

PACKAGED WATER REGULATION
Saint Kitts and Nevis
2016

SCOPE

This national regulation specifies requirements for the purity, treatment, bacteriological acceptability, packaging and labelling of all packaged waters that are pre-packaged for sale and used as beverages or in foods. This regulation shall be used in conjunction with the CARICOM Regional Code of Practice: Code of Hygienic Practice for Packaged Water.

This regulation does not apply to water distributed by the public water supply system, to the carbonated beverage, soda water or to packaged water sold for purposes other than as a beverage.

PART I DEFINITIONS

Section 1.0 Definitions

Wherever used in the Rules and Regulations for Packaged Water the following terms shall be construed as follows:

- 1.1 "Approved Laboratory" means a laboratory approved by the Director.
- 1.2 "Approved Source" means the source of the water whether it is from a spring, artesian well, drilled well, public or community water system or any other source that has been inspected and the water sampled, analysed and found to be of a safe and sanitary quality, according to standards approved by the Director.
- 1.3 "Artesian Water" means packaged water from a well tapping a confined aquifer in which the water level stands above the water table. "Artesian Water" shall meet the requirements of "Natural Water".
- 1.4 "Packaged Drinking Water" means all water which is sealed in bottles, packages, or other containers and offered for sale for human consumption, including mineral water and spring water sometimes referred to as product water.
- 1.5 "Bottled Water Plant" means any place or establishment in which bottled water is prepared for sale.
- 1.6 "Bulk Water" shall mean water intended for potable uses which is transported by means of tank trucks, for use in bottling only.
- 1.7 "Carbonated Water" or "Sparkling Water" means packaged water containing carbon dioxide.
- 1.8 "Dedicated" shall mean equipment used exclusively for the packaging, manufacturing and processing of water.
- 1.9 "Director" means the Director of the St. Kitts and Nevis Bureau of Standards.
- 1.10 "Distilled Water" means packaged water which has been produced by a process of distillation and meets the definition of purified water in the CROSQ standard for packaged water.
- 1.11 "Fluoridated Water" means packaged water containing fluoride. The label shall specify whether the fluoride is naturally occurring or added. Any water which meets the definition of this subsection shall contain not less than 0.8 milligrams per litre fluoride ion

1.13 "Lot" means a collection of primary containers or unit packages of the same size, type and style produced under conditions as nearly uniform as possible and designated by a common container code or marking.

1.14 "Mineral Water" means water that is impregnated with mineral solids and has been obtained entirely from an approved source. It shall contain not less than 500 parts per million (ppm) of dissolved mineral solids.

*1.0.0. "Natural Mineral Water" means the definition proposed in the CROSQ standard for packaged water *

1.15 "Multi-use Containers" or "multi-service containers" shall mean those containers which are intended by the packager for more than one use.

1.16 "Natural Water" means packaged spring, mineral, artesian or well water which is derived from an underground formation and is not derived from a municipal system or public water supply.

1.17 "Nontoxic Materials" shall mean transporting, storing and packaging materials which are free of substances which may render the water injurious to health or which may adversely affect the flavour, colour, odour or bacteriological quality of the product.

1.18 "Operations Water" means water which is delivered under pressure to a plant for container washing, hand washing, plant and equipment clean-up and for other sanitary purposes.

1.19 "Purified Water" means packaged water produced by distillation, deionization, reverse osmosis or other suitable process.

1.20 "Sample" means a unit of equal volume which is analysed by a consistent method and measured against a standard.

1.21 "Spring Water" means water derived from an underground formation from which water flows naturally to the surface of the earth.

1.22 "Sanitizing" means the cleaning and disinfecting of products used for packaging and/or surfaces of equipment used for the operating and/or manufacturing of packaged water products to prevent a potential health hazard, or source of contamination.

1.24 "Well Water" means water from a hole bored, drilled or otherwise constructed in the ground which taps the water of an aquifer. "Well Water" shall meet the requirements of "Natural Water".

1.0.0 a "concrete apron" is an extension of a slab (usually) either in front of a garage door, or around the perimeter of the building

PART II STANDARDS OF QUALITY

All packaged water shall be labelled, sampled and analysed in a manner and frequency approved by the Bureau of Standards or a laboratory approved by the Bureau of Standards at the expense of the packager. All packaged water shall be under the jurisdiction of the Saint Kitts and Nevis Bureau of Standards.

PART II STANDARDS OF QUALITY

Section 2.0 Standards of Quality

2.1 (a) All packaged water shall be from an approved source and shall meet standards prescribed by CROSQ: Specification for packaged water, Code of Practice for packaged water and Requirements for Labelling Prepackaged goods.

Analysis of samples taken to determine quality may be performed for the plant by approved laboratories as defined in section 1.1

(b) Except as provided in subsection (a), packaged water, including mineral water, and shall not exceed any standard contained in CROSQ Standard Specification for packaged water.

2.2 Adulteration.

Packaged water containing a substance at a level considered injurious to health is deemed to be adulterated, regardless of whether or not the packaged water bears a label statement of substandard quality.

