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SPECIFICATION FOR INDUSTRIAL TAPIOCA STARCH

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BUREAU OF CEYLON STANDARDS

SPECIFICATION FOR INDUSTRIAL TAPIOCA STARCH

SLS 417 : 1977

Gr. 6

BUREAU OF CEYLON STANDARDS
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SRI LANKA STANDARD SPECIFICATION FOR INDUSTRIAL TAPIOCA STARCH

FOREWORD

This Sri Lanka Standard Specification was prepared by the Drafting Committee of the Bureau on Tapioca Starch. It was approved by the Textiles Divisional Committee of the Bureau of Ceylon Standards and was authorised for adoption and publication by the Council of the Bureau on 1977 - 05 - 11.

Tapioca starch is manufactured from the tuberous root of the tapioca plant by a wet disintegration process (rasping and blending) that releases the starch grains from the cells. The starch is then separated from the cellular material by sieving, resulting in the starch milk, from which the starch is separated.

This is different from the preparation of flour which is a dry milling process where dried chips are ground and sieved to give a flour. In the former instance the product is nearly pure starch while in the latter case cell wall material, proteins and other cellular components are also present.

It is expected that this standard for tapioca starch would be of use especially to those in the textile industry.

For the purpose of determining particle size, Ceylon Standard sieves conforming to CS 124* are specified. Where these sieves are not available other equivalent standard sieves as judged by the aperture may be used.

All standard values given in this standard specification are in SI units.

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 observation shall be rounded off in accordance with CS 102 **. The number of figures to be retained in the rounded off value shall be the same as that of the specified value in this standard.

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* CS 124 Test sieves.

** CS 102 Presentation of numerical values.

This standard makes reference to the following standards.

CS 124 Test sieves.
CS 102 Presentation of numerical values.

In the preparation of this standard, assistance derived from related publications of the Indian Standards Institution is gratefully acknowledged.

1. SCOPE

This standard prescribes requirements of tapioca starch for use in industries which require a pure product [e.g. finishing cloth, sizing of high quality textiles, grade 1 Pearl tapioca (sago)], Methods of test for various characteristics and sampling of the starch are also given.

2. IDENTIFICATION

2.1 When the material is boiled with 15 times its own mass of water and cooled, the resulting translucent viscous fluid or jelly, like most starches, shall give a deep blue colour with iodine solution and the colour shall disappear on warming and reappear on cooling.

2.2 When tested by the method prescribed in Clause A - 2 the material shall show the characteristic shape as illustrated in Figure 1 — Photomicrograph of tapioca starch.

Note : Tapioca starch granules are round with a flat surface on one side that contains a conical pit extending to the hilum. The hilum is well defined. Some granules appear practically circular. In polarized light, a well defined cross is observed.

3. GENERAL REQUIREMENTS

3.1 The material shall be in the form of a fine white powder and shall be free from black specks, dirt and other impurities. It shall also be free from insect or fungus infestation.

4. SPECIFIC REQUIREMENTS

4.1 The material shall conform to the requirements given in Table 1 when tested by the relevant methods of test specified in Column 4 of the table.

Table 1 — Requirements for tapioca starch

Serial No.	Characteristic	Requirement	Method of Test (Ref. to Cl. No. of Appendix A)
(1)	(2)	(3)	(4)
(i)	Particle size, residue, per cent by mass, on 180 μmCS sieve, max.	2·0	A - 3
(ii)	Moisture content, per cent by mass, max.	14	A - 4
(iii)	Starch content, per cent by mass (on oven-dry basis) min.	98·0	A - 5
(iv)	Ash content, per cent, by mass, (on oven-dry basis) max.	0·4	A - 6
(v)	Protein content, per cent by mass, (on oven-dry basis) max.	0·8	A - 7
(vi)	Ether extract, per cent by mass, (on oven-dry basis) max.	0·2	A - 8
(vii)	Free acidity expressed as ml of 0·1 N NaOH per 100 g (on oven-dry basis), max.	25·0	A - 9
(viii)	pH of aqueous extract	4·8 to 7·0	A - 10
(ix)	Viscosity of 2% paste in m^2/s at 60 °C (in seconds in Redwood No. 1 Viscometer) (on oven-dry basis) min.	7×10^{-6} (44·0)	A - 11
(x)	Cold water solubles, per cent by mass, (on oven-dry basis) max.	0·4	A - 12
(xi)	Crude fibre, per cent by mass, (on oven-dry basis) max.	0·6	A - 13

5. PACKAGING

5.1 The material shall be packed in entirely enclosed packages, wrapped in suitable packaging materials which do not adversely affect the starch and which protects it from contamination.

