SRI LANKA STANDARD 793 : 1987

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SPECIFICATION FOR

GROUND NUT (PEANUT) KERNELS

SRI LANKA STANDARDS INSTITUTION

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SLS 793:1987

Gr. 5

SRI LANKA STANDARDS INSTITUTION
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This standard does not purport to include all the necessary provisions of a contract.

SRI LANKA STANDARD
SPECIFICATION FOR GROUNDNUT (PEANUT) KERNELS

FOREWORD

This Sri Lanka Standard was authorized for adoption and publication by the Council of the Sri Lanka Standards Institution on 1987-10-08, after the draft, finalized by the Drafting Committee on Subsidiary Food Crops, had been approved by the Agricultural and Food Products Divisional Committee.

This specification is subject to the provisions of the Food Act No. 26 of 1980 and the regulations framed thereunder.

The standard values used throughout this specification are given in SI units.

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

In the preparation of this specification the assistance obtained from the publications of the Food Corporation of India is gratefully acknowledged.

1 SCOPE

This specification prescribes the requirements and methods of sampling and test for groundnut *(Arachis hypogaea L.)* kernels for table use and for oil extraction *(S. RATA KADJU T. NITAKADALA)*.

2 REFERENCES

CS 102 Presentation of numerical values

SLS 313 Analysis of oils, fats and fatty materials

SLS 428 Random sampling methods

SLS 448 Analysis of food grains
Part 1 : Moisture
Part 2 : Refractions
Part 4 : Mass of 1000 grains

SLS 528 Sampling of food grains.

3 DEFINITIONS

For the purpose of this specification the following definitions shall apply:

3.1 groundnut kernel : Whole kernels of *Arachis hypogaea L.*

3.2 damaged kernel : Kernels which are distinctly identified as having been visibly affected by insects, heat, water, disease or any other causative agent. This includes kernels that are damaged in the process of handling.

3.3 immature kernel: Kernels which are not fully developed, normally smaller in size than the mature kernel, shrivelled and off coloured.

3.4 objectionable odour: Odours which are entirely foreign to groundnut and which because of their presence, render groundnut unfit for its normal commercial usage.

3.5 insect infestation: Presence of live insects or other organisms or their eggs, and/or other developmental stages.

3.6 foreign matter: All matter other than groundnut kernels (whether whole or broken). Foreign matter includes such things as sand/stones, seeds of weed, stalks, fibrous matter, insect debris and dust.

3.7 split kernel: The separated half of a kernel.

4 TYPES

Groundnut kernels for table use shall be classified into the following on the basis of mass of 1000 whole kernels (see **SLS 448:Part 4**).

a) Small - mass of 1000 whole kernels less than 325 g
b) Medium - mass of 1000 whole kernels between 325 g and 425 g
c) Large - mass of 1000 whole kernels above 425 g.

5 GRADES

Groundnut kernels shall be calssified into the following three grades as described in Table 1.
a) Grade 1;
b) Grade 2; and
c) Grade 3.

6 REQUIREMENTS

6.1 Groundnut kernels shall consist of one variety which are whole, mature and dry. The kernels shall be of uniform size and colour according to the variety and grade.

6.2 Groundnut shall be free from pest infestation and mould growth when examined as prescribed in Appendix A. They shall be free from objectionable odour and bad taste.

6.3 Groundnut kernel shall not contain pesticide residues in excess of the limits laid down under the Food Act No. 26 of 1980 and the regulations framed thereunder (See Note).

6.4 Groundnut shall not contain more than 30 µg/kg of aflatoxin (See Note).

NOTE - It is not necessary to carry out this determination as a routine for all the samples. This should be tested in case of dispute and when required by the purchaser or vendor.

6.5 Groundnut kernels shall also conform to the requirements specified, either in Table 1 or Table 2 when tested by relevant methods given in Column 6 of the tables.

TABLE 1 - Requirements for groundnut kernels for table use

Sl. No.	Characteristic	Grade			Method of test reference
		1	2	3	
(1)	(2)	(3)	(4)	(5)	(6)
i	Moisture, per cent by mass, max.	7.0	8.0	8.5	SLS 448:Part 1
ii	Foreign matter, per cent by mass, max.	0.5	1.0	1.5	SLS 448:Part 2
iii	Type admixture, per cent by mass, max.	1.0	2.0	5.0	Appendix B
iv	Damaged kernels, per cent by mass, max.	1.0	2.0	4.0	Appendix B
v	Immature kernels, per cent by mass, max.	1.0	2.0	3.0	Appendix B
vi	Split kernels, per cent by mass, max.	1.0	3.0	5.0	Appendix B

