

Legal Notice No. 42/1998

THE POTABLE WATER REGULATIONS

Art 1. Short title:

These Regulations may be cited as the "Potable Water Regulations Legal Notice No 42/1998".

Art 2. Scope of Application

These Regulations concern standards of water intended for human consumption, to be observed in fishery product activities within the context of the Fishery Product Proclamation No 105/1998 and the Fishery Product Regulation Legal Notice No 40/1998.

Art 3. Definition

For the purpose of these Regulations, water intended for human consumption shall mean all water used for that purpose, either in its original state or after treatment, regardless of origin:

- Whether supplied for consumption or
- Whether
 - used in a food production undertaking for the manufacture, processing, preservation or marketing of products or substances intended for human consumption and
 - affecting the wholesomeness of the foodstuff in its finished form.

Art 4. Types of water to which these Regulations do not apply

These Regulations shall not apply to:

- (a) natural mineral waters recognized or defined as such by the Institute of Eritrean standards; and
- (b) medicinal water recognized as such by the Institute of Eritrean Standards.

Art 5. Plan of Water Distribution

The management of a plant shall account for the source(s) of supply (mains, mains with intermediate storage, surface water or well water) and be responsible for ensuring that the water used in the plant is potable. It shall demonstrate the water distribution system within the plant. The official inspector shall have access to a reticulation plan that shows pipes and all outlets within the plant. Consecutive numbering to enable location on the plan shall identify the outlets themselves.

Art 6. Chlorination System

If chlorine is used, it shall be added in line by dosing or injection (gas or liquid) prior to intermediate storage to permit sufficient contact time with the water in order to allow the chlorine to react with the organic matter such that the chlorine not combined after 20-30 minutes remains as free residual chlorine available in line to react with whatever contamination present in the piping system (back syphonages, dead ends, for example). The retention tank, shall therefore, have the capacity to retain the water together with the chlorine added for at least 20-30 minutes.

The cleaning programs for intermediate storage shall be documented and monitored and be demonstrable.

The products (fish, shrimp, mollusks.. etc) shall not be washed, dipped, glazed, or treated with hyperchlorinated water. It is recommended to use, in the case of an in-plant chlorinating system the same chlorine level as authorized by the legislation in the third country for potable water intended for direct human consumption.

The chlorine content shall be checked regularly (at least once a day). An alarm system is recommended to be applied to ensure the functioning of the chlorination system.

Art 7. Microbiological examinations

1) Frequency:

- for public supply without intermediate storage at least once per three months from various representative outlets within the plant; and
- for public supply with intermediate storage and/or private supply: at least once per month from various representative outlets within the plant.

2) Standards

- The initial analysis shall be done according to Table 1 of these Regulations.

Table 1: MICROBIOLOGICAL PARAMETERS

	Parameter	Results volume of the sample in ml	Guide level (Gl)	Maximum advisable concentration(MAC)	
				Membrane Filter method	Multiple tube method
1	Total coliforms(1)	100	-	0	MPN<1
2	Fecal coliforms	100	-	0	MPN<1
3	Fecal streptococci	100	-	0	MPN<1
4	Sulphite reducing clostridia	20	-	-	MPN<1

Water intended for human consumption should not contain pathogenic organisms. If it is necessary to supplement the microbiological analysis of water intended for human consumption, the samples should be examined not only for the bacteria referred to in Table 1 but also for pathogens including:

- Salmonella
- Pathogenic staphylococci
- Faecal bacteriophages
- Enteroviruses

nor should such water contain:

- Parasites
- Algae
- Other organisms such as animalcules.

(1) Provided a sufficient number of samples is examined (95% consistent result).

	Parameters	Results size of sample (in ml)	Guide level (Gl)	Maximum advisable concentration	Comments
5	Total bacteria counts for water supplied	37 C	1	10(1) (2)	
	for human consumption	22 C	1	100(1) (2)	

(1) For disinfected water the corresponding values should be considerably lower at point where it leaves the processing plant.

(2) If, during successive sample, any of these values is consistently exceeded a check should be carried out.

The routine tests shall be according to table 1 of these Regulations.

