

**SRI LANKA STANDARD 662:1984**  
**UDC 635.654.3**

**SPECIFICATION FOR**  
**COW PEA, WHOLE**

**SRI LANKA STANDARDS INSTITUTION**



# SPECIFICATION FOR COWPEA, WHOLE

SLS 662:1984

Gr. 5

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SRI LANKA STANDARDS INSTITUTION

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Sri Lanka.



# SRI LANKA STANDARD

## SPECIFICATION FOR COWPEA, WHOLE

### FOREWORD

This Sri Lanka Standard was authorized for adoption and publication by the Council of the Sri Lanka Standards Institution on 1984-10-31, 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.

In reporting the result of a test or an analysis made in accordance with this specification, if the final value, observed or calculated, is to be rounded off, it shall be done 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 value 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 whole seeds of cowpea (*Vigna unguiculata* (L) Walp).  
(S. COWPEA, T. PAYATTAI).

### 2 REFERENCES

- CS 102 Presentation of numerical values
- SLS 428 Random sampling methods
- SLS 448 Analysis of food grains
  - Part 1 Moisture
  - Part 2 Refractive indices
  - Part 4 Mass of 1 000 grains
- SLS 528 Sampling of food grains.

### 3 DEFINITIONS

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

- 3.1 cowpea: Whole seeds of *Vigna unguiculata* (L) Walp.
- 3.2 damaged grain: Seeds which are distinctly identified as having been visibly affected by insects, heat, water, disease or any causative agent. This includes grains that are damaged or split in the process of handling.
- 3.3 immature grain: Seeds which are not fully developed, normally smaller in size than the mature grains, shrivelled and off coloured.
- 3.4 objectionable odour: Odours which are entirely foreign to cowpea and which because of their presence, render cowpea unfit for its normal commercial usage.
- 3.5 pest infestation: Presence of live insects or other organisms or their eggs, and/or other developmental stages.
- 3.6 foreign matter: All matter other than cowpea (whether whole or broken). Foreign matter includes such things as sand/stones, seeds of weed, stalks, fibrous matter, insect debris and dust.

### 4 TYPES

Cowpea shall be classified into the following types on the basis of the mass of 1000 grains (see SLS 448:Part 4) and colour of the grain. The basis is as follows:

- Small cream - Mass of 1 000 grains - below 110 g  
Colour - cream
- Small brown - Mass of 1 000 grains - below 110 g  
Colour - brown
- Large cream - Mass of 1 000 grains - above 110 g  
Colour - cream
- Large brown - Mass of 1 000 grains - above 110 g  
Colour - brown

### 5 GRADES

Cowpea shall be classified into the following three grades as prescribed in Table 1.

- a) Grade 1,
- b) Grade 2, and
- c) Grade 3.

## 6 REQUIREMENTS

6.1 Cowpea shall be free from objectionable odour and pest infestation when examined as prescribed in Appendix A.

6.2 Cowpea shall not contain pesticide residues in excess of the limits laid down under the Food Act No. 26 of 1980.

*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.*

6.3 Cowpea shall be in the form of well filled seeds of uniform colour.

6.4 Cowpea shall have even cooking properties.

6.5 Cowpea shall also conform to the requirements specified in Table 1 when tested by relevant methods given in Column 6 of the table.

TABLE 1 - Requirements for cowpea

| Sl. No.<br>(1) | Characteristics<br>(2)                 | Grades   |          |          | Methods of test reference<br>(6) |
|----------------|--|----------|----------|----------|----------------------------------|
|                |  | 1<br>(3) | 2<br>(4) | 3<br>(5) |                                  |
| i              | Moisture, per cent by mass, max.       | 12.0     | 12.0     | 12.0     | 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      | 3.0      | 5.0      | Appendix B                       |
| iv             | Damaged grain, per cent by mass, max.  | 1.0      | 2.5      | 4.0      | Appendix B                       |
| v              | Immature grain, per cent by mass, max. | 2.0      | 3.0      | 4.0      | Appendix B                       |

## 7 PACKAGING AND MARKING

### 7.1 Packaging

7.1.1 Cowpea in bulk shall be packed in clean jute bags, woven polypropylene or coarse cloth bags or in any other bags made from suitable material. The mouth of each bag shall be securely sealed.

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

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

## 7.2 Marking

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

- a) Name of commodity;
- b) Type;
- c) Grade;
- d) Name and address of the producer or trader;
- e) Trade mark, (if any);
- f) Net mass, in kilograms;
- g) Month and year of harvest; and
- h) The words "Produce of Sri Lanka".

## 8 SAMPLING

### 8.1 Sampling from bulk containers

A representative sample of cowpea shall be obtained according to relevant Clauses of SLS 528.

### 8.2 Sampling from retail packages

#### 8.2.1 Lot

All the retail packages containing cowpea of 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 2.



TABLE 2 - Scale of sampling

| Number of retail containers<br>in the lot | Number of containers to be<br>selected |
|---|--|
| 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 bags 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 Number of tests

The composite sample prepared as in 8.2.2.4 or Clause 5.3 of SLS 528:1981 shall be tested for all the 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 composite sample tested as in 8.3 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 grain inedible.

APPENDIX B

DETERMINATION OF TYPE ADMIXTURE, DAMAGED GRAIN AND IMMATURE GRAIN

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 cowpea sample, which has been freed from foreign matter (refer SLS 448:Part 2). Mix the sample well and take three 100-g representative samples weighed to the nearest 0.1 g. Using each of the samples, visually separate

- a) grain belonging to other types;
- b) damaged grain; and
- c) immature grain.

Calculate the percentage of each by mass.

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*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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