SRI LANKA STANDARD 965 : 1992

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CODE OF HYGIENIC PRACTICE FOR

BISCUIT MANUFACTURING AND BAKERY UNITS

SRI LANKA STANDARDS INSTITUTION

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SLS 965 : 1992

Gr.6

SRI LANKA STANDARDS INSTITUTION
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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
CODE OF HYGIENIC PRACTICE FOR BISCUIT MANUFACTURING AND BAKERY UNITS

FOREWORD

This standard was approved by the Sectoral Committee on Food Safety and Hygiene and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 1992-10-07

This code provides guidance to the manufacturers to ensure hygienic handling and processing of biscuits and bakery products. This code also recommends hygienic conditions of the premises, water supply, hygienic standards of personnel and cleaning procedures.

The attention of the user of this code is drawn to SLS 143 which covers general principles of food hygiene.

During the formulation of this code due consideration has been given to the relevant provisions made under the Sri Lanka Food Act No. 26 of 1980.

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

IS 5059 : 1969 (Reaffirmed in 1986) Code for hygienic conditions for large scale biscuit manufacturing units and bakery units.

1 SCOPE

This code recommends the hygienic practices to be adopted in biscuit manufacturing and bakery units.

2 REFERENCES

SLS 143 General principles of food hygiene.
SLS 614 Potable water.

3 PREMISES

3.1 Location and surroundings

3.1.1 A biscuit manufacturing unit or a bakery unit should be preferably situated in an open, clean and hygienic environment .

3.1.2 The ground of the premises surrounding the factory buildings should be clean and preferably paved or turfed to lay the dust.

3.2 Buildings

3.2.1 The buildings should be of permanent nature and should be of brick and lime plaster, cement, concrete or any other material which ensures cleanliness.

3.2.2 The buildings should be constructed in such a way that the entrance of rodents, flies and birds is prevented. The building and the yard, with fittings and equipment should be kept free from breeding places of flies and other insects by eliminating cracks and crevices, as well as by routine and thorough cleaning.

3.2.3 The buildings should be adequately lit and ventilated.

3.2.4 The floor should be washable with sufficient drainage facilities. It should be impervious to water and not affected by weak acids, alkali or steam.

3.2.5 The internal walls should be smooth, tiled or cement plastered or made of any other impervious material. The walls should be tiled or impervious to water up to a desired height from the floor where wash basins/sinks are installed, to safeguard the wall from seepage of water. This should be done at least up to the height of the wash basins/sinks.

3.2.6 The whole working area where applicable, should possess a ceiling and it should be kept clean.

3.2.7 The buildings should be maintained in a proper state of repair and cleanliness. Whenever required, it should be lime-washed, painted, disinfected or deodorized. There should be no cobwebs in any part of the unit.

3.2.8 All equipment should be so designed and installed as to facilitate its easy cleaning and for minimizing flour dust deposition. In all rooms woodwork surrounding doors, windows and other openings should be fixed tight to the internal wall surfaces so as to avoid open joints which may harbour pests.

3.2.9 Preparation and filling tables should be of wooden tops covered with aluminium or stainless steel sheets or otherwise made impervious to water as far as practicable. All surfaces coming into contact with the food should be free from pits, crevices and loose scale and should be non absorbent.

3.2.10 Separate rooms should be provided for storing of raw materials, packing materials and finished products. These rooms should be free from dampness and should be rodent and insectproof. Pallets should be provided for stacking of raw materials, packing materials and finished products.

3.2.11 Separate rooms for storing machinery, equipment and spare parts should be provided, wherever possible, in a location convenient to various preparation and processing areas.

3.2.12 Proper places should be provided for storage of brooms, brushes, buckets, cleaning agents and pesticides.

4 SANITARY FACILITIES

4.1 Waste materials should be collected in covered receptacles and should not be allowed to lie on the floor.

4.2 Adequate measures should be taken to prevent growth of microorganisms on equipment and internal structures of processing and storage rooms.

