

DRAFT SAINT LUCIA CODE OF PRACTICE

DCP 4

**CODE OF HYGIENIC PRACTICE — PACKAGED WATER (CRCP 1:
2010, MOD)**

Edition 2.0

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GENERAL STATEMENT

The Saint Lucia Bureau of Standards was established under the Standards Act (No. 14 of 1990) and started operations on 01 April 1991. A broad-based 15-member Standards Council directs the affairs of the Bureau.

The Standards Act gives the Bureau the responsibility to develop and promote standards and codes of practice for products and services for the protection of the health and safety of consumers and the environment as well as for industrial development in order to promote the enhancement of the economy of Saint Lucia. The Bureau develops standards through consultations with relevant interest groups. In accordance with the provisions of the Standards Act, public comment is invited on all draft standards before they are declared as Saint Lucia National Standards.

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The Bureau is a member body of the International Organisation for Standardisation (ISO), an affiliate member of the International Electrochemical Commission (IEC) and a member of the CARICOM Regional Organisation for Standards and Quality (CROSQ) and the Pan American Standards Commission (COPANT). The Bureau is the local agent for several foreign standards bodies such as the British Standards Institution (BSI) and the ASTM International (formerly known as the American Society for Testing and Materials). The Bureau serves as the enquiry point for the World Trade Organisation (WTO) on matters pertaining to the Technical Barriers to Trade (TBT) Agreement. The Bureau also serves as the National CODEX Alimentarius enquiry point with responsibility for coordinating national positions on CODEX matters.

In accordance with good practice for the adoption and application of standards, Saint Lucia National Standards are subject to review every five years. Suggestions for improvements are always welcomed at any time after publication of the standard.

**CODE OF HYGIENIC PRACTICE — PACKAGED WATER (CRCP 1:
2010, MOD)***AMENDMENTS ISSUED SINCE LAST PUBLICATION*

| Amendment No. | Date of Issue | Type of Amendment | Text(s) Affected |
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ATTACHMENT PAGE FOR SLBS AMENDMENT SHEET

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CODE OF HYGIENIC PRACTICE — PACKAGED WATER (CRCP 1: 2010, MOD)

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**CODE OF HYGIENIC PRACTICE — PACKAGED WATER (CRCP 1:
2010, MOD)**

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Foreword

This national standard is a revision of *SLCP 4: 2006 Code of hygienic practice for the collecting, processing and marketing of packaged water*. This revised version of the standard is a modified adoption of *CRCP 1: 2010 Code of practice for packaged water*. This second edition of SLCP 4 was adopted by the Standards Council on

This new edition of the code is more streamlined to production and collection processes and contains requirements as stipulated by the CODEX Alimentarius. This code has been updated to reflect advancements in collection and packaging processes in industry as well as focus on safety and hygiene issues that exist in packaging this delicate product.

Throughout Saint Lucia, water from springs or other natural sources is packaged and sold. There are many underground reservoirs which have not been exposed to any pollution and can be exploited to satisfy a growing demand for natural pure water or water containing certain minerals. Purified waters from other sources are also entering the trade and it is now desirable to set guidelines for the production and promotion of such products.

In preparation of this Code of Practice, assistance was derived from the following:

- a) Codex Alimentarius Commission, CAC/RCP 33-1995, Vol. 11-1995, Code of Hygienic Practice for the Collecting, Processing and Marketing of Natural Mineral Waters;
- b) Codex Alimentarius Commission, CAC/RCP 48: 2001, Code of Hygiene Practice for packaged/packaged drinking waters (other than Natural Mineral Waters);
- c) Code of Federal Regulations, Part 129, Title 21, Vol. 2, Parts 100-1691, Processing and Bottling of Packaged drinking Water.

Annex A is informative and lists the modifications made to the CARICOM Regional Code of Practice.

