

**BBSQ
DRAFT 1
NATIONAL GUIDELINES
“FOR MOBILE
COCONUT WATER
STREET VENDORS”
2020.08.25**

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1 - Introduction

Coconut water has traditionally been consumed as a refreshing beverage, however in recent times, it is sought after as a sports drink and for its health benefits. In addition, a shift in healthy eating trends has increased the demand for this natural commodity. The growing market opportunities have necessitated that coconut water be accessible more conveniently, hence the emergence of a lucrative form of income for the many street vendors who offer this drink for fresh consumption. Coconut water not only provides a means of livelihood for many street vendors who continue to meet the demand of tourists and the local market, but it also provides financial benefits to sustain other industries that span from medicines, jewelry, handicraft, clothes, charcoal and much more.

The following are guidelines on the best industry practices for coconut water processing that will protect the best interest of both vendors and consumers, and ensure that the coconuts harvested are of the highest quality when used for the extraction of coconut water. These guidelines also emphasize the importance of proper handling and removal of product waste to minimize or prevent product contamination and illnesses.

2 - Scope

This guideline is for all coconut water street vendors and for anyone who engages in coconut water extraction for sale to consumers.

3-Definitions

For the purpose of these Guidelines, unless indicated otherwise, the following definitions shall apply:

Additive - substance, natural or artificial, added to the product to enhance its quality or preservation

Adulteration - to reduce the quality or make impure by the addition of another substance.

Brix - the measurement of the sugar concentration in a product that provides an idea of the level of sweetness of the product. Brix is measured using a refractometer

Coconut husks - the rough exterior or dry outer covering of the coconut shell.

Coconut water - undiluted, natural, untreated clear liquid endosperm of the coconut.

Competent authority - any person or organization that has the legally delegated or invested authority, capacity, or power to perform a designated function.

Contamination - the introduction or occurrence of a contaminant in food or food environment.

Good hygiene practices - the minimum sanitary and hygiene practices for food processors to ensure that food is safe and suitable for human consumption.

Mobile unit – a food service establishment, with or without wheels, which is temporary/mobile in nature such as a food truck, push cart, stall or tent that is readily moveable.

pH - the level of acidity of a product that is measured on a unit scale of 0 to 14, using a pH meter. A pH of 7 is neutral. pH values of less than seven are acidic, those greater than seven are alkaline. Coconut water has a pH of between 5 and 5.4 and is therefore slightly acidic.

Rancid - having an unpleasant smell or taste usually from chemical change or decomposition.

Sanitization - the application of heat or chemicals to a properly cleaned (and thoroughly rinsed) food-contact surface, resulting in a 99.999% reduction of pathogenic microorganisms of public health concern.

Street vendor - a person who engages in the sale of ready-to-eat foods and beverages prepared and/or sold on streets and other similar public places.

Turbidity – the quality of being cloudy, opaque, hazy or thick with suspended matter.

Wastewater - is used water that has been affected by domestic, industrial and commercial use, for e.g., in food preparation.

4 – REQUIREMENTS

4.1 General

All food must be clean, free from spoilage, free from adulteration (e.g., additives) and safe for human consumption.

4.1.1 All food must be from an approved source;

4.1.2 All preparations must be done on the site by a permit-holding, registered and licensed operator if it is to be sold fresh;

4.1.3 For the purposes of these guidelines, no ready to consume coconut water product shall be prepared or stored in a private home in the fresh, unfrozen state and sold from a mobile unit.; only coconut water that is frozen immediately after processing can be sold from a mobile unit.;

4.1.4 All home facilities where the product is prepared and frozen must be inspected and approved by the relevant competent authorities.

4.2 Permits

4.2.1 All mobile vendors must have a current permit from the competent authority to operate on the street that shall be renewable annually.

4.2.1 Mobile vendors shall obtain a certificate of registration and business license from the respective competent authorities and meet all other requirements necessary to operate.

