

**ICS 67.200.10**

**DMS 1440:2018**

First edition

**DRAFT PROPOSAL**

## **Named animal fats – Specification**

**NOTE – This is a draft proposal and shall neither be used nor regarded as a Malawi standard**

# Named animal fats – Specification

PUBLIC REVIEW DRAFT

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### FOREWORD

This draft Malawi standard has been prepared by MBS/TC 14, the Technical Committee on *Edible oils and fats*, to provide requirements and methods of sampling and test for named animal fats.

In preparing this draft Malawi standard reference was made to the following standard:

Codex Standard, Codex Stan 211:2015, Standard for *named animal fats*.

Acknowledgement is made for the use of the information.

### TECHNICAL COMMITTEE

This draft Malawi standard was prepared by MBS/TC 14, the Technical Committee on *Edible oils and fats*, and the following companies, organizations and institutions were represented:

Blantyre City Assembly;  
Capital Oil Refining Industries;  
Consumers Association of Malawi;  
Lilongwe University of Agriculture and Natural Resources (LUANAR);  
Malawi Bureau of Standards;  
Ministry of Health and population;  
Mount Meru Millers Limited;  
Moti Oil Mill Limited;  
Peoples Trading Centre;  
Rab Processors Limited;  
SAFA Foods Limited;  
Sunseed Oil Limited;  
Universal Industries Limited; and  
University of Malawi – The Malawi Polytechnic.

### NOTICE

*This standard shall be reviewed every five years, or earlier whenever it is necessary, in order to keep abreast of progress. Comments are welcome and shall be considered when the standard is being reviewed.*

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**1 SCOPE**

This draft Malawi standard applies to the animal fats described in Clause 3 presented in a state for human consumption.

**2 NORMATIVE REFERENCES**

The following standards contain provisions, which through reference in this text, constitute provisions of this Malawi standard. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on this standard are encouraged to take steps to ensure the use of the most recent edition of the standard indicated below. Information on current valid national and international standards can be obtained from the Malawi Bureau of Standards.

MS 19: *Labelling of prepacked foods – General standard;*

MS 21: *Code of hygienic conditions for food and food processing units;*

MS 56: *Edible fats and oils – Methods of test;*

MS 237: *Food additives – General standard;*

MS 302: *Contaminants and toxins in foods – General standard;*

MS 935: *Principles for the establishment and application of microbiological criteria for foods;*

ISO 5555: *Animal and vegetable fats and oils – Sampling;*

ISO 12966-1: *Animal and vegetable fats and oils – Gas chromatography of fatty acid methyl esters – Part 1: Guidelines on modern gas chromatography of fatty acid methyl esters; and*

ISO 12966-2: *Animal and vegetable fats and oils – Gas chromatography of fatty acid methyl esters – Part 2: Preparation of methyl esters of fatty acids.*

**3 DESCRIPTIONS**

For the purposes of this draft standard, the following descriptions shall apply;

**3.1 Lard**

**3.1.1** Pure rendered lard is the fat rendered from fresh, clean, sound fatty tissues from swine (*Sus scrofa*) in good health, at the time of slaughter, and fit for human consumption. The tissues do not include bones, detached skin, head skin, ears, tails, organs, windpipes, large blood vessels, scrap fat, skimmings, settlings, pressings, and the like, and are reasonably free from muscle tissues and blood.

**3.1.2** Lard subject to processing may contain refined lard, lard stearin and hydrogenated lard, or be subject to processes of modification provided that it is clearly labelled.

**3.2 Rendered pork fat**

**3.2.1** The fat rendered from the tissues and bones of swine (*Sus scrofa*) in good health, at the time of slaughter, and fit for human consumption. It may contain fat from bones (properly cleaned), from detached skin, from head skin, from ears, from tails and from other issues fit for human consumption.

**3.2.2** Rendered pork fat subject to processing may also contain refined lard, refined rendered pork fat, hydrogenated lard, hydrogenated rendered pork fat, lard stearin and rendered pork fat stearin provided that it is clearly labelled.