1 Scope

This national standard establishes guidelines for general techniques for collecting, processing, packaging, storing, transporting, distributing and offering for sale bottled or packaged drinking water for direct human consumption.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their context constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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SLCP 1-1 Code of Practice for General Principles of Food Hygiene Part 1: Food Production and Processing

World Health Organization, Guidelines for Drinking Water Quality

3 Terms and definitions

For the purposes of this document, the following terms and definitions shall apply.

3.1 adequate

sufficient to accomplish the intended purpose of this code

3.2 aquifer

an underground layer of water-bearing rock

3.3 cleaning

removal of soil, food residues, dirt, grease or other objectionable matter

3.4 container

any bottle, carton, can or other container to be filled with purified, spring or mineral water, properly labelled and intended for sale

3.5 contamination

occurrence of any objectionable matter in the product

3.6 disinfection

reduction of the number of microorganisms, by means of hygienically, satisfactory chemical agents and/or physical methods, to a level that will not lead to contamination of packaged water

3.7 establishment

any building or area in which purified, spring or mineral water is handled after collection inclusive of the surroundings under the control of the same management

3.8 food hygiene

all measures necessary to ensure the safety, soundness and wholesomeness of packaged water at all stages from its exploitation and processing until its final consumption

3.9 handling of purified, spring or mineral water

any manipulation with regard to collecting, treating, bottling, packaging, sorting, transport, distribution and sale of purified, spring or mineral water

3.10 natural mineral water

water clearly distinguishable from ordinary water because:

- a) it is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents;

- b) it is obtained directly from natural or drilled sources from underground water bearing strata for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water;
- c) of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;
- d) it is collected under conditions which guarantee the original microbiological purity and chemical composition of its essential components;
- e) it is packaged close to the source with particular hygienic precautions; and
- f) it is not subjected to any treatment other than those permitted by SLNS 29 Packaged water – Specification.

3.11 packaged drinking water

water filled into hermetically sealed containers of various compositions, forms and capacities and suitable for direct consumption without any further treatment

3.12 packaging material

any container such as a can, bottle, carton, box, case or wrapping and covering material such as foil, film, metal, paper and wax-paper

3.13 perimeter

area surrounding the body of water from which supplies are drawn or the water's point of origin in the ground

3.14 pest

any animal capable of directly or indirectly contaminating water intended for consumption

3.15 spring

any natural mineral water discharging genuinely from the ground

4 Prescriptions of the resources of mineral and spring water

4.1 Protection of alimentary reservoirs and aquifers

4.1.1 Authorization

4.1.1.1 Mineral water, spring water or water to be purified, shall be extracted only from sources approved by the competent national authority. Details of the source required for recognition include:

- a) a hydrological description;
- b) the physical and chemical characteristics of the water;
- c) microbiological analyses;

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- d) levels of toxic substances; and
- e) stability of source.

4.1.1.2 Water from the source shall be sampled and analyzed by a competent authority for a minimum of six months before approval can be granted for extraction.

4.1.1.3 Samples of water at the source shall be taken and analyzed by the plant as often as necessary, but at a minimum frequency of once each year for chemical contaminants, once every four years for radiological contaminants, and at least once each week for microbiological contaminants.

4.1.2 Perimeter of protection

Hydro-geological data shall determine the watershed and the perimeter that can be sources of contamination. These critical areas shall be protected as much as possible.

4.1.3 Protective measures

4.1.3.1 All possible precautions shall be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of mineral water and spring water.

4.1.3.2 It is recommended that regulations be established for:

- a) the disposal of liquid, solid or gaseous waste;
- b) the use of substances that might deteriorate mineral water and spring water such as agriculture; and
- c) any possibility of accidental deterioration of spring or mineral water by natural occurrences such as a change in the hydro-geological conditions.

4.1.3.3 Particular consideration shall be given to the following potential pollutants:

- a) bacteria;
- b) viruses;
- c) fertilizers;
- d) hydrocarbons;
- e) detergents;
- f) pesticides;
- g) phenolic compounds;
- h) toxic metals;

- i) radioactive substances; and
- j) other soluble organic or inorganic substances.

