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DRAFT EAST AFRICAN STANDARD

Curry powder — Specification

EAST AFRICAN COMMUNITY

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Copyright notice

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.

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 006, *Spices, condiments and culinary herbs*.

This second edition cancels and replaces the first edition (EAS 98: 1999), which has been technically revised.

Attention is drawn to the possibility that some of the elements of this document may be subject of patent rights. EAC shall not be held responsible for identifying any or all such patent rights.

Curry powder — Specification

1 Scope

This draft East African Standard specifies the requirements, sampling and test methods for curry powder, which is used as a flavouring material in the preparation of food.

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.

Codex online guideline for pesticide residues in food

CODEX STAN 193, *Codex general standard for contaminants and toxins in food and feed*

CODEX STAN 228, *General method of analysis for contaminants*

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

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

EAS 99, *Spices and condiments — Nomenclature*

EAS 803, *Nutrition labelling — Requirements*

EAS 804, *Claims — General requirements*

ISO 928, *Spices and condiments — Determination of total ash*

ISO 930, *Spices and condiments — Determination of acid-insoluble ash*

ISO 939, *Spices and condiments — Determination of moisture content — Entrainment method*

ISO 948, *Spices and condiments — Sampling*

ISO 1108, *Spices and condiments — Determination of non-volatile ether extract*

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

ISO 5498, *Agricultural food products — Determination of crude fibre content — General method*

ISO 6571, *Spices, condiments and herbs — Determination of volatile oil content (hydrodistilation method)*

ISO 6579 (all parts), *Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of salmonella*

ISO 16050, *Food stuffs — Determination of aflatoxin B1, and the total content of aflatoxin B1, B2, G1 and G2 in cereals, nuts and derived products — High-perfomance liquid chromatographic method*

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*

ISO 16649-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of beta –glucuronidase-positive Escherichia coli — Part 2: Colony count technique at 44ºC using 5-bromo-4-chloro -3-indolyl beta –D-glucuronide*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EAS 99 and the following apply.

3.1
curry powder
product used as a condiment prepared by grinding clean and wholesome spices, aromatic herbs and seeds and sometimes starch and salts added to it

3.2
food grade packaging material
material which will safeguard the hygienic, safety, nutritional, technological and organoleptic qualities of the curry powder

3.3
extraneous matter
foreign matters such as roots, soil, skins, stems, leaves, dirt or any material other than curry powder.

4 Requirements

4.1 Ingredients

The major ingredients shall include turmeric, coriander, cumin, fenugreek and mustard. In addition any of the spices and condiments listed in EAS 99 may be used. The proportion of spices used in curry powder shall not be less than 85 %. Curry powder may contain edible starch material the nature of which shall be declared.,

4.2 General requirements

Curry powder shall:

a) have characteristic fresh taste and odour of the ingredients used;

b) free from live insects, moulds, dead insects, insect fragments and rodent contamination; and

c) be free from extraneous matter.

4.3 Specific requirements

4.3.1 Curry powder shall comply with the requirements given in Table 1 when tested in accordance with the methods specified therein.

Table 1 — Specific requirements for curry powder

S/No	Characteristic	Requirement	Test method
i.	Moisture, % m/m, max.	10.00	ISO 939
ii.	Volatile oil, ml/100 g, min.	0.25	ISO 6571
iii.	Non-volatile ether extract, % m/m, min.	7.5	ISO 1108
iv.	Acid insoluble ash in hydrochloric acid, % m/m, max.	1.0	ISO 930
v.	Salt, % m/m, max.	5.0	Annex A
vi.	Crude fibre, %, max.	15.0	ISO 5498

4.3.2 Curry powder shall be ground to such fineness that 98% of it passes through a sieve of 500 micron (0.500 mm).

5 Food additives

Curry powder shall be free from added colouring matter, flavouring substances and preservatives other than salt.

6 Contaminants

6.1 Pesticide residues

Pesticide residues in curry powder shall not exceed maximum residue limits as established in the Codex online guideline for pesticide residues in food.

6.2 Heavy metals

Heavy metals in curry powder shall not exceed maximum heavy metal limits as stipulated in CODEX STAN 193.

6.3 Aflatoxin limits

Total aflatoxin shall not exceed 10 µg/kg and aflatoxin B1 shall not exceed 5 µg/kg when tested with ISO 16050.

7 Hygiene

Curry powder shall be manufactured and handled in a hygienic manner in accordance with EAS 39 and shall comply with the microbiological limits stipulated in Table 2 when tested in accordance with the methods specified therein.

Table 2 — Microbiological requirements for curry powder

S/No	Characteristic	Requirement	Test method
i.	Total plate count, cfu/g, max.	10^5	ISO 4833-1
ii.	Yeast and moulds, cfu/g, max.	10^4	ISO 21527-2
iii.	*Salmonella spp*., per 25 g	Absent	ISO 6579

iv.	*E coli*, MPN/g, max.	Absent	ISO 16649 -2

8 Packaging

The curry powder shall be packaged in food grade packaging material that secures the integrity and the safety of the product.

9 Labelling

In addition to the requirements of EAS 38, EAS 803 and EAS 804, each container shall be legibly and indelibly labelled with the following information:

a) name of the product as “Curry powder”;

b) trade name or brand name if any;

c) name, physical and postal address of manufacturer and / or packer;

d) batch or code number;

e) net weight in metric units;

f) a complete list of ingredients in descending order of proportions;

g) storage conditions;

h) manufacturing date;

i) expiry date; and

j) instructions for use.

k) country of origin

10 Sampling

Sampling shall be carried out in accordance with ISO 948.

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Annex A
(normative)

Determination of salt (sodium chloride)

A.1 Reagents

A.1.1 Dilute nitric acid: One volume of concentrated nitric acid (relative density 1.42) diluted with 4 volumes of water and freed from lower oxides of nitrogen by boiling until colourless.

A.1.2 Standard silver nitrate solution, 0.1 N

A.1.3 Ferric indicator solution, saturated solution of ferric ammonium sulphate [$FeNH_4.(SO_4)_2\ 2H_2O$]

A.1.4 Standard potassium thiocyanate solution, 0.1 N

A.2 Procedure

Weigh accurately about 2 g to 5 g of the material in a dish preferably of platinum and obtain the total ash as described in ISO 928. Dissolve the ash in hot water. Filter and wash the dish and residue thoroughly with hot water till it is free from chlorides. Collect the filtrate and washings in an Erlenmeyer flask. Add a known volume of the standard silver nitrate solution in slight excess, 5 ml of the ferric indicator solution and a few millilitres of nitric acid. Titrate the excess silver nitrate with the standard potassium thiocyanate solution until permanent light brown colour appears

A.3 Calculation

Sodium chloride percent by mass = $\frac{5.85\,(V_1N_1 - V_2N_2)100}{M}$

where

V_1 is the volume, in millilitres of the standard silver nitrate solution used;

N_1 is the normality of the standard silver nitrate solution used;

V_2 is the volume, in millilitres of the standard potassium thiocyanate solution;

N_2 is the normality of the standard potassium thiocyanate solution; and

M is the mass, in grams of the material taken for the test.

