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ICS 67.060

FINAL DRAFT EAST AFRICAN STANDARD

Wheat flour — Specification

EAST AFRICAN COMMUNITY

Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in East Africa. It is envisaged that through harmonized standardization, trade barriers which are encountered when goods and services are exchanged within the Community will be removed.

In order to meet the above objectives, the EAC Partner States have enacted an East African Standardization, Quality Assurance, Metrology and Test Act, 2006 (EAC SQMT Act, 2006) to make provisions for ensuring standardization, quality assurance, metrology and testing of products produced or originating in a third country and traded in the Community in order to facilitate industrial development and trade as well as helping to protect the health and safety of society and the environment in the Community.

East African Standards are formulated in accordance with the procedures established by the East African Standards Committee. The East African Standards Committee is established under the provisions of Article 4 of the EAC SQMT Act, 2006. The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. 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 procedures of the Community.

Article 15(1) of the EAC SQMT Act, 2006 provides that "Within six months of the declaration of an East African Standard, the Partner States shall adopt, without deviation from the approved text of the standard, the East African Standard as a national standard and withdraw any existing national standard with similar scope and purpose".

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.

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Introduction

This revised standard has incorporated the specific compositional requirements for wheat flour. The standard has prescribed the permissible levels of food additives in wheat flour. Microbiological requirements for wheat flour have also been stipulated.

In the preparation of this East African Standard, the following sources were consulted extensively:

United States Standards for Wheat, Effective May 2006

Wheat, Official Grain Grading Guide, August 1, 2009, Canadian Grain Commission

Department of Agriculture, Regulation Gazette No. 6225, 10 July 1998, Agricultural Product Standards Act, 1990 (Act No. 119 of 1990), *Regulations relating to the grading, packing and marking of wheat intended for sale in the Republic of South Africa* + Amendment of 19 July 2002, No. 23622 and Amendment of 19th August 2003, No. 25370

Department of Agriculture, Regulation Gazette No. 22658, 11 September 2001, Agricultural Product Standards Act, 1990 (Act No. 119 of 1990), *Standards for grades of Class Bread Wheat, Class Biscuit Wheat and Class Durum Wheat*

Department of Agriculture, Regulation Gazette No. 30782, 22 February 2008, Agricultural Product Standards Act, 1990 (Act No. 119 of 1990), *Regulations relating to the grading, packing and marking of wheat products intended for sale in the Republic of South Africa*

Wheat flour — Specification

1 Scope

This East African Standard prescribes the requirements and methods of sampling and test for wheat flour (other than durum wheat flours) intended for human consumption.

2 Normative references

The following normative documents contain provisions which, through reference in this text constitute provisions of this East African

EAS 35, *Edible salt — Specification*

EAS 38, *Labelling of prepackaged foods — Specification*

EAS 39, *Hygiene in the food and drink manufacturing industry — Code of practice*

EAS 51, *Grades of wheat grain — Specification*

EAS 82, *Milled cereal products — Methods of test*

EAS 103, *Schedule for permitted food additives*

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 13690, *Cereals, pulses and milled products — Sampling of static batches*

CODEX Stan 193, *Codex general Standards for contaminants and toxins in Food and Feed*

ISO 5498, *Agricultural food products-Determination crude fibre content-General method*

ISO 2171, *Determination of Ash content*

ISO 1871, *Food and feed products -General guidelines for the determination of nitrogen by the Kjeldahl method*

3 Terms and definitions

3.1

wheat flour

shall be the product made from milling clean wheat grains conforming to the requirements of EAS 51

3.3

white wheat flour

obtained by milling wheat grains at extraction rates that leaves negligible amounts of bran

3.4

bakers flour

white wheat flour obtained by milling high protein wheat intended for bread making

3.5

household or home baking flour

white wheat flour obtained by milling wheat grades or blends of hard and soft wheat intended for domestic use

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3.6

biscuit flour

white wheat flour obtained by milling a blend of hard and soft wheat with a high percentage of soft wheat for biscuit manufacture

3.7

cracker flour

white wheat flour obtained by milling low protein wheat with no improvers

3.8

self-raising flour

white wheat flour obtained by milling a blend of soft and hard wheat to which raising agents are added

3.9

standard flour

wheat flour obtained by milling wheat grains at a higher extraction than home baking flour

3.10

wholemeal flour

wheat flour obtained by milling the entire wheat grain to fine particle size without any separation

3.11

atta flour

wholemeal flour with coarse particles

4 Quality requirements

4.1 Raw materials

The wheat grain from which the flour is obtained shall be of sound quality, free from sand, have characteristic odour and flavour complying with the relevant East African Standards

4.2 General requirements

4.2.1 All types of wheat flour shall have the characteristic colour and shall be free from any objectionable flavours and odours.

4.2.2 The flour shall be free from insects, worms, fungal infestation, rodent contaminations and foreign matter.

4.2.3 The flour shall not contain flour from other cereals. However, the addition of malted barley flour not exceeding 1 % is permissible in the case of baker's flour.