4.3 Compliance Documents

The relevant competent authorities and the requirements for the operation of street food vendors including the issuance and renewal of these requirements are outlined in the documents or agencies referenced:

- 4.3.1 The Ministry of Works (Department of Physical Planning, Building Control Division) - **Occupancy Certificate**;
- 4.3.2 The Ministry of Health (Food Safety Unit) – **Food Handler’s Certificate** - Health Certification and Food Safety Service at the Ministry of Health Food Handler’s Clinic.
- 4.3.3 The Ministry of The Environment (Department of Environmental Health Services (DEHS)) – **Sanitation Certificate and Inspection** - Health Rules: Ch. 231, Part VI, Rule 102(1 and 2);
- 4.3.4 The National Insurance Board – **Register your business** - National Insurance Act: Part III, Section 14 and Section 42 (a);
- 4.3.5 The Royal Bahamas Police Force (Commissioner of Police) – **Vendor Permit** - Section 212, Sub-section (16)1 of the Penal Code Chapter 84 ;
- 4.3.6 Inland Revenue – **Business License** – Business License Act: No. 25 of 2010;
- 4.3.7 Bahamas Agricultural Health and Food Safety Authority (BAHFSA) - **Food Business Registration** - Food Safety and Quality Act: Part IV, Sections 33.

4.4 Safety and Quality of Coconut Water

- Best practices should be used throughout the entire coconut processing chain;
- Contamination and temperature abuses are avoided by proper handling and preparation before water extraction;
- The quality of the extracted water remains fresh and clear when best practices for harvesting are maintained.

5 – SELECTION, HARVESTING, HANDLING AND QUALITY OF COCONUT AND COCONUT WATER

5.1 Selecting and harvesting Coconuts for Water Extraction

- 5.1.1 Coconut variety and maturity level must be considered for optimal water content;
- 5.1.2 Coconuts that are 7 to 9 months after pollination are considered best for harvesting; premature or over-mature coconuts should not be considered for use;
- 5.1.3 The size of the coconut may vary depending on the cultivar type and size; unhusked coconuts can be as large as 12-18 inches (30-46cm) and the shell, up to 6-8 inches (15-20 cm) in diameter; it is important not to harvest immature coconuts to ensure industry sustainability.
- 5.1.4 Harvest coconuts during cooler, morning hours for the best water quality;
- 5.1.5 Coconuts that fall to the ground or have cracks should not be used; use only intact coconuts;
- 5.1.6 Use coconuts that have been lowered to the ground and not dropped during harvesting; coconuts should never be allowed to come into contact with extraneous matter such as soil, stagnant water and chemical fertilizers.

5.2 Best Handling and Storage Methods after Coconut Harvest

- 5.2.1 Vehicles used for transport should be cleaned and sanitized and should not be used to transport animals or toxic substances that can result in contamination.
- 5.2.2 Reduce mechanical damage by exercising care during handling, loading and unloading and transportation;
- 5.2.3 Coconuts should not be stored in the sun but in cool areas (in a container, off the ground) or on ice if providing it fresh to consumers;
- 5.2.4 Avoid harvesting excessive amounts of coconut for which you cannot meet the capacity to process each day; coconuts should be used within 24 to 36 hours for optimal freshness and quality using a first in, first out (FIFO) method.

5.3 Coconut Water Quality

- 5.3.1 Coconut water after extraction that is cloudy (turbid) should not be used; the water should be clear;
- 5.3.2 If the coconut water has a rancid odor, discard; the water should have a sweet, nutty smell;
- 5.3.3 If there is any doubt about the quality of the coconut water, discard.

6 – REDUCING CONTAMINATION, CLEANING AND SANITIZING TOOLS

6.1 Reducing the risk of contamination

- 6.1.1 Coconuts for water extraction should be washed in potable water to remove any dirt and other debris using a designated and sanitized brush in cases of hard to remove dirt;
- 6.1.2 To sanitize the coconut and further reduce contamination, wash in a dilute bleach solution (1Tbs. bleach/gal water) for about 15 min. to reduce the number of microorganisms on the surface and allow to air dry;
- 6.1.3 Discard any coconuts that appear to be damaged or open during washing;
- 6.1.4 The wash water should be changed often (every hour or more) dependent on the level of dirt and debris present; transfer sanitized coconuts to a clean surface off the ground and allow to air dry.