### 3.3 Premier jus (oleo stock)

The product obtained by rendering at low heat the fresh fat (killing fat) of heart, caul, kidney and mesentery collected at the time of slaughter of bovine animals in good health at the time of slaughter and fit for human consumption, as well as cutting fats.

### 3.4 Edible tallow

**3.4.1** Edible tallow (dripping) is the product obtained by rendering the clean, sound, fatty tissues (including trimming and cutting fats), attendant muscles and bones of bovine animals and/or sheep (*Ovis aries*) in good health at the time of slaughter and fit for human consumption.

**3.4.2** Edible tallow subject to processing may contain refined edible tallow, provided that it is clearly labelled.

## 4 ESSENTIAL COMPOSITION AND QUALITY REQUIREMENTS

**Table 1 – GLC ranges of fatty acid composition for named animal fats**

1	2	3	4
S/N	Characteristic	Lard Rendered pork fat, %	Premier jus Tallow, %
1	C6:0	< 0.5 in total	< 0.5 in total
2	C8:0		
3	C10:0		
4	C12:0		
5	C14:0	1.0-2.5	2-6
6	C14:ISO	< 0.1	< 0.3
7	C14:1	< 0.2	0.5-1.5
8	C15:0	< 0.2	0.2-1.0
9	C15:ISO	< 0.1	< 1.5 in total
10	C15:ANTI ISO	< 0.1	
11	C16:0	20-30	
12	C16:1	2.0-4.0	1-5
13	C16:ISO	< 0.1	< 0.5
14	C16:2	< 0.1	< 1.0
15	C17:0	< 1	0.5-2.0
16	C17:1	< 1	< 1.0
17	C17:ISO	< 0.1	< 1.5 in total
18	C17:ANTI ISO	< 0.1	
19	C18:0	8-22	15-30
20	C18:1	35-55	30-45
21	C18:2	4-12	1-6
22	C18:3	< 1.5	< 1.5
23	C20:0	< 1.0	< 0.5
24	C20:1	< 1.5	< 0.5
25	C20:2	< 1.0	< 0.1
26	C20:4	< 1.0	< 0.5
27	C22:0	< 0.1	< 0.1
28	C22:1	< 0.5	not detected

## 5 FOOD ADDITIVES

Only those food additives permitted for use in named animal fats and as per set maximum levels in MS 237, shall be used.

## 6 CONTAMINANTS

### 6.1 Heavy metals

The products covered by this draft standard shall comply with the maximum levels for contaminants that are specified for the product in MS 302.

### 6.2 Pesticide residues

Named animal fats shall comply with those maximum pesticide residue limits as laid down by the current Codex Alimentarius Commission.

## 7 HYGIENE

The products covered by the provisions of this draft standard shall be prepared and handled in accordance with the requirements set out in MS 21. The products should comply with any microbiological criteria established in accordance with MS 935.

## 8 PACKAGING AND LABELLING

### 8.1 Packaging

**8.1.1** Named animal fats shall be packaged in food grade containers which will safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product.

**8.1.2** The containers, including packaging material, shall be made of substances which are safe and suitable for their intended use. They shall not impart any toxic substance or undesirable odour or flavour to the product.

### 8.2 Labelling

In addition to the requirements of MS 19, the following specific provisions shall apply:

**8.2.1 Name of the product.** The name of the fat shall conform to the descriptions given in Clause 3 of this draft standard.

**8.2.2 Date marking and storage instructions.** The “*date of minimum durability*” preceded by the words “*best before*” shall be declared. Storage instructions of the product shall be indicated in close proximity to the date marking if the validity of the date depends thereon.

**8.2.3 Net content.** The net contents of the product shall be declared by volume in metric units.

**8.2.4 Name and address.** The name and address of the manufacturer, packer, distributor, or vendor of the product shall be declared.

**8.2.5 Country of origin.** The country of origin of the product shall be declared and shall not be obscured by any outer wrapper.

**8.2.6 Lot identification.** Each packaging material shall be permanently marked clearly to identify the producing factory and lot.

