PCD 501: 2025
ICS 67.200.10

DRAFT ZANZIBAR NATIONAL STANDARD

Biriani masala — Specification

ZANZIBAR BUREAU OF STANDARDS

First Edition

Foreword

This draft Zanzibar National standard has been developed by the Spices and culinary herbs Technical Committee (TCFA5). In accordance with Zanzibar Bureau of Standards general procedures, this draft standard is presented to the public in order to receive any technical comment concerns.

Technical Committee Representatives

This Draft Zanzibar National Standard was prepared by the Spices and Culinary Herbs Standard committee which consists of representatives from the following organizations:

Chief Government Chemist Laboratory Agency (CGCLA)
Kidichi spices
Ministry of Agriculture, Natural resources and Irrigation
Ministry of Health (MoH) - Zanzibar Food and drugs Agency
Ministry of Trade and Industrial Development (MTID)
Tanzania Bureau of Standards (TBS)
Zanzibar Exporter Association (ZEXA)
Zanzibar Organic Producers (ZANOP)
Zanzibar State Trade Security (ZSTC)
Zanzibar Bureau of Standards (ZBS) – Secretariat

Zanzibar Bureau of Standards (ZBS)
PO Box 1136
Zanzibar
Tel: +255 24 2232225
Fax: +255 24 2232225
E-mail: info@zbs.go.tz
Web: www.zbs.go.tz

Biriani masala — Specification

1 Scope

This draft Zanzibar National Standard specifies the requirements and the methods of sampling and test for biriani masala intended for human consumption.

2 Normative references

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

CXS 192, General Standard for food additives
CXS 193, Codex general standard for contaminants and toxins in food and feed

ZNS 61, Packaging and labeling of food

ZNS 88, Code of hygienic practices for Spices and condiments

ZNS 376, Spices and condiments — Nomenclature

EAS 803, Nutrition labelling — Requirements

EAS 804, Claims — General requirements

ZNS 50, Spices and condiments — Determination of acid-insoluble ash

ZNS 49, Spices and condiments — Determination of moisture content

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 oC by the pour plate technique

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 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

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 draft Standard, the terms and definitions given in ZNS 376 and the following apply:

3.1
biriani masala
product prepared by grinding clean, dry and wholesome spices, aromatic herbs/ seeds with or without salts used to prepared biriani.

3.2
foreign matter
material not usually associated with the natural component of the biriani masala such as sticks, stones, burlap bagging, metal, etc.

3.3
food grade packaging material
material which will safeguard the hygienic, safety, nutritional, technological and organoleptic qualities of the biriani masala

4 Requirements

4.1 Ingredients

The major ingredients shall include coriander, cumin, ginger, black paper, cinnamon, cardamom and cloves. In addition, any of the spices and condiments listed in ZNS 376 may be used. The proportion of spices used in biriani masala shall not be less than 95 %.

4.2 General requirements

Biriani masala shall:

a) have a fresh, pleasant taste, odour and colour characteristic of the designated product;
b) be free from living insects, and practically free from moulds, dead insects, insect fragments and rodent contamination; and
c) be free from foreign matter.

4.3 Specific requirements

Biriani masala shall comply with the requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1: Specific requirements for Biriani masala

S/No	Characteristic	Requirements	Test methods
i)	Moisture % m/m, max.	10	ZNS 49
ii)	Volatile oil ml/100 g %m/m, min.	0.25	ISO 6571
iv)	Acid insoluble ash % m/m,	1	ZNS 50
v)	Non-volatile ether extract % m/m, min.	7.5	ISO 1108
vi)	Crude fibre % m/m, max.	15	Annex A
NOTE: Requirements from ii) to v) are on dry basis.			

5 Additives

Food additives when used in biriani masala shall comply with CXS 192

6 Contaminants

6.1 Pesticides residues

Pesticide residues in Biriani masala shall not exceed maximum residue limit as stipulated in the CODEX Pesticides Residues in Food Online Database.

6.2 Heavy metals

Heavy metals in Biriani masala shall not exceed maximum residue limit as stipulated in CXS 193.