4.3 Adequate steps should be taken to prevent infestation from cockroaches and other household pests. Accumulation of flour dust should be prevented as this may harbour insects. (See Appendix A).

4.4 When pesticides and/or disinfectants are used, care should be exercised to prevent contamination of equipment, raw materials and packing materials.

4.5 All food handlers should be educated in the handling and dangers of use and misuse of poisons, pesticides and disinfectants.

4.6 Floors and drains should be kept clean. The drains of the processing rooms should be provided with detachable covers.

4.7 Sinks and troughs used for washing of ingredients and utensils should not be used for washing of hands.

4.8 Window glasses and light fittings should be kept clean. The light bulbs should be of safety type or otherwise shielded.

4.9 There should be an adequate supply of potable water conforming to SLS 614.

4.10 There should be adequate supply of hot or cold potable water provided for cleaning of the plant where necessary.

4.11 The storage tanks for potable water should, unless completely sealed, be kept covered, examined regularly and cleaned at least once in six months.

4.12 The containers should be clean. They should be stacked in a manner which does not allow contamination of the product.

4.13 Raw materials, packing materials and finished products should be stacked away from the wall.

4.14 All equipment should be installed on a foundation which is durable and which can easily be cleaned.

4.15 Equipment should be placed away from the walls to provide facilities for inspection and cleaning.

4.16 Pipes should be installed in such a manner to facilitate easy cleaning and maintenance.

4.17 All electrical connections, such as switch boxes, control boxes, conduit cables should be installed in such a way to facilitate proper cleaning.

4.18 All equipment coming into contact with raw materials or the product should be kept clean. An ample supply of water, hoses, brushes, detergents and other equipment necessary for the proper cleaning of machinery and equipment should be available.

4.19 Products immediately after cooling should be hygienically wrapped or covered with clean suitable wrapping material like polyethylene sheets, before packing into units to prevent contamination.

4.20 Products like bread and buns should be preferably packed in clean suitable packing material as individual units or units of two depending on the product. The products without individual packing should be covered with a suitable clean protective material or packed into boxes and covered, in order to prevent contamination.

Biscuits should be packed in clean, dry containers or packages so as to protect them from damage, contamination, absorption of moisture and seepage of fat.

4.21 In the case of printed packing material, the printing ink should not come into direct contact with the product.

4.22 The products should be handled and stored hygienically until it is transported.

4.23 The products should be transported by taking all precautions to avoid the risk of contamination of the product.

4.24 Products returned from the market shall not be recycled .

4.25 All processing systems should be cleaned at the close of operation or at the termination of the continuous operation period.

4.26 Domestic animals should not be allowed in any part of the unit.

4.27 Sufficient and suitable toilet facilities should be provided, maintained and kept clean . The toilets should be properly lit. Separate toilets should be provided for each sex. These toilets should not directly open into any work room in the factory. Sufficient wash basins with soap and towels should be provided, adjacent to the toilet facilities.

Notices should be displayed requiring personnel to wash their hands after using the toilets.

The following formula could be used in assessing the adequacy of toilet facilities in relation to the number of employees :

1 to 9 employees : 1 toilet
10 to 24 employees : 2 toilets
25 to 49 employees : 3 toilets
50 to 100 employees : 5 toilets
for every 30 employees over 100 - 1 toilet

4.28 The factory effluents should be disposed in a hygienic manner and should not be let off on road or adjacent fields.

5 PERSONNEL HYGIENE

5.1 Every person employed in the factory should be medically examined before employment. Periodical medical examinations of the employees should be subsequently carried out to ensure that they are free from contagious, communicable diseases.

5.2 All employees should notify the medical officer any cases of vomitting, diarrhoea, typhoid, dysentery or any other infectious disease occuring in their homes and families.

5.3 Employees should keep their finger nails short and clean. They should wash their hands with soap or detergent before commencing work and after each absence, specially after using sanitary conveniences. Towels used for drying hands should be clean.

