



## **TANZANIA STANDARD**

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**Sesame (Simsim) seeds – Specification**

**TANZANIA BUREAU OF STANDARDS**

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# TZS 741:2010

## 0 Foreword

This Tanzania Standard has been prepared in order to guide producers/processors in achieving the safety and quality of sesame seeds which are fit for human consumption.

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 (see clause 2).

## 1 Scope

This Tanzania Standard specifies requirements and methods of sampling and tests for Sesame (Simsim) seeds (*Sesamum indicum*, Linnaeus).

## 2 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:

TZS 742: 2010, *Oleaginous seeds – Sampling*

TZS 1314: 2010, *Oleaginous seeds-methods of test*

TZS 109: 2009, *Food processing units – Code of hygiene – General*

TZS 4: 1979, *Rounding off numerical values*

TZS 538: 1999, *Packaging and labeling of foods*

Codex Stan 193-1995 General Standard for Contaminants and Toxins in Food and Feed

TZS 122 Microbiology of food and feeding stuffs – Horizontal method for the detection of *salmonella spp*

TZS 731 Microbiology of food and feeding-stuffs – Horizontal method for the detection and enumeration of presumptive *Escherichia coli* – Most Probable Number Technique

## 3 Terms and definitions

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

### 3.1 Sesame (simsim) seeds

Product obtained from threshing capsules of the simsim plant (*Sesamum indicum*, Linnaeus)

### 3.2 impurities

Foreign bodies other than pure seeds or parts thereof, which could consist of the following:

**3.2.1 Extraneous matter:** Dust, stalks, fibrous matter, stones, silica and debris.

**3.2.2 Admixtures:** Seeds other than those seeds of the same variety.

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### **3.3 Moisture and volatile matter**

the loss of mass of a test piece, when dried under specified conditions

### **3.4 Oil content**

The amount of oil in the seed

### **3.5 Acid value**

Number of milligrams of potassium hydroxide required to neutralize the free fatty acids present in 1 g of fat,

## **4 Types**

Sesame (Simsim) seeds shall be grouped into the following three types:

### **4.1 Type 1: White seeds**

shall consist of white seeds (colour of the outer coating can range from white to cream white) containing less than 10.0 %, m/m, brown and/or black/ chocolate simsim seeds, as determined by the method prescribed in 3.1.5 of TZS 1314 (see clause 2).

### **4.2 Type 2: Mixed seeds**

shall consist of a mixture of white, brown and black/chocolate seeds containing less or equal to 90.0 %, m/m, white seeds as determined by the method prescribed in 3.1.5 of TZS 1314 (see clause 2).

### **4.3 Type 3: Coloured seeds**

Shall consist of uniformly coloured seeds, brown/black or chocolate, containing not more than 10 %, m/m, white, black/ chocolate simsim.

## **5 Grades**

Sesame (Simsim) seeds of all types prescribed in clause 4, shall be graded as grade 1 and 2 sesame (simsim) seeds, depending on the requirements prescribed in clause 6.

## **6 Requirements**

### **6.1 General requirements**

**6.1.1** Sesame (Simsim) seeds of all types shall be wholesome, free from insect damage.

**6.1.2** Sesame (Simsim) seeds shall be free from living and dead insects, moulds, mites, insect fragments, excrements and rodent contamination visible to the naked eye (corrected if necessary, for abnormal vision) or with such magnification as may be necessary in any particular case, or otherwise specified by the contract. If the magnification exceeds x 10, this fact shall be stated in the test report.

**6.1.3** Sesame (Simsim) seeds of both types shall comply with the grading requirements given in table 1.

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Table 1 – Grading requirements for sesame (simsim) seeds

Characteristics	Requirements		Methods of test TZS 1314
	Grade 1	Grade 2	Clause
Moisture content and volatile matter, % (m/m), max.	7.5	7.5	3.2.1
Impurities, % (m/m), max.	1	2	3.1
Oil content (on moisture and impurity free basis). % (m/m), min.	50	48	3.2.2
Acid value of extracted oil, max.	4	6	3.2.3

## 7 Sampling and methods of test

### 7.1 Sampling

Sampling of sesame (simsim) seeds shall be done in accordance with TZS 742 (see clause 2)

### 7.2 Methods of tests

Sesame (Simsim) seeds shall be tested in accordance with TZS 1314 (see clause 2).

## 8 Contaminants

### 8.1 Metal contaminants

Sesame (Simsim) seeds shall comply with those maximum metal contaminants stipulated in Codex Stan 193-1995 (See clause 2)

### 8.2 Pesticide residues

Sesame (Simsim) seeds shall comply with those maximum residue limits established by the Codex Alimentarius Commission for this commodity.

### 8.3 Mycotoxins

The maximum contents of aflatoxins in sesame (simsim) seeds, when determined in accordance with the method described in TZS 1314:2010 (see clause 2), shall be 5 ppb for aflatoxin B<sub>1</sub> and 10 ppb for total aflatoxin.

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## 9 Hygiene

9.1 Sesame (Simsim) seeds shall be processed in accordance with TZS 109 (see clause 2).

9.2 Sesame (Simsim) seeds shall be free from pathogenic microorganisms and shall comply with the microbiological limits given in table 2

**TABLE 2: Microbiological requirements**

S/No.	Organism	Maximum limit	Method of Test
1.	Salmonella per 25 g	Shall be absent	TZS 122
2.	E. coli MPN/g	Shall be absent	TZS 731

## 10 Packing, marking and labeling

### 10.1 Packing

Sesame (Simsim) seeds shall be packed in new, clean, dry sound gunny bags, polythene bags or any other material which shall not be a source of contamination, shall be a food grade and protect the product quality during transportation and storage.

### 10.2 Marking and labeling

**10.2.1** Sesame (Simsim) seeds shall also be packed, marked and labeled in accordance with TZS 538 (see clause 2). In addition the following particulars shall be marked or labeled legibly and indelibly on each container:

- a) Name of the product and trade name or brand name, if any;
- b) Name and address of the producer/seller;
- c) Type and grade;
- d) Date of packing;
- e) Best before date
- f) Net weight in kg;
- g) Country of origin;
- h) Year of harvest
- i) Storage conditions

**10.2.2** The containers may also be marked with TBS Standards Mark of Quality.

NOTE – The TBS Standards Mark of Quality may be used by the manufacturers only under license from TBS. Particulars of conditions under which the licenses are granted, may be obtained from TBS.

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### **11 Storage and transportation**

#### **11.1 Storage**

**11.1.1** Sesame (Simsim) seeds shall be stored in a well ventilated environment. The bags shall be stacked on pallets. They shall be stored in leak proof warehouses.

**11.1.2** Warehouses should have insect repellents or killers.

#### **11.2 Transportation**

Sesame (Simsim) seeds shall be transported in well secured wagons/trucks/ containers to avoid loss and spoilage.