SRI LANKA STANDARD 231: 2013

UDC 664.34

SPECIFICATION FOR
SESAMESEED OIL
(First Revision)

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard
SPECIFICATION FOR SESAMESEED OIL
(First Revision)

SLS 231 : 2013
(Attached AMD 476)

Gr.4

SRI LANKA STANDARDS INSTITUTION
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Sri Lanka

Sri Lanka Standards are subject to periodical revision in order to accommodate the progress made by industry. Suggestions for improvement will be recorded and brought to the notice of the Committees to which the revisions are entrusted.

This standard does not purport to include all the necessary provisions of a contract.

Sri Lanka Standard
SPECIFICATION FOR SESAMESEED OIL
(First Revision)

FOREWORD

This standard was approved by the Sectoral Committee on Agricultural and Food Products and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 2013-08-28.

Sesameseed oil has a long history of human consumption and is generally regarded as high-priced, high-quality oil. It is one of the most stable edible oil despite its high degree of unsaturation. The processing of sesameseed to yield oil varies from region to region. The major differences are whether the seed coat is removed and whether the seed is roasted.

This standard was first published in 1973. It is being revised in view of the comments received from the industry, users and trade to give provision for roasted sesameseed oils. In this revision a change has been made in the requirement for colour and additional requirements for aflatoxin and heavy metals have been incorporated.

This standard is subject to the restrictions imposed under the Sri Lanka Food Act No. 26 of 1980 and the regulations framed thereunder, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with**,** the final value, observed or calculated, expressing the result of a test or an analysis, shall be rounded off in accordance with **SLS 102**. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

In revising this standard, the assistance derived from the publications of the Codex Alimentarius Commission, Bureau of Indian Standards and International Organization for Standardization (ISO) is gratefully acknowledged.

1 SCOPE

This standard prescribes the requirements and methods of sampling and testing for sesameseed oil (Syn. gingellyseed oil).

2 REFERENCES

SLS 102 Rules for rounding off numerical values
SLS 143 General principles of food hygiene
SLS 313 Methods for analysis of animal and vegetable fats and oils
- Part 1/Section 1 Preparation of test sample
- Part 1/Section 2 Determination of the relative density at $t^oC/t_0{}^oC$ in air
- Part 1/Section 4 Determination of Lovibond colour
- Part 1/Section 5 Determination of refractive index
- Part 2/Section 1 Determination of saponification value

Part 2/Section 2 Determination of iodine value
Part 2/Section 6 Determination of acid value and acidity
Part 3/Section 4 Determination of insoluble impurities content
Part 3/Section 5 Determination moisture and volatile matter content
Part 4/Section 3 Determination of unsaponifiable matter- Method using diethyl ether extraction

SLS 428 Random sampling methods
SLS 467 Code of practice for labelling of prepackaged foods
SLS 664 Methods of sampling animal and vegetable fats and oils
SLS 816 Methods for checking net contents of prepackaged good
SLS 962 Methods for determination of aflatoxin in foods

Official Methods of Analysis of the Association of Official Analytical Chemists (AOAC), 18th Edition, 2nd Revision 2007.

3 DEFINITION

For the purpose of this standard, the following definition shall apply ;

3.1 sesameseed oil : The product obtained by expression or solvent extraction from roasted or unroasted seeds of *Sesamum indicum* L.

4 REQUIREMENTS

4.1 General requirements

4.1.1 The product shall be processed, packaged, stored, transported and distributed in accordance with the conditions prescribed in **SLS 143**.

4.1.2 The product shall be clear and free from rancidity, sediments, suspended and other foreign matter, added colouring substances and added flavouring substances.

4.1.3 The product when maintained at a temperature of 25°C - 28°C for a period of 24 hours shall be clear and free from sediment or other insoluble matter.

4.1.4 The product shall have its characteristic odour and shall be free from any foreign and rancid odours.

4.1.5 The product shall be free from admixture with other oils.

4.1.6 The product shall also conform with the requirements given in Table 1, when tested according to the methods given in Column 4 of the table.

TABLE 1 – Requirements for sesameseed oil

SI No. (1)	Characteristic (2)	Requirement (3)	Method of Test (4)
i)	Colour,in a ¼-inch cell on the Lovibond scale, expressed as *Y+5R*, (max.)	20	SLS 313: Part1/Section 4
ii)	Refractive index at 40 °C	1.465 – 1.469	SLS 313: Part 1/Section 5
iii)	Relative density at 30 °C/30 °C	0.915 – 0.919	SLS 313: Part 1/Section 2
iv)	Matter volatile at 105 °C, per cent by mass, (max.)	0.2	SLS 313: Part 3/Section 5
v)	Insoluble impurities, per cent by mass, (max.)	0.05	SLS 313: Part 3/Section 4
vi)	Free fatty acids (as oleic acid), per cent by mass (max.)	3.0	SLS 313: Part 2/Section 6
vi)	Iodine value	103 - 115	SLS 313: Part 2/Section 2
vii)	Saponification value	188 - 193	SLS 313: Part 2/Section 1
viii)	Unsaponifiable matter, per cent by mass, (max.)	1.5	SLS 313: Part 4/Section 3

4.2 Specific requirements

4.2.1 The product shall not contain aflatoxin, more than 5 µg /kg (5ppb), when tested according to the method given in **SLS 962** or relevant AOAC method.

4.2.2 Only permitted antioxidants not exceeding the quantities specified against each as prescribed under the Food Act No. 26 of 1980 and regulations made thereunder, shall be used, if required.