6. MARKING

6.1 All bags and packages shall be marked with the following :

a) The name of the material ;

b) Manufacturer's name and address and/or registered trademark, if any ;

c) Net mass of the contents ;

d) Code or batch number of packaging ; and

e) The words " Made in Sri Lanka ".

7. SAMPLING

7.1 **Lot** — In any consignment all the packages containing material of approximately uniform quality and belonging to the same batch of manufacture shall constitute a lot.

7.2 Test sample, to determine conformity of a lot of the material to this standard, shall be selected so as to be representative of the lot.

Note : For the purpose of moisture determination, the test sample should be directly collected in an air-tight weighing bottle.

7.3 Ordinarily, the number of packages selected for the purpose of drawing a test sample shall not be less than the cube root of the total number of packages in the lot. Table 2 is recommended to be used for this purpose. The packages shall be selected at random from the lot.

7.4 In case of dispute, as to the quality of the material for the purpose of acceptance on the basis of the results obtained, every package in the disputed lot shall be sampled (see Clause 7·5) for the purpose of drawing a test sample.

Table 2 — Minimum number of packages to be selected from a lot (see Clause 7.3)

No. of Packages in a Lot	No. of Packages to be taken
(1)	(2)
2 to 8	2
9 to 27	3
28 to 64	4
65 to 125	5
126 to 216	6
217 to 343	7
344 to 512	8
513 to 729	9
730 to 1000	10

7.5 In drawing a test sample, three scoopfuls (see Fig. 2) of the material, one from the top, one from the middle and one from the bottom of every package selected for the purpose (see Clauses 7.3 and 7.4) shall be taken till about 2 kg (or more) of the material is collected from the whole lot. This shall constitute the test sample. If necessary the process shall be repeated to make up the test sample to 2 kg (or more). The test sample so obtained shall be mixed thoroughly and placed in a moisture-proof container (see note under Clause 7.2).

8. CRITERIA FOR CONFORMITY

The lot shall be declared as conforming to the requirements of this standard if the test sample satisfies all the requirements given in Clauses 3 and 4 and also identification given in Clause 2.

APPENDIX A
(See Clauses 2.2 & 4.1)

METHODS OF TEST

A - 1 QUALITY OF REAGENTS

A - 1.1 Unless specified otherwise, pure chemicals and distilled water shall be employed in tests.

Note : ' Pure chemicals ' shall mean chemicals that do not contain impurities which affect the results of analysis.

A - 2 TEST FOR IDENTIFICATION

A - 2.1 Method — Prepare a suspension, approximately 2 per cent, of the test sample in water in a test tube. Shake the test tube thoroughly and take 2 or 3 drops (see Note 1) of the suspension on a glass slide, by means of a glass rod. Place a cover glass on the glass slide so that no air bubble is present between the cover glass and the slide (see Note 2). Examine the slide in good daylight under a microscope (with a magnifying power of 100 to 450) and compare the outline of the granules with that in the photomicrograph given in Fig. 1. See whether or not the granules show the characteristic shape as illustrated in the figure.

Note 1 : The quantity of material should be such that while the field of view under the microscope shows numerous granules they are not so crowded as to overlap.

Note 2 : When placing the cover glass in position, care should be taken not to exert excessive pressure in order to avoid breaking of granules.

A - 3 DETERMINATION OF PARTICLE SIZE

A - 3.1 Method — Take about 100 g of the test sample, dry it to constant mass in an air oven maintained at 100 — 105°C, and determine its mass correct to one milligram. Sieve the sample in a sieve of appropriate aperture size (see CS 124*). Transfer the residue to a tared weighing dish using a brush and determine the mass of the residue.

A - 3.2 Calculation

Material retained on the sieve, per cent by mass $= \frac{m_2}{m_1} \times 100$

* CS 124 Test sieves

where

m_1 = mass, in g, of the material taken for test, and

m_2 = mass, in g, of the material retained on the sieve.