4.1.3.4 Even where nature provides apparently sufficient protection against surface pollution, potential hazards shall be taken into consideration, such as mining, hydraulic and engineering facilities.

4.2 Hygiene prescriptions for the collection of spring and mineral water

4.2.1 Extraction

The withdrawal of water from springs and other natural sources, shall be performed in conformity with the hydro-geological conditions in such a manner as to prevent any water, other than the spring or mineral water from entering or, should there be pumping facilities, prevent any extraneous water from entering by reducing the supply. The water collected or pumped shall be protected in such a way that it will be safe from pollution.

4.2.2 Materials

The pipes, pumps or other possible devices coming into contact with spring or mineral water and used for its collection shall be made of such material as to guarantee that the original characteristics of water will not be changed.

4.2.3 Protection of the extraction area

In the immediate surroundings of springs and wells, precautionary measures shall be taken to guarantee that no pollutant can enter the extraction area. The extraction area shall be inaccessible to non-authorized people by providing adequate devices such as enclosures. Any activity not aiming at the collection of spring or mineral water shall be forbidden in this area.

4.2.4 The exploitation of spring and mineral water

The condition of the extraction facilities, areas of extraction and perimeters of protection as well as the quality of the water shall periodically be checked. To control the stability of the chemical and physical particulars of the water derived, besides the natural variations, automatic measurements of the typical characteristics of water shall be carried out and notified or frequent partial analyses shall be done.

EXAMPLE Electrical conductance, temperature and content of carbon dioxide.

4.3 Maintenance of extraction facilities

4.3.1 Technical aspects

Methods and procedures for maintaining the extraction facilities shall be hygienic and not be a potential health hazard to humans or a source of contamination to the spring or mineral water. From the hygiene standpoint, servicing of the extraction installations shall meet the same standards as those required for the bottling or treatment.

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4.3.2 Equipment and reservoirs

Equipment and reservoirs used for extraction of mineral water shall be constructed and maintained in order to minimize all hazards to human health and to avoid contamination.

4.3.3 Storage at the point of extraction

The quantity of water stored at the point of extraction shall be minimal. The storage of water shall furthermore guarantee protection against contamination or deterioration.

4.4 Transport of packaged water

4.4.1 Means of transport, piping and reservoirs

Any vehicle, piping or reservoir used in the processing of packaged water from its source to the bottling facilities shall:

- a) comply with the requirements established by the competent national authority;
- b) be made of inert material such as ceramic and stainless steel which prevents any deterioration, be it by water, handling, servicing or disinfection; and
- c) allow for easy cleaning.

4.4.2 Maintenance of vehicles and reservoirs

Any vehicle or reservoir shall be properly cleaned, disinfected and kept in good repair so as not to cause any danger of contamination to mineral or spring water and deterioration of the essential characteristics of the water.

5 Establishment for processing packaged water design and facilities

5.1 Location

Establishments should be located in areas which are free from objectionable odours, smoke, dust or other contaminants and are not subject to flooding.

5.2 Roadways and areas used by wheeled traffic

5.2.1 Roadways and areas serving the establishment should have a hard paved surface suitable for wheeled traffic. There should be adequate drainage and provision should be made for protection of the extraction area in accordance with 4.2.3 where appropriate and to allow for cleaning. Adequate road signals shall be provided to call the attention of road users to the existence of a mineral water extraction area.

5.2.2 Although good roadway connections for distribution of the product and facilitating services are advisable, heavy traffic in built-up areas near to the plant is not recommended.

5.3 Buildings and facilities

5.3.1 Type of construction

Buildings and facilities shall be of sound construction in accordance with the provisions of 5.3.3 and maintained in good repair.

5.3.2 Disposition of holding facilities

5.3.2.1 Rooms for recreation, for storing or packaging of raw material and areas for the cleaning of containers to be re-used shall be apart from the bottling areas to prevent the end-product from being contaminated. Raw and packaging materials and any other additions which come into contact with the packaged water shall be stored apart from other material.