Section 3.0 Sources of Water

3.1 The sources of all bulk or packaged drinking water located in St. Kitts and Nevis must be approved by the Director. Sources of all packaged drinking water located outside of St. Kitts and Nevis must be approved by the agency having jurisdiction in the exporting country.

3.1.1 General Source Requirements:

(a) Routine chemical, physical, radiological, and bacteriological monitoring of all source waters is essential for public health protection. The untreated waters of the source shall be sampled by the Water Services Department and/or Public Health to characterize raw water bacteriological, physical, radiological and chemical quality at the minimum frequency prescribed by the Director.

(b) Unusual source and source development proposals shall be submitted to the Director in consultation with the Water Services Department before such sources are developed.

(c) Operations water, if different from the product water supply shall be obtained from an approved source properly located protected and operated and shall be easily accessible, adequate and of a safe, sanitary quality which shall be in conformance at all times with the applicable laws and regulations.

(d) Abstraction fees of any source located on private property shall be paid to Water Services Department in accordance to their rules and regulations.

3.1.2 Maintenance and Construction

(a) Springs, as necessary, shall have:

(i) A watertight wall completely surrounding the spring, not less than 1 foot or 12 inches above the highest point of the ground, and extending down through the overburden to the water bearing stratum. The top of the wall shall be level to accommodate a cover.

(ii) A wall keyed and sealed with cement grout to the rock.

(iii) A tight fitting locked cover installed on the top of the encircling wall to protect against contamination.

(iv) Surface water diverted away from the spring by means of a ditch, berm or anything of similarity.

(v) Spring water collected only at the natural orifice of the spring or through a bore hole that is adjacent to it. Spring water that is collected with external assistance shall retain all the physical properties of and be of the same composition and quality as the water that flows naturally to the surface of the earth.

(b) Drilled wells, as necessary shall:

(i) have watertight casings to the depth necessary to prevent surface and/or strata contamination.

(ii) Have a permanent casing at least 1 foot or 12 inches above the pumphouse floor or concrete apron surface and at least 1 ½ feet or 18 inches above final ground surface. All well pits must have a gravity drain that discharges to grade.

(iii) Be located on sites not subjected to flooding, or have other suitable protection as determined by SKNBS in consultation with the Water Services Department.

3.1.3 New Water Sources

(a) New sources shall be in compliance with those requirements as found in Rules and Regulations Pertaining to Public Drinking Water (Water Services)

(b) No source of water shall be developed for a water bottling manufacturing/processing system until a site plan is prepared by a professional engineer or land surveyor registered in accordance with Planning Unit and has been approved by the Director.

(i) The site plan shall include an appropriately scaled topographic map of the area under consideration.

(ii) Approval of plans and specifications granted an applicant shall expire within two years if construction of the approved source has not begun within that period.

(iii) Expired approvals may be renewed if the data provided in the application is unchanged and attested to by the applicant and the plans conform to all construction standards and testing requirements in effect at the time of application for renewal.

(c) In the case of a proposed gravel packed or gravel developed well, the site plan shall contain pertinent information within at least 1,000 feet diameter of the proposed well including, but not limited to, the location of existing and proposed sewage disposal systems and any other existing or proposed potential sources of pollution. Generally, the land within 400 feet diameter

of such wells shall be reserved for protection of the water quality of the well. This distance may be modified at the discretion of the Director taking into consideration such factors as the volume and type of waste material to be disposed or stored in close proximity to the land area reserved for protection of the well, the projected yield of the well, the depth below grade to impervious formation, the depth below grade to the water table, the type of soil in the area, or any other factors the director deems pertinent.

(d) In the case of a proposed drilled (rock), driven, or dug well, the site plan shall show pertinent information within at least 1,000 feet diameter of the proposed well including, but not limited to, the location of existing and proposed sewage disposal systems and any other existing or proposed potential sources of pollution. Generally, the land within 200 feet diameter of such wells shall be reserved for protection of the water quality of the well. This distance may be modified at the discretion of the director taking into consideration such factors as the volume and type of waste material to be disposed or stored in close proximity to the land area reserved for protection of the well, the depth below grade to impervious formation, the depth below grade to the water table, the type of soil in the area, or any other factors the director deems pertinent.

(e) In the case of a proposed surface water source, the site plan shall show pertinent information within the entire watershed of the proposed surface water supply, but not limited to the location of existing and proposed sewage disposal systems and any other existing or proposed potential sources of pollution. The portions of the watershed owned or controlled by the water purveyor shall be clearly indicated. All surface water sources shall be provided with water treatment consisting, as necessary, of sedimentation, filtration and disinfection. The treatment process shall be dependent on the raw waters.

(f) All revisions to approved plans must be submitted to the Director for approval. The Director may require a new application and/or site plan if the revisions are deemed significant.

3.1.3 Water Vending

(a) Obtain a Water Vending Machine Operator License application through the Bureau of Standards.

(b) Once licensed, the applicant will receive a Renewal notice and a Water Vending Machine Operator License application form approximately 60 days prior to the expiration date of the applicant's license.

(1) Each person who establishes, maintains, or operates any water vending machine in the state shall first secure an annual Water Vending Machine Operating Permit for each machine. Such permits are valid for only one year.