A - 4 ESTIMATION OF MOISTURE CONTENT

A - 4.1 Method — Dry a wide-mouthed glass weighing bottle in a drying oven at 100 — 105°C, cool in a desiccator, allow it to attain room temperature and determine its mass correct to one milligram. Take about 5 g of the test sample in the weighing bottle and determine the mass correct to one milligram. Place the weighing bottle with the sample in the drying oven, loosen cover (but do not remove it) and dry the sample at 105 — 110°C to constant mass. (About 4 hours drying is sufficient).

Note the mass correct to one milligram.

Note : The sample shall be taken to have attained constant mass when two consecutive mass determinations taken at an interval of 30 minutes do not differ by more than 2 mg.

A - 4.2 Calculation

$$\text{Moisture content, per cent by mass} = \frac{(m_0 - m_1) \times 100}{m_0}$$

where

m_0 = mass, in g, of the sample before drying, and

m_1 = mass, in g, of the sample on drying to constant mass.

A - 5 ESTIMATION OF STARCH CONTENT

A - 5.1 Reagents — The following reagents shall be used :

a) Dilute Hydrochloric Acid — 25 per cent ($\frac{m}{v}$)

b) Sodium Hydroxide Solution — 10 per cent ($\frac{m}{v}$)

A - 5.2 Determination of Hydrolysable Carbohydrate (starch and starch derivatives)

Equivalent of 8 g starch is mixed with 200 ml of 1M HCl. Heat under reflux for 2½ hours. Neutralise with 1N NaOH, indicator methyl orange. Titrate as in specified Clause A - 5.2.1.3.

Solution used must be 0.2 — 0.5% as glucose.

From the volume so obtained, calculate, the dextrose content in 250 ml of the solution. Let this value be M_2.

A - 5.2.1 Determination of Dextrose content

A - 5.2.1.1 Preparation of Fehling solution

a) Sodium Potassium Tartrate 846 g per litre.
Sodium Hydroxide 100 g per litre.

b) Copper Sulphate 69 g per litre. Conc. Sulphuric Acid 1 ml per litre.

Mix 5 ml of each, just before use.

A - 5.2.1.2 Standardization

Prepare standard glucose 5 g/l. If titre reading is x ml, glucose equivalent of 5 ml Fehlings is = 5 x mg.

A - 5.2.1.3 Determination of Reducing Sugars*

Take 2·50 to 3·00 g test sample. Add 200 ml water and shake up. Filter and wash to get filtrate up to 250 ml.

Add Fehlings mixture, boil, add sugar with boiling till red precipitate forms. Add one drop

* Sugars in this case will mean those obtained in standardization of standard glucose, starch hydrolysis and reducing sugar hydrolysis.

methylene blue to the flask, boiling must not stop. Titrate till blue tint disappears. For accurate value add sugar solution 1 ml less than end point, boil and repeat above. Let this value be M_1.

Note : If no end point is obtained reducing sugar is absent in starch and $M_1 = 0$.

A - 5.3 Calculation

Starch content, per cent, by mass

$$= \frac{(M_2 - M_1) \times 0{\cdot}93 \times 10\,000}{m_o\,(100 - M)}$$

where

m_o = mass, in g, of the sample taken, and

M = smoisture content, per cent, by mass, of the ample determined as in Clause A - 4.

A - 6 ESTIMATION OF ASH CONTENT

A - 6.1 Method — Take a shallow ashing dish, ignite it and place it in a desiccator. Cool the dish to room temperature and determine its mass. Take 3·0 to 5·0 g of the test sample in the dish. Gently heat the dish on a hot plate until the sample is well carbonized and increase the heat until the carbonization is complete. Transfer the dish with its contents to a muffle furnace and ash at about 600°C to constant mass. Cool in a desiccator and determine its mass.

A - 6.2 Calculation

$$\text{Ash content, per cent, by mass} = \frac{10\,000 \times m_1}{m_o\,(100 - M)}$$

where

m_o = mass, in g, of the sample taken,
m_1 = mass, in g, of the ash, and
M = moisture content, per cent, by mass, of the sample determined as in Clause A - 4.