5.3.2.2 Adequate work space shall be provided to allow for satisfactory performance of all operations.

5.3.2.3 The design shall be such as to permit easy and adequate cleaning and to facilitate proper supervision of packaged water hygiene.

5.3.2.4 The buildings and facilities shall be designed to provide separation by partition, location or other effective means between those operations which shall cause cross-contamination.

5.3.2.5 Buildings and facilities shall be designed to facilitate hygienic operations by means of a regulated flow in the process from the arrival of the water at the premises to the finished product, and shall provide for appropriate temperature conditions for the process and the product.

5.3.2.6 The room used for bottling water shall be separated from other areas of the plant by self-closing doors, and have tight ceilings and floors to prevent contamination of the product. Conduits for utilities and openings for conveyors should be no larger than necessary. Floors shall be of non-skid impervious material, graded to drains, and wall surfaces shall be smooth and impervious to water.

5.3.3 Packaged water handling, storing and bottling areas

5.3.3.1 General

Facilities shall be of a certain construction that may not pose a risk of contamination to the product.

5.3.3.2 Floors

Floors shall be:

- a) finished with water-proof, non-absorbent, washable, non-slip and non-toxic materials;
- b) without crevices;

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- c) easy to clean and disinfected; and
- d) sloped sufficiently for liquids to drain to trapped outlets.

5.3.3.3 Walls

5.3.3.3.1 Walls shall be:

- a) made of water-proof, non-absorbent, washable and non-toxic materials;
- b) lightly coloured;
- c) smooth and without crevices up to a height appropriate for the operation; and
- d) easy to clean and disinfected.

5.3.3.3.2 Angles between walls, between walls and floors, and between walls and ceilings should be sealed and coved to facilitate cleaning.

5.3.3.4 Ceilings

Ceilings shall be so designed, constructed and finished as to prevent the accumulation of dirt and minimize condensation, mould development and flaking, and shall be easy to clean.

5.3.3.5 Windows

Windows and other openings shall be so constructed as to avoid accumulation of dirt and should be fitted with screens. Screens should be easily movable for cleaning and kept in good repair. Internal window sills, if present, should be sloped to prevent their use as shelves.

5.3.3.6 Doors

Doors shall have smooth, non-absorbent surfaces, be self-closing and close fitting.

5.3.3.7 Stairs, lift cages and auxiliary structures

Stairs, lift cages and auxiliary structures such as platforms, ladders, chutes, shall be so situated and constructed as not to cause contamination of the food. Chutes shall be constructed with inspection and cleaning hatches.

5.3.3.8 Piping

5.3.3.8.1 Piping for packaged water lines shall be separate from piping for potable and nonpotable waters.

5.3.3.8.2 In packaged water handling areas, all overhead structures and fittings shall:

- a) be installed in such a manner as to avoid contamination directly or indirectly of the packaged water and raw materials by condensation and drip;

- b) not hamper cleaning operations;
- c) be insulated where appropriate;
- d) be so designed and finished as to prevent the accumulation of dirt and to minimize condensation, mould development and flaking; and
- e) be easy to clean.

5.3.3.8.3 Establishments shall be so designed that access can be controlled.

5.3.3.8.4 The use of material which cannot be adequately cleaned and disinfected, such as wood, shall be avoided unless its use would not be a source of contamination.

5.3.4 Canalization, drainage lines

Canalization, drainage and used water lines, as well as any possible waste storage area within the protected perimeter shall be built and maintained in such a manner as not to present any risk of polluting aquifers and springs.

5.3.5 Fuel storage area

Any area or tank used for the storage of fuels such as coal or hydrocarbons shall be designed, protected, controlled and maintained in such a manner as not to present a risk of aquifers and springs being polluted during the storage and manipulation of these fuels.