(2) Application for an annual operating permit shall be made in writing to the Bureau of Standards. The application must be accompanied by a fee as provided for in subsection (3). The completed application shall provide the location of each operating water vending machine, the source of the water to be vended, and the treatment that the water will receive prior to being vended for each machine.

(3) Fees – Each person seeking an operating permit to install, operate, or maintain a water vending machine shall pay an annual fee in accordance to the Bureau of Standards fees, for each machine to the Bureau of Standard. Fees shall be non-refundable.

(4) Water Vending Machine Re-Location Form, incorporated herein by reference and supplied by the Bureau of Standards, shall be completed and provided to the department prior to relocating a permitted water vending machine.

3.1.3.b Source, Construction and Operating Requirements.

(c) The source of the water supply shall be an approved public water system as defined by the Water Services Department, Public Health and/or Bureau of Standards. If the water source is from a non-community water supply or from another public water supply system that is not regulated by the Government of St. Kitts and Nevis, the water shall be of equivalent quality or better as that required for community public water supply systems. The chemical analyses shall include the contaminants currently stated in Appendix 1. Reports of analyses shall be submitted to Public Health.

(d) Water vending machines shall be designed and constructed to permit easy cleaning and maintenance of all exterior and interior surfaces and component parts.

(e) Water vending machines shall have a guarded corrosion resistant dispensing spout.

(f) Owners, managers and operators of water vending machines shall ensure that the methods used for treatment of vended water are acceptable to the Bureau of Standards and/or Public Health. Acceptable treatment includes distillation, ion-exchange, filtration, ultra-violet light, mineral addition and reverse osmosis. Purified water shall follow the CROSQ Regional Standard for packaged water. In addition, purified water shall comply with all other potable water standards.

(g) Water vending machines shall be equipped to disinfect the vended water by ultra-violet light, ozone, or equally effective methods prior to delivery into the customer's container.

(h) Water vending machines shall be equipped with monitoring devices designed to shut down operation of the machine when the treatment or disinfectant unit fails to properly function.

(i) Water vending machines shall be equipped with a self-closing, tight-fitting door on the vending compartment.

(j) Granular activated carbon, if used in the treatment process of vended water, shall comply with the specifications provided by the St. Kitts and Nevis Bureau of Standards and/or Public Health.

(k) Water vending machine operators shall place on each machine, in a position clearly visible to the consumer, a Water Vending Machine Operating Permit, furnished by the Bureau of Standards. Water vending machine operators shall also have on file and perform a maintenance program that includes:

(1) Visits for cleaning, sanitizing and servicing of machines every two weeks.

(2) Written servicing instructions.

(3) Technical manuals for the machines.

(4) Technical manuals for the water treatment appurtenances involved.

(l) Parts and surfaces of water vending machines shall be kept clean and maintained by the water vending machine operator. The vending chamber and the vending nozzle shall be cleaned

and sanitized each time the machine is serviced. A record of cleaning and maintenance operations shall be kept by the operator for each water vending machine. These records shall be made available to the Bureau of Standards and/or Public Health employees upon request.

(m) Water vending machine operators shall ensure that machines are maintained and monitored to dispense potable water. Any vended water sample testing positive for total coliforms shall be considered unsatisfactory. Each operator shall obtain and have analysed by the Bureau of Standards at least once every 3 months, a sample of vended water from each machine to determine total coliform content. However, provided a satisfactory method of post-treatment disinfection is utilized and based on a sustained record of satisfactory total coliform analyses, the Bureau of Standards shall allow modification of the 3-month sampling requirement as follows:

(1) When 3 consecutive 3-month samples are each found to contain zero coliform colonies per 100 millilitres of the vended water, microbiological sampling intervals shall be extended to a period not exceeding 6 months. Should a subsequent 6-month sample test positive for total coliform, the required sampling frequency shall revert to the 3-month frequency until 3 consecutive samples again test negative for total coliform bacteria.

(2) If any sample collected from a machine is determined to be unsatisfactory, the machine shall be cleaned, sanitized and resampled immediately. If, after being cleaned and sanitized, the vended product is determined to be positive for coliform, the machine shall be taken out of service until the source of contamination has been located and corrected.

(n) The vended water from each water vending machine utilizing silver-impregnated carbon filters in the treatment process shall be sampled once every 6 months for silver and analysed by an approved laboratory.

(o) All records pertaining to the sampling and analyses shall be retained by the operator for a period of not less than 2 years. Results of the analyses shall be available for department review upon request.

Section 4.0 *Treatment of Product Water*

4.1 All treatment of product water by distillation, ion-exchanging, filtration, ozonation ultraviolet treatment, reverse osmosis, carbonation, mineral addition, or any other process shall be done in a manner so as to be effective in accomplishing its intended purpose and in accordance with the CROSQ standard packaged water. All such processes shall be performed in and by equipment and with substances which will not adulterate the packaged product. A record of the type and date of physical inspections of such equipment, conditions found, and the performance and effectiveness of such equipment shall be maintained by the plant.

4.1.1 Product water samples shall be taken after processing and prior to bottling by the plant and analysed as often as is necessary to assure uniformity and effectiveness of the processes performed by the plant.