A - 7 ESTIMATION OF PROTEIN CONTENT

A - 7.1 The following apparatus shall be used :

a) **Apparatus for Digestion and Distillation** — A Kjeldahl flask, made of hard, moderately thick and well annealed glass (jena or Pyrex) and with a capacity of 500 ml. For distillation, use the same flask but fit it with rubber stopper ; pass the lower end of a Kjeldahl connection bulb (50 or 60 mm in diameter) through the stopper (to prevent sodium hydroxide (NaOH) from being carried over mechanically during distillation) and connect the upper end of the bulb to a condenser by means of a rubber tubing.

b) Separating Funnel — of 200 ml capacity.

c) Erlenmeyer Flask — of 500 ml capacity.

A - 7.2 Reagents — The following reagents shall be used :

a) Potassium Sulphate or Anhydrous Sodium Sulphate — pulverized.

b) Concentrated Sulphuric Acid — analytical reagent grade.

c) Copper Sulphate ($CuSO_4 . 5H_2O$) — crystals.

d) Sodium Hydroxide Solution — prepared by dissolving about 450 g of technical grade sodium hydroxide free from nitrates, in one litre of water.

e) Standard Sulphuric Acid — approximately 0·05 N.

f) Standard Sodium Hydroxide Solution — approximately 0·05 N.

g) **Mixed Methyl Red, Methylene Blue Indicator Solution** — prepared by dissolving 0·04 g of methyl red in 100 ml of alcohol and adding one millilitre of one per cent $(\frac{m}{v})$ methylene blue solution in water.

Note : This indicator changes in colour from purple in acid medium to green in alkaline medium. The change in colour is sharp at pH 5·0.

A - 7.3 Method

A - 7.3.1 Digestion — Clean and dry the Kjeldahl flask. Take about 5·0 g of test sample and transfer it to the Kjeldahl flask. Add 15g of powdered potassium sulphate or anhydrous sodium sulphate, one gram of copper sulphate and 25 ml of concentrated sulphuric acid. Place the flask in an inclined position and heat (without boiling) till frothing has ceased. Increase the heat until the acid boils briskly and digest for sometime after the solution becomes clear, or until oxidation is complete. (The digestion usually requires two hours or more). Allow the contents to cool and dilute with 200 ml of water.

Note 1 : A few pieces of granulated zinc or pumice stone may be added at this stage to prevent bumping at a later stage.

Note 2 : A catalyst consisting of a 1 : 1 mixture of selenium oxide and copper sulphate may be used 0·1 g of the catalyst being added for each 5 g of sample.

A - 7.3.2 Distillation — Take about 100 ml of water in the Erlenmeyer flask and add one millilitre of the mixed indicator solution and 20 ml of standard sulphuric acid. Connect the distillation flask (with the contents) to the Erlenmeyer flask through a Kjeldahl

connecting bulb and a double walled water condenser taking care to see that the tip of the delivery end of the condenser extends below the surface of the standard sulphuric acid solution in the Erlenmeyer flask. Make all the connections leak-proof, add about 100 ml of sodium hydroxide solution to the distillation flask through a separating funnel attached to the connecting bulb, retaining (for future use) about 10 ml of sodium hydroxide solution in the separating funnel. Heat the contents of the distillation flask over a Bunsen burner or a hot plate and allow it to boil for about 45 minutes taking care to see that there is no back-suction. Add the remaining sodium hydroxide solution left in the separating funnel to the distillation flask (retaining about 1 to 2ml of the solution) and continue boiling for 5 minutes. Disconnect the Erlenmeyer flask and the condenser from the connecting bulb before removing the heat source. Wash the condenser including its tip with about 100 ml of water, collecting the washing in the Erlenmeyer flask.

A - 7.3.3 **Titration** — Titrate the contents of the Erlenmeyer flask against the standard sodium hydroxide solution. Take the end point to have been reached when the colour of the solution under titration changes sharply from purple to green.

A - 7.4 Make a blank determination, following the same procedure (see Clause A - 7.3) and using the same amount of reagents but without the test sample.

A - 7.5 **Calculation**

$$\text{Nitrogen, per cent, by mass} = \frac{140\,(V_1 - V_2)\,N}{m_0\,(100 - M)}$$

where

V_1 = volume, in ml, of standard sodium hydroxide solution required for the blank,

V_s = volume, in ml, of standard sodium hydroxide solution required for the sample,

N = normality of standard sodium hydroxide solution,

m_0 = mass, in g, of the sample taken, and

M = moisture content, per cent by mass of the sample determined as in Clause A - 4.