5.4 Hygienic facilities

5.4.1 Water supply

5.4.1.1 An ample supply of potable water under adequate pressure and of suitable temperature shall be available with adequate facilities for its storage, where necessary, and distribution, and with adequate protection against contamination. Potable water shall conform to the requirements of the latest edition of World Health Organization (WHO) Guidelines for Drinking Water Quality or similar standards prescribed by the competent authority.

5.4.1.2 Packaged water, other potable water and non potable water for steam production or for refrigeration or any other use shall be carried in completely separate lines with no cross connection between them and without back siphonage. These lines shall be identified by different colours. Steam used in direct contact with packaged water and contact surfaces shall not contain substances which may be hazardous to health or cause contamination.

5.4.2 Effluent and waste disposal

Establishments shall have an efficient, effluent and waste disposal system which shall at all times be maintained in good order and repair. All effluent lines such as sewer systems shall be large enough to carry peak loads and should be so constructed as to avoid contamination of potable water supplies and the environment.

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5.4.3 Changing facilities and toilets

5.4.3.1 Adequate, suitable and conveniently located changing facilities and toilets shall be provided in all establishments. Toilets shall be so designed as to ensure hygienic removal of waste matter. These areas shall be well lit, ventilated and where appropriate heated, and shall not open directly into packaged water handling areas.

NOTE Changing facilities and toilets should be provided for male and female.

5.4.3.2 Hand washing facilities shall be located adjacent to toilets. Notices shall be posted directing personnel to wash their hands after using the toilet. These facilities shall be provided with hot and cold water, a suitable hand-cleaning preparation and a suitable hygienic means of drying hands. Taps of a hands-free type are recommended.

5.4.3.3 Where paper towels are used, a sufficient number of dispensers and receptacles shall be provided near to each washing facility. Care shall be taken that these receptacles for used paper towels are regularly emptied.

5.4.4 Hand washing facilities in packaged water processing areas

These facilities shall meet the requirements outlined in 5.4.3.2 and 5.4.3.3. In addition they shall meet the following requirements:

- a) adequate and conveniently located facilities for hand washing and drying shall be provided wherever the process demands;
- b) facilities for hand disinfection shall be provided; and
- c) the facilities shall be furnished with properly trapped waste pipes leading to drains.

5.4.5 Disinfection facilities

Where appropriate, adequate facilities for cleaning and disinfection of working implements and equipment shall be provided. These facilities shall be constructed from corrosion resistant materials, capable of being easily cleaned, and should be fitted with suitable means of supplying hot and cold water in sufficient quantities.

5.4.6 Lighting

5.4.6.1 Adequate natural or artificial lighting shall be provided throughout the establishment. Where appropriate, the lighting shall not alter colours and the intensity should not be less than:

- a) 540 lux (50 foot candles) at all inspection points;
- b) 220 lux (20 foot candles) in work rooms; and
- c) 110 lux (10 foot candles) in other areas.

5.4.6.2 Light bulbs and fixtures suspended over packaged water in any stage of production shall be of a safety type and protected to prevent contamination of packaged water in case of breakage.

5.4.6.3 Ventilation

Adequate ventilation shall be provided to prevent excessive heat, steam condensation and dust and to remove contaminated air. The direction of the airflow shall never be from a dirty area to a clean area. Ventilation openings shall be provided with a screen or other protecting enclosure of noncorrosive material. Screens shall be easily removable for cleaning.

5.4.6.4 Facilities for storage of waste and inedible material

Facilities shall be provided for the storage of waste and inedible material prior to removal from the establishment. These facilities shall be designed to prevent access to waste or inedible material by pests and to avoid contamination of packaged water, other potable water, equipment, buildings or roadways on the premises.

5.5 Equipment and utensils

5.5.1 Materials

All equipment and utensils used in packaged water handling areas and which shall come in contact with the water shall be made of material which does not transmit toxic substances, odour or taste, is non-absorbent, resistant to corrosion and capable of withstanding repeated cleaning and disinfection. Surfaces shall be smooth and free from pits and crevices. The use of wood and other materials which cannot be adequately cleaned and disinfected shall be avoided except when their use would not be a source of contamination. The materials shall be used in such a way that contact corrosion is avoided.