4.1.2 The methods of analysis shall be those approved by the Director.

Section 5.0 *Bottling Plant Facilities*

5.1 Bottling plants must be constructed to facilitate cleanliness, and be maintained to maximize sanitation and public health protection.

5.2 Minimum Structural Requirements shall include no less than the following:

- (a) Buildings and rooms shall be of sufficient size to allow for the proper installation of equipment and to allow for movement of personnel during operation.
- (b) The package filling operations shall be separated from other plant operations or storage areas by tight walls, ceilings and self-closing doors or other appropriate barriers to isolate these areas and provide protection against incidental contamination. Conveyor openings shall not exceed the size required to permit passage of containers.
- (c) Plant building shall be vermin proof.
- (d) Walls and ceilings shall be smooth, light colour, washable, and kept in good repair. Overhead structures, fixtures, ducts and pipes shall not be suspended over working areas so that drip or condensation may contaminate products, or product contact surfaces.
- (e) Floors shall be smooth, nonabsorbent, and vermin proof. Floors are to be graded to adequate drains equipped with traps and grills.
- (f) Doors and windows to outside areas shall be adequately screened and/or otherwise protected against entry of vermin, airborne contamination, and particulates.
- (g) All rooms are to be provided with sufficient ventilation to keep them free of excessive heat, steam, condensation, vapours, odours, and fumes.
- (h) Lighting, either natural or artificial, shall be provided, adequate for operations, with a minimum of 50 foot candles at the working surface, in all rooms where bottled or packaged waters are produced. Light bulbs, fixtures, skylights or other glass suspended over exposed production areas shall be of the safety type or otherwise protected from breakage to prevent product contamination.
- (i) Clean, dry storage facilities shall be provided for product containers and packaging materials.
- (j) Washrooms shall be convenient, separate and apart from any room or rooms where bottled or packaged water is processed, and from areas where bottles and packages are sanitized. Toilets, urinals and wash basins shall be provided, as appropriate, for the number of employees. Washrooms shall be equipped with self-closing doors and fitted with windows or separate ventilation to the outside. Signs shall be posted directing employees to wash their hands after using the toilet.
- (k) When employee locker and lunchrooms are provided, they shall be separate from plant operations and storage areas and shall be equipped with self-closing doors. The rooms shall be maintained in a clean and sanitary condition and refuse containers should be provided. Packaging or wrapping material or other processing supplies shall not be stored in locker or lunchrooms.

Section 6.0 Production, Equipment and Packaging

6.1 All Packaged water production, including transporting, packaging, and storage shall be conducted under such conditions and controls as are necessary to minimize the potential for undesirable bacterial or other microbiological growth, toxic substance formation, deterioration or contamination of the processed product.

6.1.1 During the process of filling, capping or sealing either single service or multiservice containers, the performance of the filler, capper or sealer shall be monitored and the filled containers visually or electronically inspected to assure they are sound, properly capped and sealed, coded and labelled.

6.1.2 Fillers, piping, pumps and other process equipment used in the production of packaged water products may not be used for the production of milk, fruit drinks and/or any other beverage, food or non-food substance.

6.2 Minimum Equipment Requirements:

All equipment shall be of sanitary design and shall be constructed of nontoxic, non-absorbent materials which will not impart flavour, colour, or odour to the packaged water. All equipment shall be installed and maintained to facilitate the cleaning of equipment and all adjacent spaces.

6.2.1 Storage tanks used for packaged water production shall be:

- (a) tightly closed to exclude all foreign matter and vented through inverted approved air filters;
- (b) without connections to supplies of water not approved by the Director;
- (c) protected from cross connection and equipped with backflow prevention devices approved by the Director;
- (d) equipped with linings or coatings conforming to the listing of acceptable linings for process and potable water tanks from the Director;
- (e) used only for water and not for storage of any other food product or non-food substance.

6.2.2 All pipelines and valves shall have no cross connections between finished product water lines and any other pipelines.

6.2.3 Fillers shall have the inlet so designed as to prevent the entrance of condensation. Filling valves shall be equipped with a condensation diverting apron.

6.3 Containers

6.3.1 Packaging processes and materials shall not transmit contaminants or objectionable substances to the packaged water;

6.3.2 Containers and closures for packaged water shall be in compliance with those requirements contained in the CROSQ: Specification for packaged water;

6.3.3 Only sanitary, nontoxic lubricants shall be used on container contact surfaces;

6.3.4 Packages shall be provided with a tamper-evident seal or cap;

6.3.5 Screw, snap or crown caps shall be single use, and shall be sanitized.

6.3.6 Each container of packaged drinking water shall be identified by a product code, identifying a particular batch or segment of a continuous production run, and the day produced.

6.3.7 The plant shall record and maintain the following information:

- (a) product(s)
- (b) volume(s) produced

- (c) date(s)
- (d) lot code(s)
- (e) distribution

6.4 Recall Plan

The plant shall have, on file, an approved written recall plan, which shall detail procedures for recall of any particular batch as identified in the above section.