- No. 1 total coliforms.
- No. 5 total counts at 22 C (incubation min. 72 hrs)
total counts at 37 C (incubation min. 48 hrs)

Two consecutive samples should not be positive for coliform organisms. If the samples show the presence of *E. coli*, *Faecal streptococci* or Sulphite reducing clostridia, the water of the said source(s) must not be used until the contamination has been eliminated.

3) Exceeding standards

If the results of the initial or the routine tests are unsatisfactory an immediate investigation and further sampling must be carried out. The sample must be examined immediately using parameters as laid down in Table 1 of these Regulations.

Art 8. Phsicochemical examination

1) Frequency

Water from private supplies shall be examined at least once per annum.

For water from public supplies, it shall be sufficient to show that the required examination has been carried out.

2) Standards

Physico/chemical examinations cover at least once, all parameters prescribed in Table 2 (below):

Table 2. TABLE OF STANDARD PATTERN ANALYSES (Parameters to be considered in monitoring).

Standard analyses	Minimum monitoring	Current monitoring	Periodic monitoring	Occasional monitoring in special situations or in case of accidents
Parameters to be considered	(C1)	(C2)	(C3)	(C4)
ORGANOLEPTIC PARAMETERS-	- Odor(1) - Taste(1)	- Odor - Taste - Turbidity (appearance)		The competent authority will determine the parameters (5) according to circumstances, taking account of all factors which might have an adverse affect on the quality of drinking water supplied to footnote(4)
PYSICOCHEMICAL PARAMETERS	- Conductivity or other physicochemical parameter	- Temperature(2) - Conductivity or other physicochemical parameter. - PH - Residual chlorine(3)	Current monitoring analyses + other parameters as in	
UNDESIRABLE PARAMETERS		- Nitrates - Nitrites - Ammonia		
TOXIC PARAMETERS Note: an initial analysis to be carried out before a source is exploited should be added. The parameters to be considered would be the current monitoring analyses plus, inter alia, various toxic or undesirable substance presumed present. The competent authority would draw up the list.				
(1) Qualitative assessment. (2) Except for water supplied in containers. (3) Or other disinfectants and only in the case of treatment. (4) These parameters will be determined by the competent national authority, taking account of all factors which might affect the quality of drinking water, supplied to users and which could enable the ionic balance of the constituents to be assessed. (5) The competent national authority may use parameters other than those mentioned in Tables 1 and 2 to these Regulations.				

On routine checks, examinations carried out, in particular on chemical parameters, must concentrate on those which proved to be critical, aiming to eliminate sources of contamination. Some physical checks such as pH, turbidity organic matter should be checked even far more frequently than once a year in case of chlorination.

Results of all examinations shall be retained for at least 2 years.

Art 9. Sampling

The sample shall be collected in sterile bottle. The tap to be sampled shall be run for long enough to completely flush the pipe supplying the tap, and in any case for 2-3 minutes. Before a water sample is drawn

from the tap, the tip of the tap shall be flamed using spirit and water shall be allowed to flow for 5 minutes before collection. In cases where the test is undertaken 3 hours or more after sampling, the bottles must be kept in ice. If a sample is to be taken from a chlorinated water supply, any trace of chlorine shall be neutralized immediately after collection. A crystal of sodium thiosalphate introduced into the sampling bottle prior to sterilization serves to neutralize the chlorine.

The samples shall be taken from various outlets within the plant. A rotation is organized between the identified outlets from which the water is in contact with the product. Ice shall also be regularly tested.

The result of the examination shall have the identification of the outlet where the sample is collected.

Art 10. Laboratories for official and private checks.

The yearly (3 month) full examination sample (organoleptic, physicochemical, undesirable and toxic substances, microbiological parameters) is to be collected by an official person and analyzed in an official laboratory.

The routinely-taken samples are to be collected by the management of the plant and analyzed in the in-plant laboratory or in an external private accredited laboratory. These examinations are to be carried out under the supervision of the official inspector.

Art 11. Entry into Force

These Regulations shall enter into force as of the date of their publication in the Gazette of Eritrean Laws.

Done at Asmara, this 25th day of May, 1998
Petros Solomon,
Minister of Fisheries.