5.5.2 Hygienic design, construction and installation

All equipment and utensils shall be so designed and constructed as to prevent contamination and permit easy and thorough cleaning and disinfection.

6 Establishment: hygiene requirement

6.1 Maintenance

The buildings, equipment, utensils and all other physical facilities of the establishment, including drains, shall be maintained in good repair and in an orderly condition. As far as practicable, rooms shall be kept from steam, vapour and surplus water.

6.2 Cleaning and disinfection

6.2.1 Cleaning and disinfection should meet the requirements of this Code of Practice and the latest edition of SLCP 1 Code of Practice for General Principles of Food Hygiene Part 1: Food Production and Processing.

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6.2.2 To prevent contamination of packaged water, all equipment and utensils shall be cleaned and disinfected on a regular basis.

6.2.3 Adequate precautions shall be taken to prevent packaged water from being contaminated by the use of water, detergents or disinfectants and their solutions during cleaning or disinfection of rooms, equipment or utensils. Detergents and disinfectants shall be suitable for the purpose intended and shall be approved by the competent national authority. Any residues of these agents on a surface which may come in contact with packaged water shall be removed by thorough rinsing with water in compliance with SLCP 1 Code of Practice for General Principles of Food Hygiene Part 1: Food Production and Processing.

6.2.4 Immediately after cessation of work for the day or at such other times as may be appropriate, floors, including drains, auxiliary structures and walls of packaged water handling areas shall be thoroughly cleaned.

6.2.5 Changing facilities and toilets shall be kept clean at all times.

6.2.6 Roadways and yards in the immediate vicinity of and serving the premises shall be kept clean.

6.3 Hygiene control programme

A permanent cleaning and disinfection schedule shall be developed for each establishment to ensure that all areas are appropriately cleaned and that critical areas, equipment and material are designated for special attention. A single individual, who should preferably be a permanent member of the staff of the establishment and whose duties should be independent of production, should be appointed to be responsible for the cleanliness of the establishment. This individual shall have a thorough understanding of the significance of contamination and the hazards involved. All other cleaning personnel shall be well-trained in cleaning techniques.

6.4 Storage and disposal of waste

Waste material shall be handled in such a manner as to avoid contamination of packaged water or other potable water. Care shall be taken to prevent access to waste by pests. Waste shall be removed from the packaged water handling and other working areas as often as necessary and at least daily. Immediately after disposal of the waste, receptacles used for storage and any equipment which has come into contact with the waste shall be cleaned and disinfected. The waste storage area shall also be cleaned and disinfected.

6.5 Exclusion of animals

All animals shall be excluded from establishments.

6.6 Pest control

6.6.1 There shall be an effective and continuous programme for the control of pests. Establishments and surrounding areas shall be regularly examined for evidence of infestation.

6.6.2 Should pests gain entrance to the establishment, eradication measures shall be instituted. Control measures involving treatment with chemical, physical or biological agents shall only be undertaken by or under direct supervision of personnel who have a thorough understanding of the potential hazards to health resulting from the use of these agents, including those hazards which may arise from residues retained in the packaged water. Such measures shall only be carried out in accordance with the recommendations of the national competent authority.

6.7 Storage of hazardous substances

6.7.1 Pesticides or other substances which may represent a hazard to health shall be suitably labelled with a warning about their toxicity and use. They shall be stored in locked rooms or cabinets used only for that purpose and dispensed and handled only by authorized and properly trained personnel or by persons under strict supervision of trained personnel in accordance with the material safety data sheet. Extreme care shall be taken to avoid contaminating packaged water.

6.7.2 Except when necessary for hygienic or processing purposes, no substance which could contaminate packaged water shall be used or stored in the packaged water handling area or in packaging materials.

6.8 Personal effects and clothing

Personal effects and clothing shall not be stored in packaged water handling areas.

