SRI LANKA STANDARD 622:1983
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SPECIFICATION FOR
BONE MEAL

BUREAU OF CEYLON STANDARDS

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SLS 622:1983

Gr.4

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SRI LANKA STANDARD
SPECIFICATION FOR BONE MEAL

FOREWORD

This Sri Lanka Standard specification was authorized for adoption and publication by the Council of the Bureau of Ceylon Standards on 1983-12- 20, after the draft, finalized by the Drafting Committee on Fertilizers, had been approved by the Agricultural and Food Products Divisional Committee.

All standard values given in this specification are 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 rounded off value should be the same as that of the specified value in this specification.

In the preparation of this specification valuable assistance derived from relevant publications of the Indian Standards Institution is gratefully acknowledged.

1 SCOPE

This specification prescribes the requirements, methods of sampling and tests for bone meal (raw), used as a fertilizer.

2 REFERENCES

CS 102 Presentation of numerical values

CS 124 Test sieves

SLS 559 Sampling of fertilizers

SLS 645 Tests for fertilizers

3 REQUIREMENTS

3.1 General requirements

The material shall be in the form of free-flowing particles, without undue fluffiness and shall be free from foreign matter.

3.2 Particle size

The material shall pass through a test sieve of 2.36 mm square aperture and not more than 30 per cent shall be retained on a sieve of 850 µm aperture. The sieves shall conform to CS 124.

3.3 Other requirements

The material shall also comply with the requirements given in Table 1.

TABLE 1 - Requirements for bone meal

Sl. No. (1)	Characteristic (2)	Limit (3)	Method of test ref. (4)
i	Moisture, per cent by mass, max.	8.0	SLS 645
ii	Acid-insoluble matter, per cent by mass, max.	12.0	Appendix A
iii	Total phosphates (as P_2O_5) per cent by mass, min.	20.0	SLS 645
iv	Available phosphates (as P_2O_5) soluble in two per cent citric acid solution, per cent by mass, min.	8.0	SLS 645
v	Nitrogen content of water insoluble portion, per cent by mass, min.	3.0	Appendix B

4 PACKAGING AND MARKING

4.1 Packaging

The material shall be packed in polypropylene bags or any other suitable container as agreed to between the purchaser and the supplier.

4.2 Marking

4.2.1 The packages shall be marked legibly and indelibly with the following information:

a) Words *bone meal* in capital letters;

b) The manufacturer's name and address;

c) Registered trade mark if any;

d) Net mass, in kg;

e) Batch or code number;

f) Date of manufacture; and

g) Per cent by mass of total phosphates and total nitrogen contents.

4.2.2 The packages or containers may also be marked with the Certification Mark of the Bureau of Ceylon Standards illustrated below on permission being granted for such marking by the Bureau of Ceylon Standards.

NOTE - The use of the Bureau of Ceylon Standards Certification Mark (SLS Mark) is governed by the provisions of the Bureau of Ceylon Standards Act and the regulations framed thereunder. The SLS mark on products covered by a Sri Lanka Standard is an assurance that these have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by the Bureau and operated by the producer. SLS marked products are also continuously checked by the Bureau for conformity to the relevant standards as a further safeguard. Details of conditions under which a permit for the use of the Certification Mark is granted to manufacturers or processors may be obtained from the Bureau of Ceylon Standards.

5 SAMPLING

5.1 The sampling shall be carried out as prescribed in SLS 559.

5.2 Each package selected as prescribed shall be examined for packaging and marking requirements.

5.3 Tests for requirements specified in 3 shall be carried out on the composite sample prepared as in SLS 559.

6 METHODS OF TEST

Tests shall be carried out as prescribed in SLS 645 and Appendix A and Appendix B.

7 CONFORMITY TO STANDARD

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

7.1 Each package examined as in 5.2 satisfies the requirements for packaging and marking.

7.2 The composite sample tested as in 5.3 satisfies the relevant requirements.

7.2.1 The total phosphate content and total nitrogen content of the composite sample is not less than declared contents of the material.

APPENDIX A

DETERMINATION OF ACID-INSOLUBLE MATTERS

A.1 REAGENT

Nitric acid, dilute 1:1 *(V/V)*.

A.2 PROCEDURE

Weigh to the nearest milligram about 2g to 3g of the sample into a crucible and ignite gently until all organic matter is burnt away, leaving behind grey or white ash. Cool and extract the residue twice with warm dilute nitric acid. Filter through a filter paper (Whatman No. 40 or equivalent) and wash the residue on the filter paper with water. Dry the residue in an air-oven at 150 ± 2 °C for one hour.

Incinerate the filter paper with the residue to constant mass in a previously weighed crucible, cool in a desiccator and weigh.

A.3 CALCULATION

$$\text{Acid-insoluble matter, per cent by mass} = 100 \frac{m_1}{m_2}$$

where,

m_1 = mass in g, of the residue; and

m_2 = mass in g, of the prepared sample taken for the test.

APPENDIX B

DETERMINATION OF NITROGEN CONTENT OF WATER-INSOLUBLE PORTION

Weigh to the nearest milligram, approximately 1.5 g of the sample into a clean beaker. Stir well with water for a few minutes and filter through a filter paper (Whatman No. 2 or equivalent). Transfer the residue completely to the filter paper using a fine jet of water. Carefully place the filter paper containing the residue in a 500-ml Kjeldahl flask and determine the nitrogen content as described in SLS 645.

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

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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.

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 turn 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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