A - 7.6 To determine the protein content of the sample, multiply the value obtained in Clause A - 7.5 by 6.25.

A - 8 ESTIMATION OF PETROLEUM ETHER EXTRACT

A - 8.1 Method — Take about 5·0 g of the test sample in a thimble and dry well. Place a piece of absorbent cotton in the top portion of the thimble to distribute the solvent, as it drops, on the sample. Transfer the thimble to the Soxhlet extractor. Take adequate quantity of petroleum ether (bp 60°C to 80°C) in a tared Soxhlet extraction flask and assemble the Soxhlet extraction apparatus. Heat on a water-bath or electric hot plate at such a rate that the solvent will drop from the condenser on the centre of the thimble at the rate of about 150 drops per minute. Keep the volume of the solvent fairly constant by adding enough of ether to make up for any loss due to evaporation. Continue extraction for two hours. Cool and disconnect the extraction flask. Evaporate the ether on a steam-bath until no odour of ether remains. Cool to room temperature, carefully remove any moisture or dirt from the outside of the flask and determine its mass. Dry the extract to constant mass.

A - 8.2 Calculation

$$\text{Ether extract, per cent, by mass} = \frac{10\,000 \times m_1}{m_0\,(100 - M)}$$

where

m_0 = mass, in g, of the sample taken,

m_1 = mass, in g, of the extract, and

M = moisture content, per cent by mass, of the sample determined as in Clause A - 4.

A - 9 ESTIMATION OF FREE ACIDITY

A -9.1 Reagents — The following reagents shall be used ;

a) Standard Sodium Hydroxide Solution — approximately 0·1N.

b) Phenolphthalein Indicator Solution — prepared by dissolving phenolphthalein in rectified spirit to yield a one-per cent solution ($\frac{m}{v}$).

c) Neutral Distilled Water — prepared by adding to 100 ml of freshly boiled distilled water, a few drops of phenolphthalein indicator solution and then adding drop by drop, approximately 0·01N sodium hydroxide solution carefully from a burette until a permanent faint pink colour is produced.

A - 9.2 Method — Wash a 250 ml beaker and a glass rod with adequate quantity of neutral distilled water. Take about 10.0 g of the test sample and transfer it to the beaker. Add about 100 ml of neutral distilled water and 2 drops of phenolphthalein indicator solution. Stir the contents well with the glass rod taking care that no drops splash out. Titrate the contents against standard sodium hydroxide solution. Take the end point to have been reached when the colour of the solution under titration changes to a permanent pink. Note the amount of alkali required to reach the end point.

A - 9.3 Calculation

$$\text{Free acidity, expressed as ml of 0·1 N sodium hydroxide solution required for 100 g of the sample} = \frac{100\,000 \times V \times N}{m_0\,(100 - M)}$$

where

V = volume, in ml, of standard sodium hydroxide solution used up in the titration,

N = normality of standard sodium hydroxide solution,

m_o = mass, in g, of the sample taken, and

M = moisture content, per cent, by mass, of the sample determined as in Clause A - 4.

A - 10 pH OF AQUEOUS EXTRACT

A - 10.1 Apparatus

a) For electrometric method — pH meter

b) For colorimetric method — a suitable comparator.

A - 10.2 Reagent — Freshly distilled water of pH 6·2 to 7·0.

A - 10.3 Method

A - 10.3.1 Preparation of Aqueous Extract

Take about 10 g of the material in a 250 ml beaker, add 10 ml of distilled water and mix. Allow the mixture to stand for 10 minutes with occasional stirring. Filter the mixture through neutral filter paper and collect the filtrate in another beaker.

A - 10.3.2 Determination of pH of Aqueous Extract

Determine the pH value of the aqueous extract using a pH meter or a comparator (see notes 1 to 4).

Note 1 : Every precaution should be taken to avoid contamination of the sample.

Note 2 : With a pH meter the value determined is correct to 0·01 and with a comparator the value determined is correct to only 0·2.

Note 3 : In case of dispute in the determination of pH using a comparator, the determination shall be made by a pH meter.

Note 4 : A comparator may be used only if the extract is colourless.

