

## **CONSOLIDATED TO 30 JUNE 2012**

### Section 6

#### **Public Health (Water Examination) Regulations**

G.N 47/1910.  
G.N.54/1926.  
G.N. 75/1947.  
G.N.292/1951.  
SI. 25/1960  
SI. 50/1962.  
SI. 60/1966.  
SI. 104/1975

1. These Regulations may be cited as the Public Health (Water Examination) Regulations.
2. In these Regulations -  
  
"drinking water" means water used for drinking or domestic purposes;  
  
"swimming pool water" means water in a swimming pool used for public bathing purposes, where contamination can result in involuntary consumption of the water, and whether or not admission to the pool is gained by payment.
3. (1) The standard relating to the wholesomeness, purity, and quality of drinking water is specified in Schedule 1.  
  
(2) Drinking water shall conform to the standard specified in Schedule 1.
4. (1) The standard relating to swimming pool water is specified in paragraphs 2, 3, 4, 7 and 9 of Schedule II.  
  
(2) Swimming pool water shall conform to the standard specified in subregulation (I).  
  
(3) No swimming pool shall be used or made available for use unless all the provisions in Schedule II are complied with.
5. An environmental health officer authorized under the Public Health Act may enter any premises at any time to take samples of drinking water for examination, to ascertain the wholesomeness of the water issued, served or used in those premises or at source for drinking or domestic purposes, and to ascertain the purity levels of swimming pool water.
6. (1) Where the Medical Officer of Health is of the opinion that any drinking water in any premises is unwholesome or polluted or does not conform to the standard prescribed in these Regulations, he may, by notice in writing, direct the occupier or the person having the charge, control or management of the premises to cease from issuing, serving or using the water for drinking or domestic purposes.  
  
(2) The Medical Officer of Health may, by notice in writing, direct the owner or person having the charge, control or management of any swimming pool (including those owned by the Government) to close the swimming pool within a time specified in the notice if -
  - (a) he fails to comply with any of the provisions of these Regulations relating to swimming pools;

- (b) there is an outbreak of an infectious disease which may endanger the health of any persons using the swimming pool.

(3) The Medical Officer of Health shall revoke a notice issued under subregulation (1) or (2), where he is satisfied that the drinking water or the swimming pool or the swimming pool water, as the case may be, referred to in the notice has conformed to the standards or requirements prescribed in these Regulations or that there is no danger of any outbreak of an infectious disease.

(4) Where an owner or person having the charge, control or management of a swimming pool has been directed under subregulation (2) to close a swimming pool he shall ensure that all access to the pool is effectively closed or barricaded.

7. The owner or person having the charge, control or management of a swimming pool shall not permit any person who suffers from any cut, wound or sore to use a swimming pool.

8. (1) The Minister shall appoint an analyst for the purposes of examination of drinking water and swimming pool water.

(2) The Director of the Public Health Laboratory of the Ministry of Health shall, until an appointment is made under subregulation (1), be an analyst for the purposes mentioned in that subregulation.

9. The Medical Officer of Health shall take immediate investigative action if either E. Coli or total coliform bacteria are detected in any water by the analyst and shall take action to have the cause determined and any further pollution prevented.

10. No person shall obstruct the Medical Officer of Health or an environmental health officer in the performance of the functions under these Regulations.

11. Any person who fails to comply with a notice under regulation 6(1) or (2) or contravenes regulation 6(4), 7 or 10 is guilty of an offence and is liable on conviction to a fine of R1000.

## SCHEDULE 1

### STANDARD FOR THE QUALITY OF DRINKING WATER

1. Escherichia coli organism or thermotolerant coliform bacteria must not be detectable in any 100 ml sample of all water intended for drinking or any treated water entering or in the distribution system. Whilst there could be some coliform bacteria of no sanitary significance in untreated supplies of water, within a distribution system of treated water, there should be no total coliform bacteria in 95% of multiple samples taken throughout any 12 month period, and not more than 3 in consecutive samples.
2. The following are the Maximum Contaminant levels of chemicals and physical properties of drinking water.

#### Inorganic Chemicals

#### MCL (mg/litre)

#### & Physical Characters

|         |      |
|---------|------|
| Arsenic | 0.01 |
|---------|------|

|                 |           |                                                                                                                                             |
|-----------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Chlorine        | 5         | (for effective disinfection there should be a free chlorine residual at least 0.5 mg/litre after 30 minutes contact time at pH less than 8) |
| Chromium        | 0.05      |                                                                                                                                             |
| Fluoride        | 1.5       |                                                                                                                                             |
| Lead            | 0.01      |                                                                                                                                             |
| Mercury         | 0.001     |                                                                                                                                             |
| Nitrates (as N) | 10        | (when used for infants and only as a Guideline Value)                                                                                       |
| Sodium          | 200       | (only as a Guideline Value)                                                                                                                 |
| Turbidity       | 5 NTU     | (Immediately before disinfection, and only as a guideline value)                                                                            |
| Odour           | 3         | Threshold odour number                                                                                                                      |
| pH              | 6.5 - 8.5 |                                                                                                                                             |