4.2.3 The product shall not contain any of the heavy metals in excess of the quantities given in Table 2, when tested according to the relevant methods given in Official Methods of Analysis of the Association of Official Analytical Chemists (AOAC), 18th Edition, 2nd Revision 2007.

TABLE 2 – Limits for heavy metals

SI No. (1)	Heavy Metal (2)	Limit (3)
i)	Lead, (as Pb),mg/kg, (max.)	0.1
ii)	Arsenic, (as As),mg/kg, (max.)	0.1
iii)	Cadmium, (as Cd), mg/kg, (max.)	1.0
iv)	Mercury (total), (as Hg),mg/kg,(max.)	0.3

5 PACKAGING

5.1 The product shall be packaged in food grade, appropriate clean packages or containers.

5.2 The packaging material which comes into contact directly with the product shall be sufficiently inert to preclude substances from being transferred to food in quantities large enough to endanger human health or to bring about an unacceptable change in the composition of the product or deterioration in its organoleptic properties.

6 MARKING AND/ OR LABELLING

6.1 The following shall be marked or labelled legibly and indelibly on each package or container destined for the final consumer :

a) Name of the product as “sesame oil”, “sesameseed oil”, “gingelly oil”, “gingelleyseed oil” or “roasted sesame oil”, “roasted sesameseed oil”, “roasted gingelly oil”, “roasted gingelleyseed oil;
b) Brand name or trade mark, if any ;
c) Net content, in metric units (SI);
d) Name and address of the manufacturer;
e) Name and address of the packer/distributor in Sri Lanka;
f) Batch number or Code number or a decipherable code marking;
g) Date of manufacture;
h) Date of expiry;
j) Declaration of antioxidants added, if any; and
k) Country of origin, in case of imported products.

6.2 The marking and labelling shall also be in accordance with **SLS 467**.

7 SAMPLING

7.1 A representative sample of the product for ascertaining conformity to the requirements of this standard shall be obtained in accordance with relevant clauses of **SLS 664**.

The sampling method shall be applied where compliance of a lot to the requirements of this standard is to be assessed based on statistical sampling and inspection.

Where compliance with this standard is to be assured based on manufacturer’s control systems coupled with type testing and check tests or any other procedure, appropriate method of sampling and inspection shall be adopted.

7.2 Number of tests

7.2.1 Each package/container selected as in **6.8** of **SLS 664** shall be examined for packaging and marking/ labelling requirements of this standard.

7.2.2 The laboratory sample prepared as in **6.9** of **SLS 664** and **SLS 313 Part1/Section-1**shall be tested for the requirements given in Clause 4 of this standard.

8 METHODS OF TESTS

Tests shall be carried out as prescribed in **Section 1, 2, 4, 5** of **Part 1**, **Section 1, 2, 6** of **Part 2**, **Section 4** of **Part 3, Section 3** of **Part 4** of **SLS 313, SLS 962** and **Association of Official Analytical Chemist (AOAC)** methods**.**

9 CRITERIA FOR CONFORMITY

A lot shall be declared as conforming to the requirements of this standard if the following conditions are satisfied:

9.1 Each package/container examined as in **7.2.1** satisfies the packaging and marking/labelling requirements of this standard.

9.2 The test results of the laboratory sample when tested as in **7.2.2** satisfy the requirements given in Clause **4** of this standard.

AMENDMENT NO : 01 APPROVED ON 2016-03-23 TO SLS 231: 2013

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EXPLANATORY NOTE

This amendment is issued in order to exclude the requirement for “colour” for the products prepared from roasted sesame seeds.

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Insert "*" after the word "Colour" in the item number (i) of Table 1

Insert "*****Not applicable for products prepared from roasted sesame seeds" as the footnote to Table 1.

SLS CERTIFICATION MARK

The Sri Lanka Standards Institution is the owner of the registered certification mark shown below. Beneath the mark, the number of the Sri Lanka Standard relevant to the product is indicated. This mark may be used only by those who have obtained permits under the SLS certification marks scheme. The presence of this mark on or in relation to a product conveys the assurance that they have been produced to comply with the requirements of the relevant Sri Lanka Standard under a well designed system of quality control inspection and testing operated by the manufacturer and supervised by the SLSI *which includes surveillance inspection of the factory, testing of both factory and market samples.*

Further particulars of the terms and conditions of the permit may be obtained from the Sri *Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.*

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SRI LANKA STANDARDS INSTITUTION

The Sri Lanka Standards Institution (SLSI) is the National Standards Organization of Sri Lanka established under the Sri Lanka Standards Institution Act No. 6 of 1984 which repealed and replaced the Bureau of Ceylon Standards Act No. 38 of 1964. The Institution functions under the Ministry of Technology & Research.

The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

The Institution is financed by Government grants, and by the income from the sale of its publications and other services offered for Industry and Business Sector. Financial and Administrative control is vested in a Council appointed in accordance with the provisions of the Act.

The development and formulation of National Standards is carried out by Technical Experts and representatives of other interest groups, assisted by the permanent officers of the Institution. These Technical Committees are appointed under the purview of the Sectoral Committees which in return are appointed by the Council. The Sectoral Committees give the final Technical approval for the Draft National Standards prior to the approval by the Council of the SLSI.

All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution endeavours to ensure adequate representation of all view points.

In the International field the Institution represents Sri Lanka in the International Organization for Standardization (ISO), and participates in such fields of Standardization as are of special interest to Sri Lanka.

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