4.1  General requirements

Faba beans shall be

a) mature dry seeds of Vicia faba L.;

b) well-filled, clean, wholesome, uniform in size, and shape;

c) free from substances which render them unfit for human or animal consumption or processing into or utilisation thereof as food or feed;

d) free from abnormal flavours, musty, sour or other undesirable odour, obnoxious smell and discolouration; and

e) free from micro-organisms and substances originating from micro-organisms, fungi or other poisonous or deleterious substances in amounts that may constitute a hazard to human health.

4.2  Specific requirements

Faba beans shall be categorized into three grades on the basis of the tolerable limits established in Table 1.
Table 1 — Specific requirements

<table>
<thead>
<tr>
<th>S/N</th>
<th>Characteristics</th>
<th>Maximum limits</th>
<th>Method of test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Grade 1</td>
<td>Grade 2</td>
</tr>
<tr>
<td>i)</td>
<td>Foreign matter, % m/m</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td>ii)</td>
<td>Inorganic matter, % m/m</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>iii</td>
<td>Broken grains, % m/m</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>iv)</td>
<td>Pest damaged grains, % m/m</td>
<td>0.3</td>
<td>0.8</td>
</tr>
<tr>
<td>v)</td>
<td>Rotten and diseased grains, % m/m</td>
<td>0.2</td>
<td>0.5</td>
</tr>
<tr>
<td>vi)</td>
<td>Discoloured grains, % m/m</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>vii</td>
<td>Immature/shriveled grains, % m/m</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>viii</td>
<td>Filth, % m/m</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>ix)</td>
<td>Total defective grains, % m/m</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>x)</td>
<td>Moisture, % m/m</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>xi)</td>
<td>Total aflatoxin (AFB₁+AFB₂+AFG₁+AFG₂), ppb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>xii</td>
<td>Aflatoxin B₁, ppb</td>
<td></td>
<td></td>
</tr>
<tr>
<td>xiii</td>
<td>Fumonisin ppm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE The parameter, Total defective grains is not the sum total of the individual defects. It is limited to 70% of the sum total of individual defects.

5 Contaminants

5.1 Pesticide residues

Faba beans shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this commodity.

NOTE Where the use of certain pesticides is prohibited by some Partner States, it should be notified to all Partner States accordingly.

5.2 Other contaminants

Faba beans shall comply with those maximum limits for other contaminants established in CODEX STAN 193.

6 Hygiene

6.1 Faba beans shall be produced, prepared and handled in accordance with the provisions of appropriate sections of EAS 39.

6.2 When tested by appropriate standards of sampling and examination listed in Clause 2, the products shall:

a) be free from microorganisms in amounts which may represent a hazard to health and shall not exceed the limits stipulated in Table 2;

b) free from parasites which may represent a hazard to health; and
c) not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

Table 2 — Microbiological limits

<table>
<thead>
<tr>
<th>S/N</th>
<th>Type of micro-organism</th>
<th>Limits</th>
<th>Method of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>i)</td>
<td>Yeasts and moulds cfu per g, max</td>
<td>$10^4$</td>
<td></td>
</tr>
<tr>
<td>ii)</td>
<td><em>Staphylococcus aureus</em> cfu per g, max</td>
<td>$10^5$</td>
<td>EAS 217</td>
</tr>
<tr>
<td>iii)</td>
<td><em>Escherichia coli</em>, per g</td>
<td>Absent</td>
<td></td>
</tr>
<tr>
<td>iv)</td>
<td><em>Salmonella</em> per 25 g</td>
<td>Absent</td>
<td></td>
</tr>
</tbody>
</table>

7 Packaging

7.1 Faba beans shall be packed in suitable packages which shall be clean, sound, free from insect, fungal infestation and the packaging material shall be of food grade quality.

7.2 Faba beans shall be packed in containers which will safeguard the hygienic, nutritional, technological and organoleptic qualities of the products.

7.3 Each package shall contain Faba beans of the same type and of the same grade designation.

7.4 If Faba beans are presented in bags, the bags shall also be free of pests and contaminants.

7.5 Each package shall be securely closed and sealed.

8 Labelling

In addition to the requirements in EAS 38, each package shall be legibly and indelibly marked with the following:

a) product name as “Faba beans”;

b) grade;

c) name, address and physical location of the producer/packer/importer;

d) lot/batch/code number;

e) net weight, in kilograms;

NOTE EAC Partner States are signatory to the International Labour Organizations (ILO) for maximum package weight of 50 kg where human loading and offloading is involved.

f) the declaration “Food for Human Consumption”

g) storage instruction as “Store in a cool dry place away from any contaminants”;

h) crop year;

i) packing date;

j) instructions on disposal of used package;

k) country of origin; and
l) a declaration on whether the faba beans were genetically modified or not.

9 Sampling methods

Sampling shall be done in accordance with the EAS 79/ISO 13690.