TABLE 2 - Requirements for groundnut kernels for oil extraction

Sl. No. (1)	Characteristic (2)	Grade 1 (3)	Grade 2 (4)	Grade 3 (5)	Method of test reference (6)
i	Moisture, per cent by mass, max.	7.0	8.0	8.5	SLS 448:Part 1
ii	Foreign matter, per cent by mass,max.	0.5	1.0	1.5	SLS 448:Part 2
iii	Damaged kernels, per cent by mass,max.	2.0	4.0	7.0	Appendix B
iv	Immature kernels, per cent by mass,max.	1.0	3.0	6.0	Appendix B
v	Acid value of extracted oil, max.	1.0	2.0	4.0	SLS 313
vi	Oil content, per cent by mass, min.	48.0	46.0	43.0	SLS 313

7 PACKAGING AND MARKING

7.1 Packaging

7.1.1 Groundnut kernels shall be packed in plywood chests or any other suitable container as agreed to between the buyer and seller. Each container shall be securely sealed (See Note).

7.1.2 Groundnut kernels when prepacked for retail trade shall be packed in clean polyethylene bags or any other suitable material. The mouth of each bag shall be securely sealed.

NOTE - When containers are being re-used, the existing markings shall be crossed out with indelible ink or dye.

7.2 Marking

Each container shall be marked legibly and indelibly or a label shall be attached to the container, with the following information:

a) Name of commodity (indicating whether for table use or oil extraction);

b) Type;

c) Grade;

d) Name and address of the producer or trader (including the country);

e) Trade mark, if any;

f) Net mass, in grams or in kilograms; and

g) Month and year of harvest (applicable to bulk packages).

8 SAMPLING

8.1 Sampling from bulk containers

A representative sample of groundnut kernels shall be obtained according to relevant clauses of SLS 528.

8.1.1 Each container selected as in 5 of SLS 528:1981 shall be emptied on a flat and hard surface and primary samples shall be taken from different parts of so empties.

8.1.2 The primary samples thus obtained shall be thoroughly mixed and reduced by means of successive coning and quartering method to get a composite sample of required size.

8.2 Sampling from retail packages

8.2.1 *Lot*

All the retail packages containing groundnut kernels of one type or one grade and packed at one place from one batch of supply shall constitute a lot.

8.2.2 *Scale of sampling*

8.2.2.1 Samples shall be taken from each lot for ascertaining conformity of the lot to the requirements of this specification.

8.2.2.2 The number of retail containers to be selected from a lot shall be in accordance with Table 3.

TABLE 3 - Scale of sampling

Number of containers in the lot (1)	Number of containers to be selected (2)
Up to 50	3
51 to 100	5
101 to 150	8
151 to 300	13
301 to 500	20
501 to 1 000	32
1 001 to 5 000	50
5 001 to 10 000	80

8.2.2.3 The retail containers shall be selected at random. In order to ensure randomness of selection random number tables as given in SLS 428 shall be used.

8.2.2.4 The retail containers selected as in **8.2.2.2** shall be emptied on a flat and hard surface and thoroughly mixed. The material shall be reduced by means of successive coning and quartering method to get a composite sample of required size.

8.3 Preparation of test samples

The composite sample prepared as in **8.1.2** or **8.2.2.4** shall be divided into 3 equal parts. Each part thus obtained shall constitute a test sample. One of these samples shall be marked for the purchaser, one for the supplier and the third as the reference sample to be used in case of dispute between purchaser and supplier.

8.4 Number of tests

The test sample prepared as in **8.3** shall be tested for all requirements of this specification.

9 METHODS OF TEST

Tests shall be carried out as prescribed in SLS 448 and the appropriate appendices of this specification.

10 CONFORMITY TO STANDARD

A lot shall be declared as conforming to the requirements of this specification, if the sample tested as in **8.4** satisfies the relevant requirements.

APPENDIX A

VISUAL EXAMINATION

A.1 PROCEDURE

Take about 500 g of the test sample and examine as a whole as given in SLS 448:Part 2 for its general conditions including odour and infestation and report whether the sample is wholesome, clean, dry and in sound marketable condition. Examine the sample for any deleterious material hazardous to human health and/or rendering the kernel inedible.

APPENDIX B

DETERMINATION OF TYPE/ADMIXTURE, DAMAGED KERNEL AND IMMATURE KERNEL

B.1 APPARATUS

B.1.1 *Balance*, of sensitivity 1 mg.

B.1.2 *Magnifying glass*, with a handle of about 75 mm in length and having magnification of 10.

B.1.3 *Forceps*, of about 100 mm in length.

B.2 PROCEDURE

Take the sample, which has been freed from foreign matter (refer **SLS 448:Part 2**). Mix well and take four 100-g representative samples weighed to the nearest 0.1 gram. Use one sample each to separate each of the following;

a) Kernels belonging to other types;

b) Damaged kernels;

c) Immature kernels; and

d) Split kernels.

Weigh each (a to d) and calculate the percentage of each by mass.

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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.*

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SRI LANKA STANDARDS INSTITUTION

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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.

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