7 Personnel hygiene and health requirements

7.1 Hygiene training

The management of establishments shall arrange for adequate and continuous training of all packaged water handlers in the hygienic handling of water, and in personal hygiene so that they understand the precautions necessary to prevent contamination of packaged water.

7.2 Medical examination

Persons who come into contact with the packaged water in the course of their work shall have a medical examination prior to employment. Medical examination of packaged water handlers shall be carried out at other times when clinically or epidemiologically indicated. If the product is untreated, consideration shall be given to screening employees for Salmonella, Shigella and Campylobacter. Stool samples for this shall be provided prior to appointment, biannually, after visits abroad, and after any sickness and or diarrhoea.

7.3 Communicable diseases

The management shall take care to ensure that no person, while known or suspected to be suffering from, or to be a carrier of a disease likely to be transmitted through food or while afflicted with infected wounds, skin infections, sores or with diarrhoea, is permitted to work in any packaged water handling area in any capacity in which there is any likelihood of such

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a person directly or indirectly contaminating the water with pathogenic micro-organisms. Any person so affected should immediately report the illness to management.

7.4 Injuries

Any person who has a cut or wound shall not continue to handle packaged water or packaged water contact surfaces unless the injury is completely protected by a waterproof covering which is firmly secured, and which is conspicuous in colour. Adequate first-aid facilities shall be provided for this purpose.

7.5 Washing of hands

7.5.1 Every person, while on duty in a packaged water handling area, shall wash his or her hands frequently and thoroughly with a suitable hand-cleaning preparation under running warm water. Upon completion of washing hands an appropriate hand sanitizer shall be used.

7.5.2 Hands shall always be washed before commencing work, immediately after using the toilet, after handling contaminated material and whenever else necessary. After handling any material which might be capable of transmitting disease, hands shall be washed and disinfected immediately.

7.5.3 Notices requiring hand-washing shall be displayed. There shall be adequate supervision to ensure compliance with this requirement.

7.6 Personal cleanliness

7.6.1 Every person engaged in a packaged water handling area shall maintain a high degree of personal cleanliness while on duty, and shall at all times while so engaged, wear suitable protective clothing including head covering and footwear. Protective clothing shall be cleanable unless designed to be disposed of and should be maintained in a clean condition consistent with the nature of the work in which the person is engaged. Aprons and similar items shall not be washed in the production area. No jewellery, wrist watches or cuff links shall be worn.

7.6.2 Fingernails shall be kept clean and short and nail varnish shall not be worn. Long hair shall be neatly contained with no grips outside the hair covering and beards shall be covered in open bottle areas. Excessive use of perfume or aftershave shall not be permitted.

7.6.3 Protective clothing shall be restricted for on-site use only. Pockets shall be restricted to below the waist, and shall only accommodate items required for work. Cleaning of protective clothing shall facilitate a high standard of cleanliness and shall be handled by the establishment.

7.7 Personal behaviour

Any behaviour which could result in contamination of packaged water, such as eating, use of tobacco, chewing or unhygienic practices such as spitting, shall be prohibited in packaged water handling areas.

7.8 Visitors

All visitors to packaged water handling areas shall be made aware of the precautionary provisions outlined in 6.8, 7.3, 7.4 and 7.7 and shall follow all instructions that would prevent contamination of packaged water.

7.9 Supervision

Responsibility for ensuring compliance by all personnel with all requirements of 7.1 to 7.8 shall be specifically allocated to competent supervisory personnel.

8 Establishment: hygiene processing requirements

8.1 Raw material requirements

8.1.1 To guarantee a good and stable quality of packaged water, the following criteria shall be monitored regularly:

- a) spring discharge;
- b) temperature of the packaged water;
- c) appearance of the packaged water;
- d) odour and taste of the packaged water;
- e) the conductance of packaged water or any other adequate parameter; and
- f) the microbiological flora.

8.1.2 Should there be a perceptible lack in meeting the standards, the necessary corrective measures are to be taken immediately.