A - 11 DETERMINATION OF VISCOSITY

A - 11.1 Apparatus — The following apparatus shall be used:

a) Redwood viscometer No. 1 or any suitable viscometer.

b) Water-bath with Thermo-regulator.

c) Time-recording device-capable of reading correct to one second.

A - 11.2 Preparation of Paste — From the known moisture content of the test sample determined as in Clause A - 4) calculate the amount of material which would give 4 g of oven-dry sample. Transfer the calculated amount of material to a 750-ml conical flask. Determine the mass of the flask containing the sample on a pan balance. Add about 25 ml of cold water to the flask and make the sample into a fine slurry. Break any lumps or clots with a glass rod flattened at the end. Pour sufficient boiling water with constant stirring till the total amount of water added is just 200 g. Boil the paste gently under a reflux condenser for exactly one hour and cool it to 60°C with constant stirring.

A - 11.3 Measure the viscosity of the paste at 60°C.

A - 12 COLD WATER SOLUBLES

A - 12.1 Method — Take about 5·0 g of the test sample and make it into a uniform slurry with about 80 ml of water at 30°C. Dilute to about 200 ml in a 250 ml volumetric flask. Shake it for an hour and make up the volume to 250 ml. Filter the contents discarding the first 25 ml of the filtrate. Collect 50·0 ml of the filtrate in a tared dish, evaporate it to dryness on a

steam bath and dry the residue to constant mass in a drying oven at about 100°C, say for about 2 hours.

A - 12.2 Calculation

$$\text{Cold water solubles, per cent by mass} = \frac{m_1 \times 5 \times 10\,000}{m_0\,(100\text{-}M)}$$

where

m_0 = mass, in g, of the sample taken ;

m_1 = mass, in g of the residue ; and

M = moisture content, per cent, by mass, of the sample determined as in Clause A - 4.

A - 13 DETERMINATION OF CRUDE FIBRE

A - 13.1 Reagents

A - 13.1.1 Dilute Sulphuric Acid — 1·25 per cent ($\frac{m}{v}$), accurately prepared.

A - 13.1.2 Sodium Hydroxide Solution - 1·25 per cent ($\frac{m}{v}$), accurately prepared.

A - 13.2 Method — Dry to constant mass, about 5 g of the test sample, in an electric air-oven at 105 ± 1°C. Take about 2·5 g of the dried material in a thimble and extract for about one hour with petroleum ether using a Soxhlet apparatus. Transfer the fat-free material to a one-litre flask. Take 200 ml of dilute sulphuric acid in a beaker and bring to the boil. Transfer, the whole of the boiling acid to the flask containing the fat-free material and immediately connect the flask with a reflux water condenser and heat, so that the contents of the flask begin to boil within one minute. Rotate the flask frequently, taking care to keep the material from remaining on the sides of the flask out of contact with the acid. Continue boiling for 30 minutes. Remove the flask and filter through fine linen (about 18 threads per 10 mm in warp and weft directions) in a funnel and wash with boiling water until the washings are no longer acidic to litmus.

Bring to the boil some quantity of sodium hydroxide solution under a reflux condenser. Wash the residue on the linen into the flask with 220 ml of the boiling sodium hydroxide solution. Immediately connect the flask with the reflux condenser and boil for 30 minutes. Remove the flask and immediately filter through the filtering cloth. Thoroughly wash the residue with boiling water and transfer to a Gooch crucible prepared with a thin but compact layer of ignited asbestos. Wash the residue thoroughly first with hot water and then with about 15 ml of ethyl alcohol (95% $\frac{v}{v}$). Dry the Gooch crucible and contents at 105 ± 1°C in an air-oven to constant mass. Cool and determine its mass. Incinerate the contents of the Gooch crucible in an electric muffle furnace at 600 ± 20°C until all the carbonaceous matter is burnt. Cool the Gooch crucible containing the ash in a desiccator and determine its mass.

A - 13.3 Calculation

$$\text{Crude fibre (on dry basis), per cent by mass} = \frac{(m_1 - m_2) \times 100}{m_o}$$

where

m_1 = mass, in g, of Gooch crucible and contents before ashing,

m_2 = mass, in g, of Gooch crucible containing asbestos and ash, and

m_o = mass, in g, of the dried material taken for the test.

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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.*

Printed at SLSI (Printing Unit)

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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Printed at the Sri Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.