6.2 Tools: Cleaning and Sanitization

- 6.2.1 A stainless steel cutlass, butcher's knife or other suitable type of cutting device shall be used during coconut processing;
- 6.1.5 Other equipment requiring sanitization include a funnel, cutting board, stainless steel sieve/strainer, and bottles purchased from a licensed vendor; vendors are encouraged to secure verification of purchase/receipt(s) when possible for traceability in the event of product contamination and any illness caused;
- 6.1.6 Ensure that there are spare tools and equipment on hand and that they are cleaned, sanitized and allowed to air dry before using during processing.
- 6.1.7 Cutting boards shall be cleaned and sanitized at least once every hour or as deemed necessary and allowed to air dry.
- 6.1.8 Use soap and water to wash all tools; sanitize for 15 min. or transfer to boiling

- water for 15min.; air dry before use;
- 6.1.9 All tools and implements must be properly cleaned, sanitized and air-dried in order to reduce the risk of microbial contamination during processing operations.

7 - PROCESSING OF COCONUT WATER

7.1 Personal and Environmental Hygiene

- 7.1.1 Personal and environmental hygiene practices must be employed during coconut water processing to avoid contamination.
- 7.1.2 Individuals must be in good health and observe Good Hygienic Practices (GHP) to prevent the contamination of the product during coconut water extraction and bottling.
- 7.1.3 The processing environment where the coconut is opened and transferred during bottling must be clean and free of animals, insects, dust or garbage.
- 7.1.4 The processing area shall include table(s), containers (plastic bins) with ice for coconut storage or refrigeration (if available), containers for tools storage, an area for hand washing and a container for discarded items at least 30ft. away from the processing area.
- 7.1.5 All surfaces must be cleaned and sanitized before coconut processing commences.
- 7.1.6 The process of cutting the coconut open and bottling of the extracted water must be physically separated to avoid contamination by fibers and debris.
- 7.1.7 Waste material (i.e. coconut husk) must be removed daily from the processing environment; the husk must be separated from other solid waste to allow contracted agents to collect it for further processing.

7.2 Good Hygienic Practices for Coconut Water Processors

- 7.2.1 Good hygienic practices shall be observed at all times.
- 7.2.2 Processors must wash their hands before handling the coconut for processing.
- 7.2.3 During coconut water processing, refrain from eating, chewing gum, talking or smoking to prevent product contamination.
- 7.2.4 Clean clothes should be worn or a clean, disposable apron that is changed once per hour or as needed.
- 7.2.5 Coconut Water operators who are sick shall not handle coconuts or coconut water (e.g. with the “flu” or Covid-19 symptoms).
- 7.2.6 If the processor has a cut, it shall be cleaned and covered with water resistant bandages and gloves worn when handling coconuts or coconut water.
- 7.2.7 Cover all hair (including beard) to protect the coconut water from possible contamination.
- 7.2.8 Wear other personal protective equipment such as a face mask or shield during processing.
- 7.2.9 Do not store coconuts, tools or equipment on the floor or ground; provide proper

storage bins, containers or shelving at least 6 inches above the ground on non-wood pallets.

7.3 Sanitization of bottles for coconut water collection

- 7.3.1 Care must be taken to properly sanitize the bottles for the bottling of coconut water. Improperly or non-sanitized bottles are a source of contamination and can affect product shelf-life.
- 7.3.2 The caps must also be sanitized at the same time as the bottles.
- 7.3.3 Proper sanitization can be achieved as follows:
 - 7.3.3.1 Rinse the bottles and caps in potable water.
 - 7.3.3.2 Sanitize for 15min.
 - 7.3.3.3 Allow the bottles and caps to air dry in an inverted position on a cleaned and sanitized drain rack.

7.4 Filtration of Coconut Water

- 7.4.1 Utilize a sanitized stainless steel strainer and a container for the filtration of coconut water.
- 7.4.2 Cool the extracted water immediately to 40°F(4°C) if not sold directly to the consumer and after cooling, transfer to labelled, sterilized, firmly capped bottles.
- 7.4.3 The bottled coconut water should be again maintained at 40°F(4°C) immediately, either by placing it under refrigeration on site for 3-4hrs., in a freezer, if available or in a sanitized plastic bin filled with ice.
- 7.4.4 Maintain good hygienic practices during bottling in order to avoid contamination.

