L.N. 17 of 2009

FOOD SAFETY ACT
(CAP. 449)

Water Intended for Human Consumption Regulations, 2009

IN exercise of the powers conferred by article 10 of the Food Safety Act, the Minister for Social Policy has made the following regulations:-

Citation.

1. (1) The title of these regulations is the Water Intended for Human Consumption Regulations, 2009.

Scope.

2. These regulations transpose Council Directive 98/83/EC of 3 November, 1998, on the quality of water intended for human consumption. These regulations also concern the quality of water intended for human consumption, with the objective to protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean, and to set in place a regime that provides protection to persons consuming the water. They shall apply to any water supplied by a water supplier.

Definitions.

3. For the purposes of these regulations and unless the context otherwise requires:-

"the Act" means the Food Safety Act;

"competent authority" means the Superintendent of Public Health or a person authorized to act on his behalf;

"the Directive" means Council Directive 98/83/EC of 3 November, 1998 on the quality of water intended for human consumption and any amendments thereto;

"distribution network" includes any method by which water intended for human consumption is transported to a domestic distribution system;

"domestic distribution system" means the pipe work, fittings and appliances which are installed between the taps intended to convey water for human consumption, and the distribution network, except those which fall under the

responsibility of the water supplier in its capacity as a water supplier;

"private water supply" means any potable water which is not distributed through a distribution network;

"source" with respect to water shall include the outlet of water treatment works, a borehole, a pumping station, a blending point or a service reservoir, whether permanent or not;

"water intended for human consumption" means:

(a) all water either in its original state or after treatment, intended for drinking, cooking, food preparation or other domestic purposes, regardless of its origin and whether it is supplied from a distribution network, from a tanker, or in bottles or containers;

(b) all water used in any food-production undertaking for the manufacture, processing, preservation or marketing of products or substances intended for human consumption unless the competent authority is satisfied that the quality of the water cannot affect the wholesomeness of the foodstuff in its finished form.

Exemptions.

4. (1) The provisions of these regulations shall not apply to:

(a) natural mineral waters recognised as such by the competent authority, in accordance with Council Directive 80/777/EEC of 15 July 1980 on the approximation of the laws of the Member States relating to the exploitation and marketing of natural mineral waters;

(b) waters which are medicinal products within the meaning of Council Directive 65/65/EEC of 26 January 1965 on the approximation of provisions laid down by law, regulation or administrative action relating to medicinal products.

(2) The competent authority may exempt from the provisions of these regulations:

(a) water intended exclusively for those purposes for which the competent authority is satisfied that the quality of

the water has no influence, either directly or indirectly, on the health of the consumers concerned;

(b) water intended for human consumption from an individual supply providing less than 10 m^3 a day as an average or serving fewer than 50 persons, unless the water is supplied as part of a commercial or public activity.

(3) In those cases where the competent authority grants the exemptions provided for in the preceding sub regulation it shall ensure that the population concerned is informed thereof and of any action that can be taken to protect human health from the adverse effects resulting from any contamination of water intended for human consumption. In addition, when a potential danger to human health arising out of the quality of such water is apparent, the population concerned shall promptly be given appropriate advice.

General obligations.

5. (1) Without prejudice to other obligations under the provisions of other laws the competent authority shall take the measures necessary to ensure that water intended for human consumption is wholesome and clean. For the purposes of the minimum requirements of these regulations, water intended for human consumption shall be wholesome and clean if:

(a) it is free from any micro-organisms and parasites and from any substances which, in numbers or concentrations, constitute a potential danger to human health, and

(b) it meets the minimum requirements set out in Schedule I, Parts A and B; and

(c) if in accordance with the relevant provisions of these regulations and in accordance with the Treaty, the competent authority takes all other measures necessary to ensure that water intended for human consumption complies with the requirements of these regulations.

(2) The competent authority shall ensure that the measures taken to implement the provisions of these regulations in no circumstances have the effect of allowing, directly or indirectly, either any deterioration of the present quality of water intended for human consumption so far as that is relevant for the protection of human health or any increase in the pollution of waters used for the production of drinking water.

Quality standards.

6. (1) The competent authority shall set values applicable to water intended for human consumption for the parameters set out in Schedule I.

(2) The values set in accordance with the preceding paragraph shall not be less stringent than those set out in Schedule I. As regards the parameters set out in Schedule I, Part C, the values need be fixed only for monitoring purposes and for the fulfillment of the obligations imposed in regulation 9.

(3) The competent authority shall set values for additional parameters not included in Schedule I where the protection of human health in Malta or any part within it so requires. The values set should, as a minimum, satisfy the requirements of regulation 5(1)(a).

Point of compliance.

7. (1) The parametric values set in accordance with the preceding regulation shall be complied with:

(a) in the case of water supplied from a distribution network, at the point, within premises or an establishment, at which it emerges from the taps that are normally used for human consumption;

(b) in the case of water supplied from a tanker, at the point at which it emerges from the tanker;

(c) in the case of water put into bottles or containers intended for sale, at the point at which the water is put into the bottles or containers;

(d) in the case of water used in a food-production undertaking, at the point where the water is used in the undertaking.

(2) In the case of water covered by sub-regulation (1) (a) hereof, the competent authority shall be deemed to have fulfilled its obligation under this regulation and under regulations 5 and 9(2) where it can be established that non-compliance with the parametric values set in accordance with regulation 5 is due to the domestic distribution system or the maintenance thereof except in premises and establishments where water is supplied to the public, such as schools, hospitals and restaurants.

