



DRAFT TANZANIA STANDARD

Mustard Seeds for oil extraction – Specification

DRAFT FOR STAKEHOLDERS COMMENTS

Mustard seeds for oil extraction – Specification

0 Foreword

Mustard seeds are small round seeds of various mustard plants with colour ranging from yellowish-white, reddish-brown or black. They are used as ingredients in many food products.

This Tanzania Standard is intended to guide farmers/traders in achieving quality of mustard seeds required for oil extraction in internal and external markets.

In the preparation of this Standard assistance was drawn from:

ISO 1237:1981 (reviewed 2018) Mustard seed – specification published by International Organization for Standardization.

In reporting the results of a test or analysis made in accordance with this Tanzania Standard, if the final value observed or calculated is to be rounded off, it shall be done in accordance with TZS 4.

1 Scope

This Tanzania Standard specifies requirements, methods of sampling and test for white mustard (*Sinapis alba* or *Brassica hirta*), brown and yellow mustard (*Brassica juncea*) or black mustard (*Brassica nigra*) intended for oil extraction.

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 Stan 193, *General Standard for Contaminants and Toxins in Food and Feed*

TZS 4, *Rounding off numerical values*

TZS 109, *Food processing units – Code of hygiene – General*

TZS 538, *Packaging and labeling of foods*

TZS 742, *Oleaginous seeds – Sampling*

TZS 799, *Foodstuffs – Determination of aflatoxin B1, and the total content of aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products – High-performance liquid chromatographic method*

TZS 1314 – 1, *Oilseeds – Determination of content of impurities*

TZS 1314 – 2, *Oilseeds – Determination of moisture and volatile matter content*

TZS 1314 – 3, *Oilseeds – Determination of oil content (Reference method)*

TZS 1314 – 4, *Oilseeds – Determination of acidity of oils*

3 Terms and definitions

For the purposes of this Tanzania Standard, the following terms and definitions shall apply:

3.1 mustard seeds

seeds obtained from the white mustard (*Sinapis alba* or *Brassica hirta*), brown and yellow mustard (*Brassica juncea*) or black mustard (*Brassica nigra*) plants.

3.2 foreign matter

organic and inorganic matter and anything else other than mustard seed, and includes loose and empty shells (hulls, husks).

3.3 immature or shriveled seeds

mustard seed that has indications of lack of maturity or full development.

3.4 damaged seeds

seeds that are damaged mechanically, or by mould or insects, or those showing internal discoloration of seeds materially affecting their quality.

4. Requirements**4.1 General requirements**

4.1.1 The mustard seeds shall be dry and reasonably uniform in size.

4.1.2 The mustard seeds shall be free from any other edible or non-edible seeds.

4.1.3 The mustard seeds shall be free from rancidity and foreign odours.

4.1.4 Mustard seeds shall be free from living and dead insects, mould, mites, insect fragments, excrement and rodent contamination visible to the naked eye.

4.2 Specific requirements

Mustard seeds for oil extraction shall comply with specific requirements specified in Table 1.

Table 1- Grading requirements for mustard seeds for oil extraction

S/NO	Characteristics	Requirements			Methods of test
		Grade 1	Grade 2	Grade 3	
i.	Oil content on moisture free basis% (m/m), min.	35	31	30	TZS 1314-3
ii.	Acid value of extracted oil, max.	1.5	2.5	6	TZS 1314-4
iii.	Foreign matter%(m/m),max	0.7	1.0	1.5	TZS 1314-1
iv.	Immature/shriveled and damaged seeds % (m/m), max.	1.0	2.0	4.0	TZS 1314-1
v.	Moisture content and volatile matter% (m/m), max.	10	10	10	TZS 1314-2

5. Contaminants**5.1 Metal contaminants**

Mustard seed for oil extraction shall comply with those maximum metal contaminants stipulated in CODEX STAN 193.

5.2 Pesticide residues

Mustard seed for oil extraction shall comply with those maximum residue limits established by the

Codex Alimentarius Commission.

5.3 Mycotoxin

Mustard seed for oil extraction shall conform to those maximum mycotoxin limits established by the Codex alimentarius Commission.

5.3.1 Aflatoxin

In particular aflatoxin level for mustard seed for oil extraction shall not exceed maximum limits as given in Table 2 when tested in accordance with test method specified therein:

Table 2- Aflatoxin limits for mustard seeds for oil extraction

S/N	Aflatoxin	Maximum limit (µg/kg)	Method of test
i)	Total aflatoxin	10	TZS 799
ii)	Aflatoxin B1	5	

6 Hygiene

Mustard seeds for oil extraction shall be grown in accordance with Good Agricultural Practices, handled and stored in accordance with TZS 109.

7 Sampling and methods of testing

7.1 Sampling

Sampling of mustard seeds for oil extraction shall be done in accordance with TZS 742.

7.2 Methods of testing

Mustard seeds for oil extraction shall be tested in accordance with the methods specified in this standard.

8 Packing, Marking and Labeling

8.1 Packing

Mustard seeds for oil extraction shall be packed in suitable food grade packaging materials which ensure that the safety and quality requirements specified in this standard are maintained throughout the shelf life of the product.

8.2 Marking and labeling

8.2.1 The product shall be marked and labeled in accordance with TZS 538. In addition each container/packet of product shall be legibly and indelibly marked with the following information:

- Name of the product as 'Mustard seed'
- Grade
- Trade name or brand, if any;
- Name, address of the producer and/or packer;
- Batch or lot number;
- Date of packing;
- Net weight in metric unit;
- Country of origin;

- i) Storage conditions
- j) Year of harvest;

8.2.2 Language on the label shall be in Kiswahili or Kiswahili and English. Any additional language may be used depending on the designated market

8.2.3 The containers shall also be marked with TBS Standards Mark of Quality.

NOTE - The TBS Standards Mark of Quality shall be used by the manufacturers only under license from TBS.

9 Storage and Transportation

9.1 Storage

Mustard seeds for oil extraction shall be stored in a dry and well ventilated environment and stacked on pallets to avoid moisture ingress. They shall be stored in leak-proof warehouses. Warehouses shall be free from pests.

9.2 Transportation

Mustard seeds for oil extraction shall be transported in well secured wagons/containers/trucks to avoid contamination, loss and spoilage.