Section 7.0 Sanitation and Maintenance

7.1 Buildings and other physical facilities of the plant shall be kept in good repair, as indicated in Section 5.0.

7.2 Equipment.

All tanks, pipelines and equipment used to store, handle and transport water shall be inspected, maintained, cleaned and sanitized according to the following requirements:

7.2.1 Storage tanks shall be:

- (a) Inspected for cleanliness on a monthly basis and shall be kept free of scale, evidence of oxidation, and residue.
- (b) Cleaned on a monthly basis by sanitizing with one of the following and flushing with product water:
 - (i) Chlorinated water solution of 200 ppm for 5 minutes minimum.
 - (ii) Chlorinated water solution by spraying 200 ppm is to be used on surfaces that are not reached by the above soaking treatment.
 - (iii) Bactericides, such as organic chlorine compounds, and bactericidal agents containing iodine or bromine.
 - (iv) 0.1 ppm ozonated water solution for not less than ten minutes contact time.

7.2.2 Product water pipelines shall be:

- (a) Kept free of scale, evidence of oxidation, and residue.
- (b) Cleaned on a daily basis by sanitizing with chlorine water of 200 ppm for 5 minutes, followed by product water flushing, or continuous recirculation of at least 0.1 ppm ozonated water.

7.2.3 Product Equipment

- (a) Cappers shall be sanitized on a daily basis.
- (b) Hoppers shall be kept covered, free of residue and contact surfaces shall be sanitized on a daily basis.
- (c) Ozone mixing tanks and equipment; soft water tanks and other associated equipment shall be inspected on a monthly basis, disassembled, if necessary cleaned and sanitized as needed.
- (d) Bottle washing equipment shall be checked daily to assure proper timing and adequate washing of bottles;

(e) Fillers shall be kept free from residue and shall be sanitized on a daily basis. Filling and capping operations shall be so conducted as to prevent contamination of water being packaged. The filler reservoir shall be kept covered at all times.

7.2.4 Lubricants

All lubricants used in equipment for the purpose of processing/manufacturing packaged water shall be USDA/FDA approved.

7.2.5 Dedicated Equipment

As defined in Section 1.8 of these regulations shall be used in processing and manufacturing of packaged water.

7.3 Personnel:

- (a) Employees shall wear clean outer garments for any phase of product water processing.
- (b) Every worker shall wash his/her hands and forearms with soap and warm water and thoroughly rinse them in clean water, before beginning work, and/or after any interruption in work activity.
- (c) No person shall knowingly be permitted to work in a packaged water plant in any capacity who is affected by a communicable disease or other abnormal source of microbiological contamination.
- (d) No activities that may cause contamination shall be permitted in the product processing area.

Section 8.0 Sanitizing Bottles and Caps

8.1 Sanitizing operations, including those performed by chemical means or by any other means such as circulation of live steam or hot water, shall be adequate to effect sanitization of the intended product water contact surfaces and any other critical area. The plant should maintain a record of the intensity of the sanitizing agent and the time duration that the agent was in contact with the surface being sanitized. The following times and intensities shall be considered a minimum:

8.1.1 Steam in enclosed system: At least 77°C (170°F) for at least 15 minutes or at least 93°C (200°F) for at least 5 minutes

8.1.2 Hot water in enclosed system: At least 77°C (170°F) for at least 15 minutes or at least 200°F for at least 5 minutes.

8.1.3 Chemical sanitizers shall be equivalent in bactericidal action to a 2 minutes exposure of 50 parts per million of available chlorine at 14°C (57°F) when used as an immersion or circulating solution. Chemical sanitizers applied as a spray or fog shall have as a minimum 100 parts per million of available chlorine at 14°C (57°F) or its equivalent in bactericidal action.

8.1.4 0.1 part per million ozonated water solution in an enclosed system for at least 5 minutes.

8.1.5 When containers are sanitized using a substance other than one provided for in Appendix 2, such substance shall be removed from the surface of the container by a rinsing procedure. The final rinse, prior to filling the container with product water, shall be performed with a

disinfected water rinse free of pathogenic bacteria or by an additional sanitizing procedure equivalent in bactericidal action to that required in

Section 8.1.3.

8.1.6 Other methods equally protective of public health as the above, when approved by the Director, may be used.

8.1.7 Single-use packages or containers, which are free of all bacteria, dust, or other contamination, need not comply with the above sanitizing requirement prior to filling.

8.1.8 Multiservice shipping cases shall be maintained in such condition as to assure they will not contaminate the primary container or the product water. Adequate dry or wet cleaning procedures shall be performed as often as necessary to maintain the cases in satisfactory condition.

Section 9.0 Labelling

9.1 Each package or container shall bear a label to be affixed to each package or container before it leaves the plant. Wording shall be printed in English, in legible type which shall be in contrast with other printed matter on the label, cap or container.

9.1.1 **Contents of Label.** Each label shall be in accordance with CROSQ: Specification for packaged water and Requirements for Labelling of Prepackaged goods and indicate:

(a) Type of Source Water:

(i) Water coming from springs may be labelled "Spring Water" or "Natural Spring Water".

(ii) Artesian or pumped water taken from the ground, from drilled wells may be labelled "Well Water", "Artesian Water", or "Natural Water".

