



## **DRAFT EAST AFRICAN STANDARD**

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### **Maize gluten for animal feed — Specification**

**EAST AFRICAN COMMUNITY**

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## 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 001, *Animal feeds and feeding stuffs*.

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.

This second edition cancels and replaces the first edition (EAS232:2001), which has been technically revised.



# Maize gluten for animal feed — Specification

## 1 Scope

This Draft East African Standard specifies requirements, sampling and test methods for maize gluten meal and feed for use in animal feeds.

## 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.

ISO 5510, *Animal feeding stuffs — Determination of available lysine*

ISO 5983-1, *Animal feeding stuffs — Determination of nitrogen content and calculation of crude protein content — Part 1: Kjeldahl method*

ISO 5984, *Animal feeding stuffs — Determination of crude ash*

ISO 5985, *Animal feeding stuffs — Determination of ash insoluble in hydrochloric acid*

ISO 6490-1, *Animal feeding stuffs — Determination of calcium content — Part 1: Titrimetric method*

ISO 6491, *Animal feeding stuffs — Determination of phosphorus content — Spectrometric method*

ISO 6492, *Animal feeding stuffs — Determination of fat content*

ISO 6495, *Animal feeding stuffs — Determination of water-soluble chlorides content*

ISO 6496, *Animal feeding stuffs — Determination of moisture and other volatile matter content*

ISO 6497, *Animal feeding stuffs — Sampling*

ISO 6865, *Animal feeding stuffs — Determination of crude fibre content — Method with intermediate filtration*

ISO 9831, *Animal feeding stuffs, animal products, and faeces or urine — Determination of gross calorific value — Bomb calorimeter method*

ISO 13903, *Animal feeding stuffs — Determination of amino acids content*

ISO 14718, *Animal feeding stuffs — Determination of aflatoxin B1 content of mixed feeding stuffs — Method using high-performance liquid chromatography*

ISO 17375, *Animal feeding stuffs — Determination of aflatoxin B1*

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*

ISO 27085, *Animal feeding stuff — Determination of calcium, sodium, phosphorous, magnesium, potassium, iron, zinc, copper, manganese, cobalt, molybdenum, arsenic, lead and cadmium by ICP-AES*

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

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1

##### **maize gluten meal**

product derived from the wet milling process of starch manufacture and is mainly composed of proteins, carbohydrates and minerals

#### 3.2

##### **maize gluten feed**

product derived from the wet milling process of starch manufacture and is mainly composed of the fibrous part of the maize and soluble proteins starch and minerals. Its essentially fed to ruminants and is highly digested by ruminants

#### 3.3

##### **extraneous matter**

organic or inorganic materials other than maize bran such as sand, stones, chaff, dead insects and others.

### 4 Requirements

#### 4.1 General requirements

Maize gluten feed shall:

- a) be in the form of a meal or pellets or granules;
- b) free from rancidity and from fermented, musty or other objectionable odour; and
- c) be free from any extraneous matter, adulterants, harmful constituents, insects or fungus infestation.

#### 4.2 Specific requirements

The material shall conform to the requirements specified in Table 1 when tested in accordance with the test methods specified therein.

**Table 1 — Requirements for maize gluten feed**

S/No	Characteristic	Requirement		Test method
		Meal	Feed	
i	Moisture, per cent by mass, max.	12	12	ISO 6496
ii	Crude fat, per cent by mass, min. <sup>a</sup>	1	1	ISO 6492
iii	Crude protein (N x 6.25), per cent by mass, min <sup>a</sup>	55	20	ISO 5983-1
iv	Crude fibre, per cent by mass, max. <sup>a</sup>	3	12	ISO 6865
v	Acid insoluble ash, per cent by mass, max.	0.4	0.4	ISO 5985
<sup>a</sup> Characteristic is on dry matter basis.				

## 5 Contaminants

### 5.1 Aflatoxin

Aflatoxin contamination in maize gluten shall not be more than 10 ppb for B<sub>1</sub> and 20 ppb for total aflatoxin when tested with ISO 16050.

### 5.2 Pesticide residues

Maize gluten shall comply with those maximum limits for pesticide residues stated in Codex Alimentarius commission

### 5.3 Heavy metal

Maize gluten shall be free from heavy metals in amounts which may represent a hazard to animals and shall comply with the maximum limits of heavy metals as specified in Table 3 when tested in accordance with the methods specified therein

**Table 2 — Limits for heavy metals in maize gluten**

S/No	Heavy metal	Maximum limit, mg/kg	Test method
1	Arsenic	2.0	ISO 27085
2	Lead	5.0	
3	Cadmium	1.0	

## 6 Hygiene

Maize gluten shall be prepared in accordance with CAC/RCP 54.

## 7 Weights and measures

Maize gluten shall be weighed according to the weights and measures regulation of the destination country.



## **8 Packaging**

Maize gluten feeds for sale shall be packaged in suitable containers that are of sufficient strength, and sufficiently sealed to withstand reasonable handling without tearing, bursting or falling open. The containers shall be clean and not previously used.

## **9 Labelling**

In addition to the requirements in EAS 38, each package shall be legibly and indelibly labelled with the following:

- a) expiry date;
- b) name of the feed for example "Maize gluten";
- c) name and physical address of the manufacturer;
- d) net weight in metric units;
- e) batch number /lot identification;
- f) manufacturing date; and
- g) storage instructions.

## **10 Sampling**

Sampling shall be done in accordance ISO 6497.

## Bibliography

EAS 232:2001, *Maize gluten animal feeds specification*

PUBLIC REVIEW DRAFT 2019



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