**8.2.7 List of ingredients.** All ingredients used shall be declared on the label.

### 8.3 Labelling of non-retail containers

The above labelling requirements shall be either on the container or in accompanying documents, except that the name of the product, lot identification and the name and address of the manufacturer or packer shall appear on the container. However, lot identification and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

## **9 METHODS OF SAMPLING AND TEST**

### **9.1 Sampling**

Sampling shall be carried in accordance with ISO 5555 and samples prepared for testing according to ISO 12966-2.

### **9.2 Determination of GLC ranges of fatty acid composition**

Testing of the product shall be done in accordance with the procedures stipulated in ISO 12966-1.

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**ANNEX A**  
**(Informative)**

**OTHER QUALITY AND COMPOSITION FACTORS**

These quality and composition factors are supplementary information to the essential composition and quality factors of the standard. A product, which meets the essential quality and composition factors but does not meet these supplementary factors, may still conform to the draft standard.

**A.1 Quality characteristics**

**Table A.1 – Quality characteristics for named animal fats**

Parameter	Requirements			
	Rendered pork fat	Lard	Premier jus	Edible tallow
Colour	White when solid	White to cream	Creamy white to pale yellow	Off white to pale yellow
Odour and taste	Characteristic and free from foreign and rancid odour and taste.	Characteristic and free from foreign and rancid odour and taste.	Characteristic and free from foreign and rancid odour and taste.	Characteristic and free from foreign and rancid odour and taste.
Matter volatile at 105°C, max	0.3 %	0.3 %	0.3 %	0.3 %
Insoluble impurities, max	0.05 %	0.05 %	0.05 %	0.05 %
Sodium soap content, max	nil	nil	0.005 %	0.005 %
Iron (Fe)	1.5 mg/kg	1.5 mg/kg	1.5 mg/kg	1.5 mg/kg
Copper (Cu)	0.4 mg/kg	0.4 mg/kg	0.4 mg/kg	0.4 mg/kg
Acid value	1.3 mg KOH/g fat = ffa max 0.65 %	2.0 mg KOH/g fat = ffa max 1.00 %	2.5 mg KOH/g fat = ffa max 1.25 %	2.5 mg KOH/g fat = ffa max 1.25 %
Peroxide value	up to 10 milliequivalents active oxygen/kg fat			

**A.2 Chemical and physical characteristics**

**Table A.2 – Chemical and physical characteristics for named animal fats**

Parameter	Requirements			
	Rendered pork fat	Lard	Premier jus	Edible tallow
Relative density (40°C/water at 20°C)	0.894 - 0.906	0.896 - 0.904	0.893-0.904	0.894-0.904
Refractive index (N D 40°C)	1.448-1.461	1.448-1.460	1.448-1.460	1.448-1.460
Titre (°C)	32-45	32-45	42.5-47	40-49
Saponification value (mg KOH/g fat)	192-203	192-203	190-200	190-202
Iodine value (Wijs)	60-72	55-65	36-47	40-53
Unsaponifiable matter (g/kg)	≤12	≤10	≤10	≤12

**A.3 Methods of analysis and sampling**

Sampling and tests of named animal fats shall be done in accordance with MS 56.

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**THE MALAWI BUREAU OF STANDARDS**

The Malawi Bureau of Standards is the standardizing body in Malawi under the aegis of the Ministry of Industry and Trade. Set up in 1972 by the Malawi Bureau of Standards Act (Cap: 51:02), the Bureau is a parastatal body whose activities aim at formulating and promoting the general adoption of standards relating to structures, commodities, materials, practices, operations and from time to time revise, alter and amend the same to incorporate advanced technology.

**CERTIFICATION MARK SCHEME**

To bring the advantages of standardization within the reach of the common consumer, the Bureau operates a Certification Mark Scheme. Under this scheme, manufacturers who produce goods that conform to national standards are granted permits to use the Bureau's "Mark of Quality" depicted below on their products. This Mark gives confidence to the consumer of the commodity's reliability.