(iii) (a) For water containing carbon dioxide (CO₂) that emerges from the source and is packaged directly with its entrapped gas or from which the gas is mechanically separated and later reintroduced at a level not higher than naturally occurring in the water may be labelled "Naturally Carbonated" or "Naturally Sparkling".

(b) Packaged water which contains CO₂ other than that naturally occurring in the source of the product shall be labelled "Carbonated", "Carbonation Added" or "Sparkling".

(iv) (a) Mineral water may be labelled "Mineral Water" or "Natural Mineral Water".

(b) Packaged water to which minerals are added shall be labelled so as to disclose that minerals are added, and may not be labelled "Natural Mineral Water".

(v) For a municipal water supply source, the name of the municipal supply must be stated.

(b) Other Information

(i) For packaged waters identified on the label as being distilled, the type of source water does not need to be indicated.

(ii) Purified water shall be labelled "Purified Water" and the method of preparation shall be stated on the label except that purified water produced by distillation may be labelled as "Distilled Water".

(iii) Supplemental printed information and graphics concerning recognized uses of the water may appear on the label but shall not imply properties of the product or preparation methods which are not factual.

(iv) Address and location of the bottling facility or corporate offices.

(v) Net contents and/or capacity of the container.

(vi) Location of water source must be stated.

9.1.2 Production Code: Each unit package from a batch or segment of a continuous production run of packaged drinking water shall be identified by a production code. The production code shall identify a particular batch or segment of a continuous production run and the day produced. The plant shall record and maintain information as to the kind of product, volume produced, date produced, lot code used, and the distribution of the finished product to wholesale and retail outlets.

9.1.3 Sodium Labelling: Certain descriptive terms about the quantitative sodium content of packaged water may be used on the label, provided such statements indicate the number of milligrams of sodium per measured volume of packaged water.

9.1.4 Additional Label Statements: Whenever any term such as "no fluorides", "no chlorides", "no bromides", etc. is used in labelling, quantitative information shall be provided, which includes milligrams per litre or milligrams per measured serving. All label statements are subject to review and approval by the Director.

Section 10.0 Sampling, Methods Record Keeping and Reporting.

10.1 Packaged waters must be routinely sampled and analysed for physical, chemical, radiological and bacteriological quality by the Bureau of Standards or a laboratory approved by the Bureau of Standards. The results of these analysis must be recorded and filed at the plant and shall be available to the Director. In addition, any results which indicate that a water quality standard listed in Appendix I of these Regulations, or any standard established by State Rules and Regulations Pertaining to Public Drinking Water, has been exceeded must be reported directly to the Office of Drinking Water Quality within twenty-four (24) hours, or by the next business day if state offices are closed.

10.1.1 Sampling Requirements:

(a) Packaged water shall be sampled at the minimum frequency and analysed for the water quality parameters outlined in APPENDIX I, table I, PACKAGED WATER SAMPLING REQUIREMENTS or as requested by the Bureau.

Methods of Analysis and Sampling shall be in accordance with CROSQ: Specification for packaged water and CODEX ALIMENTARIUS - Methods of Analysis and Sampling Volume I3.

(b) When necessary, more frequent sampling or additional monitoring may be required by the director.

10.1.2 Sampling Methods and Analyses:

(a) Source Water samples shall be taken from each approved source.

(b) Product water (finished product) samples shall be taken from a batch or segment of a continuous production run for each type of packaged water produced during a day's production. The representative sample shall consist of a primary container of the product.

(c) All required product water quality analyses must be performed by an approved laboratory. Each laboratory must submit evidence that said laboratory is approved according to the definition in section 1.1 of these regulations.

(d) All required source water quality analyses must be performed by a laboratory meeting either domestic approval or foreign approval by the appropriate government agency for source water analysis.

(e) Analyses shall be conducted in accordance with the analytical requirements for drinking water set forth in Standard Methods for the Examination of Water and Wastewater, current edition, and/or applicable procedures acceptable to the Director.

10.1.3 Container Sampling:

(a) Containers and closures shall be inspected to ascertain that they are free from contamination.

(b) At least once every three months, a bacteriological swab and/or rinse count should be made from at least four containers and closures selected just prior to filling and sealing. No more than one of the four samples may exceed more than one bacteria per millilitre of capacity or one colony per square centimetre of surface area. All samples shall be free of coliform organisms. The procedure and apparatus for these bacteriological tests shall be in conformity with those approved by the Director. Tests shall be performed by qualified plant personnel or an approved laboratory.

10.1.4 Record Retention and Reports:

(a) National or Local Packagers:

(i) Records shall be kept of all inspections, cleaning and sanitizing operations and bottling production. Records of all bacteriological and chemical testing must also be maintained by owners and operators of packaged and bulk water facilities used for bottling and shall be available to the Director for the most recent two year period.

(ii) Plants shall also retain, on file at the plant, current certificates or notification of approval by the Director.

(iii) All required documents shall be available for official review by the Director at reasonable times.

(iv) All inspection, chemical and microbiological test results shall be available for not less than 2 years.

