

Maize semolina — Specification

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Kenya Industrial Research and development Institute
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Forward

This fourth Edition of DKS 168 was prepared by the Technical Committee on Processed Cereals and Pulses under the guidance of the Standards Project Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

During revision of this standard amendments were introduced in quality requirements, heavy metal contaminants and microbiological limits where the provision were aligned to recent scientific information as well as aligning the requirements to those of similar products such as maize meal where applicable.

During the preparation of this standard, valuable information was obtained from the following document.

EAS 2, Specification for maize grain
KS 168 Specification for maize meal.

The assistance derived from the above source is hereby acknowledged with thanks.

Maize semolina — Specification

1. Scope

This draft Kenya Standard specifies the requirements and the methods of sampling and test for maize semolina.

2. Normative references

The following reference documents are indispensable for the application of this standard. The latest edition of the document shall be used:

KS EAS 38: Labeling of prepackaged foods.

KS 140: Methods of test for processed fruits and vegetables.

KS 220: Methods for the microbiological examination of foods.

KS EAS 39: Code of practice for hygiene in the food and drink manufacturing industry.

KS ISO 16050, 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

KS ISO 712:2009 – Cereal & Cereal products: Determination of moisture content

3 Definition

3.1 Maize semolina

a product grain of maize by grinding or milling processes in which the bran and germ are essentially removed and the remainder is comminuted to a suitable degree of fineness.

2. Requirements

2.1 The maize shall conform to KS EAS 2.

2.2 It shall be free from musty or other off odour, insect or fungus infestation, rodent contamination, adulterants and extraneous matter.

2.3 The material shall be manufactured in premises maintained under hygienic conditions and in accordance with KS EAS 39.

2.4 Maize semolina shall comply with the requirements given in Table 1.

Table 1 — Requirements for maize semolina

SL No.	Characteristic	Requirement	Test Method
(i)	Moisture content, per cent by mass, max.	14.0	KS ISO 712
(ii)	Total ash content dry mass basis, per cent by mass, max.	0.75	KS ISO 2171
(iii)	Acid insoluble ash (on dry basis)	0.15	KS 171
(v)	Crude fibre (on dry basis), per cent by mass, max.	0.7	KS 171

2.5 The level of total aflatoxin in milled cereals and pulses shall not exceed 10 ppb, wherein aflatoxin B₁ shall not be more than 5 ppb when tested according to KS ISO 16050 .

2.6 Heavy metal contaminants limits shall comply with Table 2.

Table 2 — Heavy metals contaminants

SL No.	Contaminant	Maximum Limit	Test Method
(i)	Lead as pb, mg/kg	0.2	AOAC 972.25
v)	Arsenic (As) mg/kg	1.0	
v)	Cadmium, mg/kg	0.1	

3. Hygiene

3.1 The product shall be prepared in hygienically sound conditions in accordance with KS EAS 39.

3.2 The product, when analyzed in accordance with KS 220, relevant Part, shall comply with the requirements given in Table 3.

Table 3 — Microbiological Limits

SL No.	Micro-organism	Maximum Limit	Test Method
(i)	Yeasts and moulds	10^4 per g	KS 220
(ii)	<i>E. Coli</i>	< 10	"
(iii)	<i>Salmonella in 25 g</i>	shall be absent	"
(iv)	<i>Staphylococcus aureaus</i>	100 per g	"
NOTE The manufacturers are advised to ensure the total aerobic counts do not exceed 10^5 per gram.			

4. Packaging

4.1 The maize semolina shall be packed in food grade material that shall ensure product safety and integrity.

4.2 The fill of the package shall comply with the Weights and Measures Act, Cap. 513 of the Laws of Kenya

5. Labelling

The containers shall be labelled in accordance with KS EAS 38. In addition, the following shall be legibly and indelibly marked on the container:

- (i) Name of product;
- (ii) Name and address of the manufacturer;
- (iii) Batch or code number;
- (iv) Net mass (weight) in metric system (g or kg);
- (v) Expiry date.