



UGANDA NATIONAL BUREAU OF STANDARDS

Minimum requirements for producers of Drinking water and Imitation drinks (Juices).

1. **Trading license**- The business must be registered with and licensed by the local authorities and must therefore have a trading license.
2. **Water source** – Only National Water from (NWSC) shall be allowed as raw material. The tap must be within the premises and the raw water shall not be transported by means other than that of piping system. Where any other source other than NWSC is available, there must be a certificate of quality analysis of the source of water from UNBS laboratories at least twice a year, or any other certified or accredited laboratories. The water to be used for mixing the juices must pass through the same process as drinking water.
3. **Production equipment**

(a) **Storage tanks** – Raw/ finished product storage tanks should be made of appropriate material; stainless steel, and food grade plastic tanks/ containers. Raw/ finished product storage tanks should have appropriate covers, provisions for cleaning and disinfection; and should be placed on a raised level.

N.B A plastic container can no longer be considered food grade if it has been used to store non-food items like chemicals, paint, or detergents.

(b) **Water treatment**- Water treatment facility shall have provisions for killing microorganisms /sterilization; (e.g. UV treatment, Ozonation, or any other technically acceptable sterilization system) which shall be referred to UNBS for technical evaluation. Appropriate cleaning and disinfection mechanism of the system should be put in-place.

(c) **Micro filters**- A minimum of a three stage filtration system should be put in-place for purifying water for blending the final product, **these are:** cartridge filters of **size 0.5 microns, activated carbon filters**, and cartridge filters of **0.2 micron**.

(d) **Filling and sealing equipment**

Stainless steel tanks/ food grade plastic tanks fitted with stainless steel taps on a raised level from the ground shall be used. The filling equipment should be designed in such a way to prevent any possible means of contamination of the final product. Packaging material should be kept clean and aseptic (in tightly sealed packages) till the time of filling. The filled bottles should be sealed immediately. Working tables preferably of stainless steel material should also be provided.

(e) **Pipes and fittings**- Water Pipes and fittings shall be made of stainless steel or food grade plastic material that is easy to clean and disinfect.

(f) **Laboratory equipment** -Simple diagnostic tools i.e. pH meters, refractometers for measuring brix, and TDS meters for measuring Total Dissoluble Solids, measuring cylinders, and thermometers shall be available to carry out internal laboratory checks.

(g) **Others**- Appropriate calibrated weighing scales **especially** for critical ingredients like preservatives must be available.

4. **Raw material supply and handling** - Raw materials (ingredients) shall be purchased from recognized suppliers who should be able to provide a copy of certificates of quality analysis

of the critical parameters in line with the relevant specifications for food intended for human consumption, to ascertain fitness for human consumption of the products from the respective manufacturers.

5. Hygiene-these shall meet the requirements of premises, and personnel.

- **Premises-** Premises shall be permanent structures, with food grade paint finishing or tiles on the walls, smooth floor, that are easy to wash and disinfect daily, windows and doors shall have a provision for a fly mesh screen to prevent/minimize entry of insects and or dust to the production room, vermin proof and with no direct connection with residential premises.
- **Premises** must be availed with **clean toilets**, preferably flash toilets. Where pit latrines are used they shall be clean, covered, lockable and not less than 15 meters away from the processing area, and shall have flowing water hand washing facilities with a provision for dispensers for liquid soap and hand sanitizer.
- **Personnel-** shall have valid medical certificates to prove that they are fit to work in food industries, free from any contagious diseases. The certificates shall be renewable every after 6 months by K.C.C Clinics or any authorized medical hospitals. Personnel shall be provided with appropriate protective wear like nose/mouth mask, head gears, gumboots, overcoats and these shall be kept clean. Personnel shall also be checked daily before production for personal hygiene, (short clean nails, beards, flu etc)

6. Product labeling- All the packaged water and juices shall have the following on the labels.

- Name of the manufacturer as it appears on the Trading license,
- Address of the manufacturer including physical location of the plant and telephone contact,
- The brand name and the words” **Drinking water**” for water and ”**Fruit flavored juice/drink**” for juice, or” **Fruit juice**” for that which is actually from the natural fruit. The type of flavor used shall also be declared e.g. mango, pineapple, passion etc., the statement of concentrated or ready to drink shall also appear.
- List of ingredients shall also be declared in descending order of quantities added, the actual name of preservatives used shall be declared.
- Date of manufacture, expiry date, and batch number.
- Net quantity of juice or water packed in mls or litres shall also be declared.

7.Documentation- the following minimum documents shall be used and kept at the premises – Relevant standards, Cleaning and disinfection program, medical certificates, personal hygiene checks, Internal test results, equipment service/maintenance records; final product analysis records and any other activities that may be deemed crucial to the production process by the manufacturer.

8.UNBS Laboratory Test Certificates- No person shall be allowed to sell packaged water or juice before a sample of the product has been tested by UNBS and proved to meet the requirements of the relevant standards (US 42: 2008, US 43:2008, US 48: 2003, US 62-1: 2000 and US 7:2002). In addition, the manufacturer shall ensure that samples of the water are tested by UNBS as follows.

- Weekly for the first month
- Monthly for the next 3 months
- Every 3 months there after