

SRI LANKA STANDARD 1229 : 2002
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SPECIFICATION FOR
PINEAPPLES

SRI LANKA STANDARDS INSTITUTION

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PINEAPPLES**

SLS 1229 : 2002

Gr. 5

**SRI LANKA STANDARDS INSTITUTION
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SRI LANKA STANDARD SPECIFICATION FOR PINEAPPLES

FOREWORD

This standard was approved by the Sectoral Committee on Agriculture and Food Products and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 2002-04-11.

During the formulation of this specification due consideration has been given to the relevant provisions made under the Sri Lanka Food Act No. 26 of 1980. Specific requirements given in this specification, wherever applicable, are in accordance with the relevant regulations. However general provisions made under the Sri Lanka Food Act have not been included in this specification and therefore, the attention of the user of this specification is drawn to the general provisions made in the regulations framed under the Food Act.

In this specification quality grades of the product are categorized based on physical and sensory quality parameters through visual inspection. However, inspection authorities may use cut tests and moisture determination methods to evaluate quality more objectively in case of a necessity.

Guidelines for the determination of a compliance of a lot with the requirements of this standard based on statistical sampling and inspections 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 results of a test or an analysis, shall be rounded off in accordance with CS 102. The number of significant places 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, the assistance derived from the following publications are gratefully acknowledged:

Codex STAN 182 – 1993 (Rev. 1 – 199) – Revised Codex Standard for Pineapple
MS 1041 : 1986 - Malaysian Standard Specification for Fresh Pineapples
CNS 1122 N 1015 – Chinese National Standard for Grading and packaging of Pineapples

1 SCOPE

This specification prescribes the requirements of grades and size classification for commercial varieties of pineapples grown from *Ananas comosus* (L.) *Merr.* of the *Bromeliaceae* family, to be supplied fresh to the consumer. Pineapples for industrial processing are excluded.

2 REFERENCES

- ISO 874 Fresh fruits and vegetables - sampling
- CS 102 Presentation of numerical values
- SLS 143 Code of practice for general principles of food hygiene
- SLS 428 Random sampling methods
- SLS 467 Code of practice for labelling of prepackaged food
- SLS 910 Limits for pesticide residues in food

3 DEFINITIONS

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

3.1 pineapple : The edible composite fruit of the plant *Ananas comosus* (L.) Merr. belonging to the family *Bromeliaceae* to be supplied fresh to the consumer.

3.2 similar varietal characteristics : A condition where a pineapple in any lot which is similar in shape, size, colour and taste of flesh.

3.3 mature : A condition where the pineapple has reached the state of development (colour changing from green to yellow & well developed eyes) which will ensure a proper completion of the ripening process.

3.4 firm : A condition where the pineapple does not yield to slight pressure.

3.5 well-formed : A condition where the pineapple shows good shoulder development and not lopsided or distinctly pointed and that the sides are not noticeably flattened.

3.6 fairly well-formed : A condition where the pineapple is not excessively lopsided or excessively flattened at the side.

3.7 injury : A condition where any defect which reasonably affects the appearance and eating quality of the pineapple.

3.8 single crown : A condition where the pineapple has only one prominent main stem at the crown.

3.9 crown slips : A condition where the pineapple has small secondary top growth at the crown.

3.10 fairly well-developed eyes : A condition where eyes which show fairly normal development and are not badly misshapen.

3.11 clean : A condition where the pineapple is free from staining with mud, dirt or other foreign matter.

3.12 reasonably free from decay : A condition where damaged pineapples are not more than 1 % by count.

4 GRADES

Pineapples shall be of the following grades :

4.1 Size grades; and

4.2 Quality grades.

4.1 Size grades

Pineapples shall be of the following size grades :

4.1.1 Large;

4.1.2 Medium; and

4.1.3 Small.

4.2 Quality grades

Pineapples shall be of the following quality grades :

4.2.1 Grade A;

4.2.2 Grade B; and

4.2.3 Grade C.

5 REQUIREMENTS

5.1 General requirements

5.1.1 Pineapples shall be of normal appearance for the varieties of *Ananas comosus* (L.) and its hybrids. It shall be whole, clean, practically free from any visible foreign matter and fresh in appearance, including peduncle and the crown which should be free of dead or dried leaves. It shall be free of abnormal external moisture.

Pineapples shall be sound and free of damage caused by pests or temperature or any signs of decay or any diseases.

5.1.2 Pineapples shall be physiologically ripe without evidence of un-ripeness (opaque, flavourless flesh) or overripeness (exceedingly translucent or fermented flesh.)