4.2.4 The shelf life shall be three months for wholemeal and atta, but six months for all other flours.

4.3 Specific requirements

The types of wheat flour shall comply with the compositional requirements given in Table 1

Table 1 — Specific requirements

Types of flour	Moisture content, max. %, m/m	Fibre content, max. %, m/m	Total ash content, max. %, m/m	Residue on sieving through 180 micron-sieve, max. %	Protein content, min. %, m/m	Mixture of acid-ingredients and sodium bicarbonate added, max. %, m/m	Total aflatoxin	Aflatoxin B1 only, ppb max	Fumonisin
White wheat flour:									
Baker's flour	13	1.0	0.70	0.80	11.0	–	10	5	2
Home baking flour	13	1.0	0.70	0.80	9.0	–			
Biscuit flour	13	1.0	0.55	0.50	8.0	–			
Cracker flour	13	1.0	0.70	0.50	8.0	–			
Self-raising flour	13	1.0	2.0	0.80	8.0	4.5			
Standard flour	13	1.5	1.10	30.0	11.0	–			
Atta flour	13	2.0	2.0	55.0	12.0	–			
Whole-meal flour	13	2.0	2.0	30.0	12.0	–			
Test methods	ISO 6540	ISO 5498	ISO 2171		ISO 1871				

4.4 Self-raising flour

In addition to the specifications in Table 1, specific requirements for self-raising wheat flour may contain the following:

4.4.1 Edible salt conforming to EAS 35.

4.4.2 Acid ingredients

The acid ingredients shall be one or any combination of the following:

- i) sodium acid pyrophosphate;
- ii) mono acid calcium phosphate;
- iii) sodium aluminium phosphate;
- iv) sodium bicarbonate shall be in sufficient amounts to provide not less than 0.4 % of available carbon dioxide.

5 Food additives

The product shall contain only permitted additives complying with EAS 103.

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5.1 Improvers

Improvers may be added singly or in combination, including but not limited to:

	<i>Maximum permitted level</i>
i) ascorbic acid	200 ppm;
ii) potassium persulphate	100 ppm;
iii) ammonium persulphate	250 ppm;
iv) mono calcium phosphate	2 500 ppm;
v) chlorine dioxide	30 ppm.

5.2 Bleachers (added singly)

	<i>Maximum permitted level</i>
i) nitrogen peroxide	GMP;
ii) benzoyl peroxide	150 mg/kg

5.3 Diastatically actives (singly or combined)

	<i>Maximum permitted level</i>
i) malt flour (milled from highly diastatic barley)	GMP;
ii) fungal enzyme (amylzyme or MYL-X)	45 mg/kg

NOTE All food additives shall be of food grade quality.

5.4 Azodicarbonamide (ADA) and Potassium Bromate

Shall not be used at all.

6 Hygiene

6.1 Wheat flour shall be produced, prepared and handled in accordance with the provisions of appropriate sections of EAS 39.

6.2 When tested by appropriate methods of sampling and examination, the product:

- shall be free from microorganisms in amounts which may represent a hazard to health;
- shall be free from parasites which may represent a hazard to health; and
- shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

6.3 The product shall be free from pathogenic micro-organism and shall comply with microbiological limits in Table 2.

Table 2 — Microbiological limits

Sl. No.	Micro-organism	Maximum limit	Methods of test
(i)	Total aerobic count per g	10 ⁵	EAS 217
(ii)	<i>E. Coli</i> per 1 g	Not detectable	EAS 217
(iii)	<i>Salmonella</i> per 25 g	Not detectable	EAS 217
(iv)	Yeast and Moulds cfu/g	10 ⁴	EAS 217
(v)	<i>S.aureus</i> per 25 g	Not detectable	EAS 217

7 Contaminants

7.1 Heavy metals

Wheat flour shall comply with those maximum limits for heavy metals established by the Codex Alimentarius Commission for this commodity.

7.2 Pesticide residues

Wheat flour shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this commodity.

Note: where the use of certain pesticides is prohibited by some Partner States, then it shall be notified to all Partner States accordingly.

7.3 Mycotoxins:

Wheat flour shall comply with those maximum mycotoxin limits established by the Codex Alimentarius Commission for this commodity. In particular, total aflatoxin levels in wheat grains for human consumption shall not exceed 10 µg/kg (ppb) with B₁ not exceeding 5 µg/kg (ppb) when tested according to ISO 16050.

8 Packaging

8.1 Wheat flour shall be packaged in containers which will safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product.

8.2 The containers, including packaging material, shall be food grade.

8.3 When the product is packaged in sacks, these must be clean, sturdy and strongly sewn or sealed.

9 Labelling

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

- i) product name as "wheat flour "
- ii) name, address and physical location of the manufacturer/ packer/importer;
- iii) lot/batch/code number;

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iv) net weight, in kg;

Note: EAC partner states are signatory to the International Labour Organizations (ILO) for maximum package weight of 50kg where human loading and offloading is involved.

v) the declaration "Food for Human Consumption";

vi) storage instruction as "Store in a cool dry place away from any contaminants";

vii) Date of manufacture;

viii) expiry date;

ix) instructions on disposal of used package;

x) country of origin;

10 Methods of sampling

Sampling shall be done in accordance with the ISO 13690.

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