8.2 Treatment

8.2.1 Processing shall be supervised by technically competent personnel.

8.2.2 All steps in the production process, including packaging, shall be performed without unnecessary delay and under conditions which will prevent the possibility of contamination, deterioration, or the development of pathogenic and spoilage micro-organisms.

8.2.3 Rough treatment of containers shall be avoided to prevent the possibility of contamination of the processed product.

8.2.4 Treatment and necessary controls shall be such as to protect against contamination or development of a public health hazard and against deterioration within the limits of good commercial practice.

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8.2.5 All equipment which has been in contact with raw materials shall be thoroughly cleaned and disinfected prior to being used in contact with the end-products.

8.3 Packaging material and containers

8.3.1 All packaging material shall be stored in a clean and sanitary manner. The material shall be appropriate for the product to be packed and for the expected conditions of storage and shall not transmit to the product objectionable substances beyond the limits acceptable to the national competent authority. The packaging material shall be sound and shall provide appropriate protection from contamination. Only packaging material required for immediate use shall be kept in the packing or filling area.

8.3.2 Product containers shall not have been used for any purpose that may lead to contamination of the product. Used and new containers, if there is a possibility that they have been contaminated, shall be cleaned and disinfected. When chemicals are used for these purposes, the container shall be rinsed as prescribed under 6.2.3. Containers shall be well drained after rinsing. Used and, when necessary, unused containers shall be inspected immediately before filling.

8.4 Filling and sealing of containers

8.4.1 Packaging shall be done under conditions that preclude the introduction of contaminants into the product.

8.4.2 The methods, equipment and material used for sealing shall guarantee a tight and impervious sealing and should neither damage the containers nor deteriorate the chemical, bacteriological and organoleptic quality of the packaged water.

8.5 Packaging of containers

The packaging of containers shall protect the latter from contamination and damage and allow appropriate handling and storage.

8.6 Lot identification

Each container shall be permanently marked, coded or un-coded, to identify the producing factory and the lot.

8.7 Processing, production records and retention samples

Permanent, legible and dated records of pertinent production details shall be kept concerning each lot. These records shall be retained for a period that exceeds the shelf life of the product. Records shall also be kept of the initial distribution by lot. Retention samples shall be kept for a period not exceeding the product shelf life.

8.8 Storage and transport of the end-product

The end-product shall be stored and transported under such conditions as will preclude contamination with and or proliferation of micro-organisms and protect against deterioration of the product or damage to the container. During storage, periodic inspection of the

packaged water shall take place to ensure that only packaged water which is fit for human consumption is dispatched and that the product specifications are met.

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Annex A
(informative)

Technical deviations to CRCP 1

In this standard certain modifications were made due to the hygiene practices for package water. This additional information has been added directly to clauses to which they refer. Below is a complete list of the modification together with their justifications:

| Clause | Modification | Justification |
|-----------------|---|--|
| 3.2 | Insert new definition an underground layer of water-bearing rock | To have a better understanding of the word. |
| 5.3.3 | Include paragraph 'Facilities shall be of a certain construction that may not pose a risk of contamination to the product.' | Necessary to include clause to introduce the requirement for building. |
| 5.3.3.2.1 | Add Bullet 'easy to clean and disinfected.' | It is important to ensure that the walls are cleaned and disinfected. |
| 6.7.1 Line 4 | Insert after 'personnel' 'in accordance with the material safety data sheet.' | To prevent cross contamination during storage and handling. |
| 6.7.2 Line 3 | Insert after 'area ' 'or in packaging materials.' | To prevent contaminated packaging material from entering the product line. |
| 6.8 | Omit 'deposited' Replace with 'stored' | Word is not appropriate in sentence. |
| 8.7 | Include 'Retention Samples' in heading Include new paragraph 'Retention samples shall be kept for a period not exceeding the product shelf life.' | It is important to have traceability in the event of product quality issues. |

Bibliography

Saint Lucia National Standard, *SLNS 29 Packaged water – Specification.*

END OF DOCUMENT

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