5.4 All employees should be innoculated against typhoid and paratyphoid diseases on their first appointment and thereafter, once in three years. In case of an epidemic situation all workers should be innoculated. A record should be maintained.

5.5 No worker should be allowed to work without proper clothing.

5.6 Employees should be provided with clean uniforms or aprons or both, cloth masks to cover mouth and nose and clean washable caps, where necessary.

5.7 The uniforms, aprons, cloth masks and caps should be worn just before starting the work and changed when leaving. These should be not worn outside the plant.

5.8 Wearing of jewellery, watches, ornaments (except wedding ring and sleeper earrings) and use of nail varnishes should be prohibited amongst those workers handling the dough.

5.9 Eating, spitting, nose clearing or use of tobacco in any form or chewing betel leaves should be prohibited within the manufacturing, packing and storage areas of the unit. Notices to this effect should be prominently displayed.

6 CLEANING

6.1 An officer should be appointed to be responsible for cleaning and disinfecting operations in the factory.

6.2 A routine cleaning chart should be drawn and implemented. It may be as the model chart given in Appendix A.

APPENDIX A
ROUTINE CLEANING CHART FOR PREMISES

Sl. No. (1)	Equipment or area (2)	Routine (3)	Frequency (4)
i)	Drains	Remove grease and clean	Daily
ii)	Open drainage channels	Remove any surface grit and scrub grids and channels with hot water containing a detergent and a sterilizer	Daily
iii)	Dust bins	Wash and invert to dry	Daily
iv)	Walls and shelves	Sweep and/or vacuum clean	At least once a week
v)	Floors	Sweep and/or vacuum clean	Daily
		Wash with hot water containing a detergent	Daily
vi)	Utensils supply vessels and measures	Wash with hot water containing a detergent rinse and dry. If these used for meat, cream, imitation cream or eggs the hot water should contain a detergent and a sterilizer.	At least once a day, more frequently if the process requires

Sl. No. (1)	Equipment or area (2)	Routine (3)	Frequency (4)
vii)	Ventilation ducts and fans	Brush and clean outside surfaces of ducts and metal fittings	When cleaning the walls
viii)	Storage tanks (not completely sealed)	Drain the tank, wash interior with hot water containing a detergent. Rinse thoroughly. When refilling first run off sufficient water to dispose any residues.	At least once in six months
ix)	Brining tanks	Scrape, scrub and wash with hot water containing a detergent. Rinse thoroughly	Before refilling
x)	Blocking, forming and stamping machines	Dismantle, remove grease and clean thoroughly	Daily
xi)	Homogenisers	Dismantle, wash with warm water containing a detergent. Rinse with a sterilizer, then with clean water	At the end of each working period
xii)	Cooking utensiles	Clean thoroughly and scrub with water at 45 °C or above, or immerse in warm water containing a detergent and a sterilizer. Scour, rinse and dry	After each period of use
xiii)	Conveyor belts	Clean off dropped material	Daily
		Clean the surface of rollers	At least once a day
xiv)	Proving and baking tins	Clean thoroughly	Daily
xv)	Proving trolleys	Wash with hot water containing a detergent, rinse and dry	Daily

Sl. No. (1)	Equipment or area (2)	Routine (3)	Frequency (4)
xvi)	Dough and pastry mixers	Remove spillage and extruded food	Daily
		Clean thoroughly and wash with warm water containing a detergent. Rinse with cold water and dry	At the end of each working period
xvii)	Flavours, essences and colour containers	Clean outside of the containers	Each time after use
xviii)	Pastry boards and icing tables	Remove all traces of flour or sugar deposits. Immerse boards in boiling water and scrub or scrub with warm water containing a detergent and a sterilizer	Daily
xix)	Knives and similar equipment	Wash with water at 45 °C or above or in warm water containing a detergent and a sterilizer. Rinse and dry	After use
xx)	Wooden trays	Scrub in the direction of the grain with warm water containing a detergent. Rinse and dry	Daily
xxi)	Wiping materials and cloths	Keep in a suitable sterilizer between uses	Change several times a day

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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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