5.1.3 Pineapples shall be of characteristic odour and/or taste and it shall be free of any foreign smell or taste.

5.1.4 Pineapples shall be with a peduncle and it shall be firm and the cut shall be transversal, straight and clean.

5.1.5 Pineapples shall not contain pesticide residues in excess of the limits as prescribed in SLS 910.

5.2 Hygienic requirements

Pineapples shall be handled, stored, distributed under hygienic conditions in accordance with SLS 143.

5.3 Finished product

5.3.1 Pineapples shall conform to size grades as prescribed in Table 1.

TABLE 1 - Size grades

Grade	Mass (kg)	Tolerance
(1)	(2)	(3)
Large	2.0 min	The amount of over size and under size by mass, should not be more than 5% for all grades.
Medium	1.0 – 2.0	
Small	less than 1.0	

5.3.2 Pineapple shall conform to quality grades as prescribed in Table 2.

TABLE 2 – Quality grades

Grades	Requirements	Tolerance
A	<p>Pineapples shall be of the similar varietal characteristics which are mature, firm, well-formed with well developed eyes.</p> <p>Pineapples shall be free from decay and injury caused by bruising, diseases, insects, storage disorders by mechanical or other means.</p> <p>Pineapples shall be classified into size grades according to 5.3.1</p>	Pineapples in each sample shall be not more than 5% by count for grade B.
B	<p>Pineapples shall be of the similar varietal characteristics which are mature, firm, well-formed, with well developed eyes.</p> <p>Pineapples shall be reasonably free from decay and injury caused by bruising, diseases, insects, storage disorders by mechanical or other means and not affect the eating quality.</p> <p>Pineapples shall be classified into size grades according to 5.3.1</p>	Pineapples in each sample shall be not more than 5% by count for grade C.
C	<p>Pineapples shall be of the similar varietal characteristics which are mature, firm, and fairly well-formed, have fairly well-developed eyes.</p> <p>Pineapples shall be reasonably free from decay and injury caused by bruising, diseases insects, mechanical or other means and not affect the eating quality.</p> <p>Pineapples shall be classified into size grades according to 5.3.1</p>	Pineapples in each sample shall be not more than 5% by count for off grade.

6 PACKAGING AND MARKING

6.1 PACKAGING

6.1.1 Pineapples shall be packed in such a way so as to protect the produce properly. The materials used inside the package shall be new, clean, and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps, bearing trade specifications is allowed, provided that the printing or labelling has been done with non-toxic ink or glue.

When paper or plastic packages are used, they must be perforated to allow adequate ventilation.

6.2 MARKING

6.2.1 Each package shall bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from out side (either printed on the package itself or on a label secured to the fastening).

- a) Name of commodity;
- b) Grade (quality/size)
- c) Name and address of the purchaser or trader (including the country of origin);
- d) Batch or code number;
- e) Net mass, in grams or kilograms;
- f) Date of packaging; and
- g) Instructions for storage.

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

7 METHOD OF TEST

7.1 Pineapples shall be observed visually for the requirements prescribed in 5.3.1 and 5.3.2.

ANNEX 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.

A.1 LOT

A stated quantity of goods of same size grade and same quality grade in bulk form or packages of same weight and presented for inspection.

A.2 SCALE OF SAMPLING

A.2.1 In case of goods in packaged form the number of packages to be selected from the lot shall be in accordance with **4.2.1** of **ISO 874**.

A.2.2 In case of goods in bulk form, samples shall be drawn from the lot in accordance with **4.2.2** of **ISO 874**.

A.2.3 Preparation of bulk sample or reduced sample.

A.2.3.1 In case of goods in packaged form equal quantity of goods shall be taken from top, middle and bottom layers of each package selected as in **A.2.1** and mix them together to form a bulk sample. Then the bulk sample shall be reduced to the laboratory sample of the size given in Table 3 of **ISO 874**.

A.2.3.2 In case of goods in bulk form the reduced sample shall be prepared in accordance with **4.3** of **ISO 874**.

A.3 NUMBER OF TESTS

A.3.1 Each package selected as in **A.2.1** shall be inspected for packaging and marking requirements.

A.3.2 The sample prepared as in **A.2.3.1** or **A.2.3.2** shall be visually examined for requirements given in **5.3.2**.

A.3.3 The sample examined as in **A.3.2** shall be examined for each requirements given in **5.3.1**.

A.4 CRITERIA FOR CONFORMITY

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

A.4.1 Each package inspected as in **A.3.1** satisfies the relevant requirements.

A.4.2 The test results on each quality parameters when examine as in **A.3.2** shall satisfy the relevant requirements given **5.3.2**.

A.4.3 The test results on size when examine as in **A.3.3** shall satisfy the relevant requirements specified in **5.3.1**.

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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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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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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.