7.5 Storage Temperature after Water Extraction and Bottling

- 7.5.1 Coconut water should be cooled to 40°F(4°C) immediately after extraction to maintain freshness and product stability.
- 7.5.2 Use a cleaned and sanitized bin with ice (made with potable water or from a reputable ice production facility) to store processed coconut water for cooling and quality control.
- 7.5.3 If available, a freezer can be used for quicker cooling to extend the coconut water shelf life.
- 7.5.4 Use adequate sheltering (tent, umbrella, etc.) to avoid exposure of the bottled coconut water in direct sun or at high temperatures which can affect coconut water quality resulting in lower pH (more acidic) and reduced Brix (sugar levels) over time.

7.6 Labeling of Bottled Coconut Water

- 7.6.1 Labels facilitate product identification and traceability.
- 7.6.2 Labels should be vibrant, attractive and informative.
- 7.6.3 At minimum, mobile coconut water street vendors shall contain labels with the following:
 - 7.6.3.1 Product name, such as “Fresh, Bottled Coconut Water” and Brand (your company name and phone contact);
 - 7.6.3.2 The statement, ‘Keep refrigerated’; and
 - 7.6.3.3 If frozen, the statement, ‘Thaw and shake well’.

- 7.6.4 Processors that manufacture coconut water for larger retail and wholesale markets, shall include these additional labeling requirements:
- 7.6.4.1 The net volume of coconut water.
 - 7.6.4.2 Ingredients in descending order of quantity. In this case, coconut water is the sole ingredient.
 - 7.6.4.3 A code date indicating the date of manufacture.
 - 7.6.4.4 A “best used before” date - within 3-4hrs for fresh coconut water; within 1-2d for refrigerated product; for optimal taste and quality, within 5d after freezing.
 - 7.6.4.5 Detailed contact information (company address, phone, email and/or website).
 - 7.6.4.6 Labels should be waterproof to ensure they adhere to the bottle during storage on ice or during refrigeration.
- 7.6.5 Coconut water sold while still in the coconut does not require a label.

7.7 Storage and Transportation of Bottled Coconut Water

- 7.7.1 Bottled coconut water must be maintained between 32-40°F(0-4°C) during transportation and storage to prevent the proliferation of yeast and bacteria and to ensure that the quality is maintained and shelf life is prolonged.
- 7.7.2 Do not store bottled coconut water in the sun or at high temperatures; temperatures should not exceed 40°F(4°C).
- 7.7.3 When purchasing coconut water, whether from a street vendor or at a retail establishment, ensure that it is stored at the correct temperature and away from direct light.

7.8 Ice and Refrigeration

- 7.8.1 If a mechanical refrigeration unit is available, it must be kept clean and in good repair and must be capable of maintaining food temperatures of 40°F(4°C) or below. Thermometers must be provided in all refrigeration units.
- 7.8.2 If ice is to be used for temperature control, the following must be achieved:
 - 7.8.2.1 Ice must be from an approved source.
 - 7.8.2.2 The ice-holding container must be strong, durable, constructed of non-porous materials, with an attached lid, cleaned and sanitized. Styrofoam coolers are not recommended.
 - 7.8.2.3 Ice used for cooling the bottled coconut water shall not be used for human consumption.
 - 7.8.2.4 Drain the ice container to prevent water accumulation resulting in bottles falling below the ice-water level.

8 – EQUIPMENT, MAINTENANCE AND WASTE REMOVAL

8.1 Construction of Mobile Units/Stalls and Site Location

- 8.1.1 Mobile vendors may choose from varying levels of mobile units from a simple tent (with sides that can be rolled down) with tables and other pieces of equipment to the more advanced systems on wheels or larger food trucks.
- 8.1.2 Mobile units or structures must be approved by the competent authority.
- 8.1.3 Fans and or screens, depending on your set up, may be included to not only control flies but for providing relief from the heat.

