SRI LANKA STANDARD 1037 : 1995

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SPECIFICATION FOR FISH MEAL AS LIVESTOCK FEED

SRI LANKA STANDARDS INSTITUTION

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SLS 1037 : 1995

Gr. 5

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 FISH MEAL AS LIVESTOCK FEED

FOREWORD

This standard was finalized by the Sectoral Committee on Agriculture and Food Technology - 2 and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 1995-04-27.

This specification is subject to the provisions of the Animal Feed Act No 15 of 1986 and the regulations framed thereunder.

Guidelines for the determination of a compliance of a lot with the requirements of this standard based on statistical sampling and inspection are given in Appendix A.

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 an analysis, shall be rounded off in accordance with CS 102. The number of significant figures to be retained in the rounded off value shall be the same as that of the specified value in this specification.

In the preparation of this standard assistance derived from the following publication is gratefully acknowledged :

IS 4307 : 1973 - Indian Standard Specification for Fish meal as livestock feed.

1 SCOPE

This specification prescribes the requirements and methods of test for fish meal.

2 REFERENCES

CS 102 Presentation of numerical values
CS 124 Test sieves
SLS 428 Random sampling methods
SLS 516 Microbiological test methods
Part 5 General guidance for detection of *salmonella*
SLS 626 Methods of test for animal feeds

3 GRADES

The product shall be of following grades;

a) Grade 1; and

b) Grade 2.

4 REQUIREMENTS

4.1 Raw material

The product shall be obtained from fresh fish,fish wastes, sun dried fish or a mixture.

4.2 Processing

The product shall be prepared by cooking the raw material or by heat treating the dried fish in a steam-jacket cooker or by any other means, pressing the cooked mass if necessary, drying and pulverizing the treated material to the required mesh size. (see **4.4.1**)

4.3 Microbiological requirements

The product shall be free from *Salmonella* as detected by the method given in Part 5 of SLS 516.

4.4 Product requirements

4.4.1 The product shall be in the form of powder ground to such fineness that practically it shall pass through 2.80-mm sieve conforming to CS 124.

4.4.2 The product shall have the characteristic odour and shall be free from any off odour indicative of spoilage.

4.4.3 The product shall be free from adulterants, insect or mite infestation and from visible fungal growth.

4.4.4 The product shall also conform to the requirements prescribed in **Table 1** when tested in accordance with the methods given in Column 4 of the table.

TABLE 1 - Requirements for fish meal as livestock feed

Sl. No	Characteristic	Requirement		Method of test Ref.to SLS 626
		GRADE 1	GRADE 2	
(1)	(2)	(3)	(4)	(5)
(i)	Moisture, per cent by mass, max.	10	10	Clause 5
(ii)	Crude protein per cent by mass,min.	60	50	Clause 6
(iii)	Ammoniacal nitrogen, per cent by mass,max.	0.5	0.5	Clause 6
(iv)	Crude fat,per cent by mass,max.	10	10	Clause 7
(v)	Acid insoluble ash, per cent by mass,max.	3	5	Clause 10
(vi)	Chloride (as NaCl) per cent by mass,max.	4	5	Clause 13

NOTE

Requirements for the characteristic (ii) to (vi) are on moisture-free basis.

5 PACKAGING AND MARKING

5.1 Packaging

The product shall be packed in clean bags made of woven polypropylene, jute or paper with suitable lining.

The mouth of each bag shall be securely fastened.

5.2 **Marking**

5.2.1 Each bag shall be suitably marked or labelled legibly and indelibly with the following information:

a) Name and grade of the material;
b) Brand name or trade name;
c) Name and address of the manufacturer;
d) Batch or code number indicating date of manufacture; and
e) Net mass, in kilograms.

5.2.2 General guidelines for marking and labelling as given in SLS 467 shall be followed.

NOTE

Attention is drawn to certification marking facilities offered by the Sri Lanka Standards Institution. See the inside back cover of this standard.

6 METHODS OF TEST

Tests shall be carried out as specified in SLS 626 and Part 5 of SLS 516

APPENDIX A
COMPLIANCE OF A LOT

The sampling scheme given in this appendix should 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 schemes of sampling and inspection should be adopted.

A.1 LOT

In any consignment all the bags of fish meal of same size and grade belonging to one batch of manufacture or supply shall constitute a lot.

A.2 GENERAL REQUIREMENTS OF SAMPLING

When drawing samples following precautions shall be taken:

A.2.1 Samples for microbiological analysis shall be drawn first.

A.2.2 The sampling instruments shall be clean and dry when used. When drawing samples for microbiological examination, the sampling instruments shall be sterilized.

A.2.3 The samples shall be kept in clean and dry glass or suitable containers. The samples for microbiological examination shall be kept in sterilized containers.

A.2.4 The sample containers shall be sealed air-tight and marked with necessary details of sampling.

A.2.5 The samples shall be stored so that there will be no deterioration of quality of the material.

A.3 PREPARATION OF SAMPLE FOR MICROBIOLOGICAL TESTING

A sub sample of five bags shall be selected from the bags selected in A.5.2. Approximately equal quantities of sufficient material shall be drawn from each bag using appropriate sampling instruments and transferred to five different sample containers.

A.4 PREPARATION OF THE COMPOSITE SAMPLE

Approximately equal quantities shall be drawn from each package selected as in A.5.2 using an appropriate sampling instrument, mixed and reduced by the coning and quartering method to get a composite sample of sufficient size and transfered to a moisture proof sample container.

A.5 SCALE OF SAMPLING

A.5.1 Samples shall be tested from each lot for ascertaining conformity of the material to the requirements of this specification.

A.5.2 The number of bags to be selected from the lot shall be in accordance with Table 2.

TABLE 2 - Scale of sampling

Number of bags in the lot (1)	Number of bags to be selected (2)
Up to 150	5
151 to 500	8
501 to 1200	13
1201 to 3200	15
3201 and above	20

A.5.3 The bags shall be selected at random. In order to ensure randomness of selection, tables of random numbers as given in SLS 428 shall be used.

A.6 NUMBER OF TESTS

A.6.1 Each bag selected as in A.5.2 shall be inspected for marking and packaging requirements.

A.6.2 Each bag selected as in A.5.2 shall be opened and individually tested for the requirements given in 4.4.1, 4.4.2 and 4.4.3

A.6.3 The five samples prepared as in A.3 shall be tested for the microbiological requirements given in 4.3

A.6.4 The composite sample prepared as in A.4 shall be tested for the requirements given in 4.4.4

A.7 CRITERIA FOR CONFORMITY

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

A.7.1 Each bag inspected/examined as in A.6.1 and A.6.2 satisfies the relevant requirements.

A.7.2 The results on microbiological tests satisfy the relevant requirements.

A.7.3 The composite sample tested as in A.6.4 satisfies the relevant requirements.

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.

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