(b) Packagers outside of the Federation of St. Kitts and Nevis: (Including Imported Bottled Water) must submit the following annually:

(i) Most recent inspection report of cleaning and sanitizing operations and packaging production performed by the government agency having jurisdiction over said packager.

(ii) Current certificate of approval from appropriate health agency, and

- (iii) All of the most recent chemical & microbiological test results.
- (iv) All records and inspection reports shall be available for not less than 2 years.

Section 11.0 Bulk Water

Tank trucks, loading and unloading facilities, and other equipment used to transport bulk water for packaged water purposes shall be maintained clean and sanitary conditions at all times. Tanks previously used to transport milk or juice products, toxic materials, petroleum products, or other deleterious substances shall not be used to haul drinking water.

11.1.1 Sources: All sources of water for bulk water shipment must be approved by the Director and must meet the requirements outlined in Section 2.

11.1.2 Storage Tanks: All source water storage facilities must be maintained in a clean and sanitary condition at all times and must meet the requirements outlined in Sections 6 and 7.

11.1.3 Bulk Transport and Transfer Procedure:

(a) Sanitation:

- (1) Prior to filling, tank interior shall be cleaned, flushed with potable water, sanitized with not less than 100 ppm chlorine water solution for a contact period of not less than 20 minutes, and rinsed with potable water.
- (2) All hoses, connections, and fittings shall be sanitized with a concentrated solution of chlorine (3 oz. of 5.25% household bleach to 2 gallons of water) by brushing solution on all exposed parts.
- (3) The cover shall not be opened after sanitizing.

(b) Fluid Transfer:

- (1) Tank trucks or tank trailers may be filled through the fitting on the inner dome cover when the rear pipe cannot be used.
- (2) Water quality in the tank, after 20-30 gallons have been delivered into the tank, shall be checked as follows:
 - (a) Stop filling.
 - (b) Have discharge valve opened.
 - (c) Inspect water as it discharges. If water has unpleasant odour and/or looks dirty, it shall be rejected for use, and the tank shall be re-sanitized per sections 11.1.3a.
- (3) When these checks indicate satisfactory water quality proceed to fill the tank.
- (4) The dome cover shall be closed and sealed after filling to volume desired.
- (5) The tank discharge valve cover shall be closed and sealed after filling.
- (6) If used a fill connection shall be constructed in a manner to prevent contamination and shall be capped at all times when not in use.

11.1.4 Sampling:

(a) Analysis of the samples must be performed for the plant by an approved commercial laboratory as outlined in Section 10.

(b) When deemed necessary by the Director, sampling of water from Bulk Water System (i.e. tank truck, water buffalo, storage tank, transfer line, etc.) shall be conducted and analysed.

11.1.5 Records:

(a) Shall be maintained and include the number of gallons delivered daily, cleansing and sanitizing methods used for tank truck and tank trailer interiors, risers, connections, hoses, etc.

(b) Such records shall include date, time and location of delivery, concentration of sanitizing solution, time of contact when applicable, and water quality analysis results as legal evidence of compliance with public health practices and standards.

PART III PERMITS

Section 12.0 Permits/Revocation

12.1 Packagers' permits required for manufacture or sale. It shall be unlawful for any person, firm or corporation to manufacture or package for sale, or to sell or offer for sale any carbonated or non-alcoholic beverage, soda water, fruit juice, syrup, mineral or spring water either plain or carbonated, or any other soft drink, so-called, without a permit from the Department of Health or a certificate of analysis from the Saint Kitts and Nevis Bureau of Standards or from a laboratory that is recognised by the Bureau of Standards. No carbonated or non-alcoholic beverage, soda water, fruit juice, syrup, mineral or spring water either plain or carbonated, or any other soft drink, so-called, which has been manufactured outside of this state shall be sold or offered for sale within this state unless the person, firm or corporation manufacturing or bottling the same for sale shall hold a permit so to do from the Department of Health. Said permit shall be known as a "Packagers' Permit" and the person, firm or corporation receiving said permit shall be known as the "Packager".

12.2 The provisions of section 12.1 shall not apply to dealers at retail who purchase from the packager of any carbonated or non-alcoholic beverage, soda water, fruit juice, packaged drinking water either plain or carbonated, or any other soft drink, so-called.

12.3 Issuance and Renewal of Permits - Fee - Posting - Exempt Cider. Blank forms of application for permits shall be furnished by the said department without cost. The fee for such permit shall be as set forth in the *Rules and Regulations Pertaining to the Fee Structure for Licensing, Laboratory and Administrative Services Provided by the Bureau*. All permits shall expire on December thirty-first of the year in which they are issued. Application for renewal of permits must be made on or before the first day of December of each and every year. All permits granted hereunder shall be posted in a conspicuous place on the premises of the packager so that they may readily be seen by any person inspecting the premises;

12.4 Suspension or Revocation of Permits. Permits granted hereunder may be suspended or revoked by the Bureau for violation of any provision of this chapter, Standards Act or Metrology Act.

PART IV VARIANCE PROCEDURE/VIOLATIONS/PRACTICES AND PROCEDURES/SEVERABILITY

Section 13.0 Variance Procedure

13.1 The Department may grant a variance either upon its own motion or upon request of the applicant from the provisions of any rule or regulation in a specific case, if it finds that a literal enforcement of such provision will result in unnecessary hardship to the applicant and that such variance will not be contrary to the public interest, public health and/or health and safety of the public.