- 8.1.4 All food contact surfaces must be durable, smooth, easily cleanable, non-absorbent, and non-toxic; and kept in good repair.
- 8.1.5 Overhead protection must be provided for all food preparation and food storage areas. Materials such as canvas, plastic or wood that protect the establishment from the weather must be approved.
- 8.1.6 A site should be chosen which will minimize problems associated with dirt, flooding, muddy areas and dust.
- 8.1.7 All other equipment must be constructed and properly maintained (cleaned and sanitized) in a manner consistent with these guidelines.

8.2 Hand and Equipment Washing



- 8.2.1 An approved hand wash sink with hot and cold water must be installed under pressure.
- 8.2.2 Where hot and cold water under pressure is not practical, a barrel with a capacity to hold up to 30-40 gal of potable water for cleaning and sanitization shall either be affixed at an angle to allow gravity flow to the mobile unit/stall or in a position that is safe from contamination.
- 8.2.3 Moist towelettes containing alcohol may be used to sanitize hands in the event the water runs out but for no more than 2hrs. before the water is refilled.
- 8.2.4 All coconut water street vendors must be equipped with either a two-compartment sink or an approved two-bin/bucket system to wash and sanitize tools and equipment.
- 8.2.5 A separate two-bin/bucket system may be required for the washing and sanitizing of the coconut prior to coconut water extraction.

8.3 Water Supply



- 8.3.1 Where available, hot and cold water must be provided from an approved source;
- 8.3.2 Portable water must be sourced from a potable water supply and be adequate to meet the vendor needs on a daily basis.
- 8.3.3 A strong, durable and suitable water storage container shall be used for the containment of potable water.

8.4 Wastewater



- 8.4.1 Wastewater must be retained in a spill and leak proof container with a larger capacity than the water supply available.
- 8.4.2 Wastewater must be disposed of into an approved sanitary sewer or tank. Receipts verifying proper disposal may be required.

8.5 Refuse:



- 8.5.1 All food wastes such as the husks or soiled paper or hand towel and other waste, must be stored in a leak proof, plastic or galvanized refuse container with a tight fitting lid.
- 8.4.3 Waste must be emptied or taken away every day.
- 8.4.4 Vendors may engage other establishments to collect their coconut husks but they must be separated from other solid waste.

9 - PENALTIES AND FINES

9.1 Enforcement

- 9.1.1 Any coconut water vendor who fails to act in accordance with these guidelines commits an offence and shall be liable upon summary conviction to a fine of one hundred dollars but not exceeding one thousand dollars.
- 9.1.2 Furthermore, any vendor who operates a business without being registered or having all the compliance documents in Section 4, subsection 4.3, commits an offence and shall be liable upon summary conviction to a fine of five hundred dollars but not exceeding two thousand dollars.
- 9.1.3 Where there is a repeat offence, the vendor is liable to a further fine not exceeding two hundred dollars for each day that such offence continues.
- 9.1.4 All fines are to be paid within 7 days of the date of the offence, non-payment of which shall result in the temporary closure of the business until the fine is paid in full.

BOTTLED COCONUT WATER PRODUCTION

Receiving and storage of coconuts



Preliminary washing of coconuts in potable water



Sanitizing with chlorinated water for 15 minutes

i.e. 300 ppm 5% chlorine bleach

(1 oz or 1 tablespoon of bleach per 4.5 liters (1gal) of water)



Storage of coconuts in a clean environment and air drying off the ground



Cutting of coconuts (with a stainless steel (SS) cutlass) on a sanitized plastic cutting board or SS table¹



Filtering of the coconut water through a sanitized silk screen cloth or cheese cloth in a SS sieve/strainer



Collection of coconut water in a sanitized container 40°F(4 °C)



Transfer to a cooling tank, or to a freezer, and chill to 40°F(4°C)

Rapidly filling coconut water in sanitized bottles²



Label and immediately cooling in ice or in a freezer



Drain



Store at 40°F(4°C)



Distribute on ice

¹ Quality control checks on coconut water:

a) turbidity - not turbid; b) no rancid odor.

² Sanitize bottles in diluted bleach water (1 tablespoon 5 percent bleach in 4.5 litres (1gal) of water).