## **SCHEDULE II - STANDARDS FOR SWIMMING POOL WATER AND REQUIREMENTS OF SWIMMING POOLS**

**1.** The pumps, filters, disinfectant and chemical feeders, flow indicators, gauges, and all related parts of the water purification system of a pool shall be kept in working condition whenever the pool is available for use and for such further periods as may be necessary to maintain the water in the pool in a clear and disinfected condition.

**2.** (1) The continuous circulation and purification system shall be operated and maintained so as to keep the water in the pool clear and clean at all times to an extent that a 19SWG platinum wire can be seen at a depth of 2 metres.

(2) The colour of the water as determined in Hazen Unit shall not exceed 5.

**3.** (1) The pool shall be continuously disinfected by chlorine or any other chemical approved by the Medical Officer of Health.

(2) Where chlorine is used, a chlorine residual of not less than 0.4 milligram per litre and not more than 1.5 milligrams per litre shall be maintained at the outlet.

(3) Where other halogens or approved chemicals are used, a disinfectant residual shall be maintained at a level approved by the Medical Officer of Health.

**4.** The water in the pool shall be maintained in an alkaline condition as indicated by pH 7.2 to 8.4. Nitrates should be absent.

5. A testing kit for measuring the concentration of the disinfectant shall be provided and maintained in good working condition at each pool complex.

6. A testing kit for measuring the pH value of the water in the pool shall be provided and maintained in good working condition at each pool complex.

7. If an algicidal agent is required, then only copper sulphate may be used provided the concentration of copper sulphate determined as copper shall not exceed 0.2 milligram per litre.

8. No other chemical shall be used for any purpose without the prior approval of the Medical Officer of Health.

9. The bacteriological quality of the water in the pool shall be as follows:

- (a) no sample of the water shall contain any *Escherichia coli* organism in 100 millilitres of water;
- (b) not more than 1 out of 5 samples of the water shall contain any coliform organism in 100 millilitres of water and in any case none of the 5 samples shall contain more than 10 coliform organisms in 100 millilitres of water; and
- (c) no sample of the water shall contain a total of more than 200 bacteria per millilitre as determined by the 24 hour plate count at 37°C or by the membrane filter method.

10 (1) No floating scum, sputum and debris shall be allowed to accumulate in the pool.

(2) All floating materials shall be removed continuously either by skimming or by maintaining the water level in the pool.

11. All the surfaces of the pool including the decks shall be kept clean of slime, dirt and algae.

12. (1) All parts of the pool and pool complex including all auxiliary equipment shall be maintained in good condition.

(2) The bottom and side walls of the pool shall be kept free of cracks and other defects.

13. The entire pool area shall be kept clean, and free of litter and vermin.

14. Notices directing every swimmer to use a foot-bath and a shower before entering the pool shall be displayed in conspicuous places.

15. Every foot-bath shall be adequately provided with an approved disinfectant.

16. All shower rooms, toilets and changing rooms shall be well ventilated with at least 10 air changes per hour.

17. All toilets, urinals, showers, wash basins and other plumbing fixtures shall be maintained in a clean condition and in good repair,

**18.** All bathing suits and towels furnished or rented out by the management of the pool shall be laundered and cleaned, and caps shall be sanitized after each usage.

**19.** (1) The chlorine gas feeding equipment room of the pool shall be well ventilated.

(2) The room shall not be below ground level and shall be provided with vents close to the floor level.

(3) An approved extractor fan capable of providing at least 10 air changes per hour shall be installed near the floor level and the discharge point shall be away from neighbouring premises.

**20.** (1) An approved gas mask designed for use in a chlorine atmosphere shall be kept in an unlocked cabinet outside the chlorine gas feeding equipment room.

(2) In addition, a replacement canister shall be provided and a record shall be kept of the use of the gas mask to ensure that the mask shall be serviceable when needed.

**21.** (1) Diagramatic illustrations of Cardio-Pulmonary Resuscitation procedure shall be posted so that they are clearly visible from any nearby deck.

(2) An adequately equipped first-aid box and a telephone shall be installed in a conspicuous place.

**22.** All records of tests taken daily on the pH value of the water in the pool and the residual chlorine therein shall be kept and shall be made available for inspection by the Medical Officer of Health or an environmental health officer.

**23.** Samples of the water in the pool shall be submitted to the Analyst for chemical and bacteriological analyses at least once a month or at such other intervals as may be stipulated by the Medical Officer of Health.