13.2 A request for a variance shall be filed by an applicant in writing, setting forth in detail the basis upon which the request is made.

13.2.1 Upon the filing of each request for variance with the Bureau and within thirty (30) days thereafter, the Department shall notify the applicant by certified mail of its approval or in the case of a denial, a hearing date, time and place may be scheduled if the applicant appeals the denial.

Section 14.0 Violations

14.1 Any person who violates the statutory provisions and the regulations herein shall be subject to the sanctions of the National Bureau of Standards Act Cap 23.15.

APPENDIX I

PACKAGED WATER SAMPLING REQUIREMENTS AND STANDARD OF QUALITY MICROBIOLOGICAL

(1) Coliform Count:

(a) Standard - less than one colony per 100 millilitres (ml), or absence of total coliforms in a sample.

(b) Frequency of samples:

(1) Public water supply

a. source water - one sample every three months.

b. finished product - minimum one sample per week.

(2) Private water supply

a. source water - one sample per week.

b. finished product - minimum one sample per week.

(2) Standard Plate Count for Containers and closures:

(a) Swab or Rinse Count Method [21 CFR, Sect. 129.80 (f)]

(b) Standard - sample(s) shall be free of coliform organisms.

(c) Frequency of samples:

(1) minimum of four containers every three months.

PHYSICAL

(1) Turbidity:

(a) Standard - shall not exceed five units.

(b) Frequency of samples:

(1) source water - one sample per year.

(2) finished product - one sample per year.

(2) Color:

(a) Standard - shall not exceed 15 units.

(b) Frequency of samples:

(1) source water - one sample per year.

(2) finished product - one sample per year.

(3) Odor:

(a) Standard - shall not exceed threshold odor No. 3.

(b) Frequency of Samples:

(1) source water - one sample per year

(2) finished product - one sample per year.

RADIOLOGICAL:

(1) Gross Alpha Particle Activity:

(a) Including Radium 226 but excluding Radon & Uranium.

(b) Standard - shall not exceed 15 picoCuries/liter (pCi/l).

(c) Frequency of Samples:

(1) source water - one sample every three years.

(2) finished product - one sample every three years.

(d) If gross alpha particle activity is 5 pCi/l or less, there is not a need to analyse for Radium 226 and Radium 228. If the gross alpha particle activity exceeds 5 pCi/l, the sample must be analysed for Radium 226. If the concentration of Radium 226 exceeds 3 pCi/l, the concentration of Radium 228 shall be determined.

(2) Combined Radium 226 and Radium 228:

(a) Standard - shall not exceed 5 picoCuries per liter.

(b) Frequency of Samples:

(1) source water - one sample every three years.

(2) finished product - one sample every three years.

(3) Manmade Beta Particle Activity and Photon Emitters:

(a) Standard - shall not contain beta particle and photon radioactivity from manmade radionuclides in excess of that which would produce an annual dose equivalent to the total body or any internal organ of 4 millirems per year calculated on the basis of intake of 2 litres of water per day.

(b) Compliance may be assumed if the average annual concentration of gross beta particle activity is less than 50 pCi/l and the average annual concentration of tritium and strontium 90 are less than 20,000 pCi/l and 8 pCi/l respectively and the sum of their annual dose not to exceed 4 millirems per year.

(c) Frequency of Samples:

(1) source water - one sample every three years.

(2) finished product - one sample every three years.

INORGANIC CHEMICALS:

(1) Frequency of Sampling:

(a) Samples of source water and finished product are to be taken and analysed by the plant as often as necessary, but at a minimum frequency of once each year for the following chemicals:

Table I

Chemical Name

The limits for each chemical listed below, are linked to that of the CROSQ Standard for Packaged Water. Additional constituents may be added with technological advancements.

1. Aluminium
2. Antimony
3. Arsenic
4. Barium
5. Cadmium
6. Chloride
7. Copper
8. Iron
9. Lead
10. Manganese
11. Magnesium
12. Mercury
13. Nickel
14. Phosphate
15. Zinc
16. Fluoride
17. Chloride

18. Nitrate
19. Sulfate

ORGANIC CHEMICALS

(1) Frequency of Sampling:

(a) Samples of source water and finished product are to be taken and analysed by the plant as often as necessary, but at a minimum frequency of once each year for the following chemicals:

Chemical Name

1. Phenols
2. Pesticides

REFERENCES

1. CARICOM REGIONAL STANDARD: Specification for packaged water, CRS 1: 2010.
2. Rules and Regulations Pertaining to Public Drinking Water (R46-13-DWQ) Rhode Island Department of Health.
3. Florida Administrative Code and Florida Administrative Register: Source, Construction and Operating Requirements (03/18/1998).
<https://www.flrules.org/gateway/ChapterHome.asp?Chapter=5K-9>
4. Florida Administrative Code and Florida Administrative Register: Permitting Requirements (03/18/1998).
<https://www.flrules.org/gateway/ChapterHome.asp?Chapter=5K-9>