6.3 Aflatoxin limits

Total aflatoxin shall not exceed 10 µg/L and aflatoxin B_1 shall not exceed 5 µg/L when tested with ISO 16050.

7 Hygiene

Biriani masala shall be manufactured and handled in a hygienic manner in accordance with ZNS 88, ZNS EAS 39 and shall comply with the microbiological limits stipulated in Table 2 when tested in accordance with the test methods specified therein.

Table 2: Microbial Requirements for Biriani masala

S/No	Characteristic	Limit	Test methods
i)	Total plate count cfu/g max.	10^5	ISO 4833-1
ii)	Yeast and mould cfu/g, max.	10^3	ISO 7954
iii)	*Salmonella spp.* per 25 g	Absent	ISO 6579
v)	*Escherichia coli* MPN/g, max.	Absent	ISO 7251

8 Packaging and labelling

8.1 Packaging

Biriani masala shall be packaged in food grade packaging material that secures the integrity and the safety of the product.

8.2 labelling

8.2.1 In addition to the requirements in ZNS 61, Biriani masala package shall be legibly and indelibly marked with following information:

a) common name of the product;
b) trade name or brand name if any;
c) name and physical address of manufacturer and/or packer;
d) batch or code number;
e) net weight;
f) manufacture date

g) best before date /expiring date;
h) country of origin;
i) a complete list of ingredients; and
j) storage condition.
k) instruction for use

8.2.2 The language on the label shall be Kiswahili or Kiswahili and English. Other language may be used depending on the designated market.

9 Sampling

Sampling of Biriani masala shall be done in accordance with ISO 948.

Annex A
(normative)

Determination of crude fibre

A.1 Reagents

A.1.1 Petroleum ether:

A.1.2 Dilute sulphuric acid: 1.25% (m/v) accurately prepared.

A1.3 Sodium hydroxide solution: 1.25% (m/v) accurately prepared.

A.1.4 Ethanol: 95% (v/v)

A.2 Procedure:

Weigh accurately about 2.5 g of the ground material into a thimble and extract for about 1 hour with petroleum ether using a Soxhlet apparatus. Transfer the material in the thimble to a one-litre flask. Take 200 ml of the dilute sulphuric acid in a beaker and bring to boil. Transfer the whole of the boiling acid to the flask containing the fat-free material and immediately connect the flask with a water-cooled reflux condenser and heat so that the contents of the flask begin to boil within 1 minute. Rotate the flask frequently taking care to keep the material from remaining on the sides of the flask and out of contact with the acid. Continue boiling for exactly 30 minutes. Remove the flask and filter through fine linen (about 18 thread to the centimetre) or through a coarse acid washed hardened filter paper, held in a funnel and wash with boiling water until the washings are no longer acidic to litmus paper. Bring some quantity of sodium hydroxide solution to boil under reflux condenser. Wash the residues on the filter into the flask with 200 ml of boiling sodium hydroxide solution. Immediately connect the flask with the reflux condenser and boil for exactly 30 minutes. Remove the flask and immediately filter through the linen or the filter paper.

Thoroughly wash the residue with boiling water and transfer to a Gooch crucible prepared with a thin but compact layer of ignite asbestos. Wash the residue thoroughly first with hot water and then with about 15 ml of ethyl alcohol and with three successive washings of 15 ml of petroleum ether each.
Dry the Gooch crucible and contents at 105 ± 1°C in an air-oven for 3 hours, cool and weigh. Repeat the process of drying for 30 minutes, cooling and weighing until the difference between two consecutive weighings is less than 1 mg. Incinerate the contents of the Gooch crucible in the muffle furnace at 550 ± 20˚C until all the carbonaceous matter is burnt. Cool the Gooch crucible containing the ash in a desiccator and weigh.

A.3 Calculation

Crude fibre (on dry basis), percent by mass

$$= \frac{100\,(M_1 - M_2)}{M} \times \frac{100}{(100\text{-}H)}$$

Where: M_1 = mass in g of Gooch crucible and contents before ashing,
M_2 = mass in g of Gooch crucible containing asbestos and ash, M = mass in g of the material taken for the test
H= moisture content of the sample as received in percent