(3) Where the provision of sub-regulation (2) applies and there is a risk that water covered by paragraph (a) of sub-regulation (1) hereof would not comply with the parametric values

established in accordance with regulation 5, the competent authority shall nevertheless ensure that:

(a) appropriate measures are taken to reduce or eliminate the risk of non-compliance with the parametric values, such as advising property owners of any possible remedial action they could take, and, or other measures, such as appropriate treatment techniques, are taken to change the nature or properties of the water before it is supplied so as to reduce or eliminate the risk of the water not complying with the parametric values after supply; and

(b) the consumers concerned are duly informed and advised of any possible additional remedial action that they should take.

Monitoring.

8. (1) The competent authority shall take all measures necessary to ensure that regular monitoring of the quality of water intended for human consumption is carried out, in order to check that the water available to consumers meets the requirements of these regulations and in particular the parametric values set in accordance with regulation 6. Samples should be taken so that they are representative of the quality of the water consumed throughout the year. In addition, the competent authority shall take all measures necessary to ensure that, where disinfection forms part of the preparation or distribution of water intended for human consumption, the efficiency of the disinfection treatment applied is verified, and that any contamination from disinfection by-products is kept as low as possible without compromising the disinfection.

(2) To meet the obligations imposed in sub-regulation (1), appropriate monitoring programmes shall be established by the competent authority for all water intended for human consumption. Those monitoring programmes shall meet the minimum requirements set out in Schedule II.

(3) The sampling points shall be determined by the competent authority and shall meet the relevant requirements set out in Schedule II.

(4) (a) The competent authority shall comply with the specifications for the analyses of parameters set out in Schedule III.

(b) Methods other than those specified in Schedule III, Part 1, may be used, providing it can be demonstrated that the

results obtained are at least as reliable as those produced by the methods specified. Should the competent authority have recourse to alternative methods, it shall provide the European Commission with all relevant information concerning such methods and their equivalence.

(c) For those parameters listed in Schedule III, Parts 2 and 3, any method of analysis may be used provided that it meets the requirements set out therein.

(5) The competent authority shall ensure that additional monitoring is carried out on a case-by-case basis of substances and micro-organisms for which no parametric value has been set in accordance with regulation 6, if there is reason to suspect that they may be present in amounts or numbers which constitute a potential danger to human health.

Remedial action and restrictions in use.

9. (1) The competent authority shall ensure that any failure to meet the parametric values set in accordance with regulation 6 is immediately investigated in order to identify the cause.

(2) If, despite the measures taken to meet the obligations imposed in regulation 5(1), water intended for human consumption does not meet the parametric values set in accordance with regulation 6, and subject to regulation 7(2), the competent authority shall ensure that the necessary remedial action is taken as soon as possible to restore its quality and shall give priority to their enforcement action, having regard inter alia to the extent to which the relevant parametric value has been exceeded and to the potential danger to human health.

(3) Whether or not any failure to meet the parametric values has occurred, the competent authority shall ensure that any supply of water intended for human consumption which constitutes a potential danger to human health is prohibited or its use restricted or such other action is taken as is necessary to protect human health. In such cases consumers shall be informed promptly thereof and given the necessary advice.

(4) The competent authority shall decide what action under the preceding sub-regulation should be taken, bearing in mind the risks to human health which would be caused by an interruption of the supply or a restriction in the use of water intended for human consumption.

(5) The competent authority may establish guidelines to assist the water suppliers to fulfill their obligations under the preceding sub-regulation.

(6) In the event of non-compliance with the parametric values or with the specifications set out in Schedule I, Part C, the competent authority shall consider whether that non-compliance poses any risk to human health. It shall ensure that water suppliers take remedial action to restore the quality of the water where that is necessary to protect human health.

(7) The competent authority shall ensure that, where remedial action is taken, water suppliers have notified consumers except in those cases where the competent authority considers the non-compliance with the parametric value to be trivial.

Derogations.

10. (1) The competent authority may provide for derogations from the parametric values set out in Schedule I, Part B, or set in accordance with regulation 6(3), up to a maximum value to be determined by it, provided no derogation constitutes a potential danger to human health and provided that the supply of water intended for human consumption in the area concerned cannot otherwise be maintained by any other reasonable means. Derogations shall be limited to as short a time as possible and shall not exceed three years, towards the end of which a review shall be conducted to determine whether sufficient progress has been made. Where the competent authority intends to grant a second derogation, it shall communicate the review along with the grounds for its decision on the second derogation, to the European Commission. No such second derogation shall exceed three years.

(2) In exceptional circumstances, the competent authority may ask the European Commission for a third derogation for a period not exceeding three years. The European Commission shall take a decision on any such request within three months.

(3) Any derogation granted in accordance with this regulation shall specify the following:

(a) the grounds for the derogation;

(b) the parameter concerned, previous relevant monitoring results, and the maximum permissible value under the derogation;

(c) the geographical area, the quantity of water supplied each day, the population concerned and whether or not any relevant food-production undertaking would be affected;

(d) an appropriate monitoring scheme, with an increased monitoring frequency where necessary;

(e) a summary of the plan for the necessary remedial action, including a timetable for the work and an estimate of the cost and provisions for reviewing;

(f) the required duration of the derogation.

(4) If the competent authority consider the non-compliance with the parametric value to be trivial, and if action taken in accordance with regulation 9(2) is sufficient to remedy the problem within 30 days, the requirements of sub-regulation (3) need not be applied. In that case, only the maximum permissible value for the parameter concerned and the time allowed to remedy the problem shall be set by the competent authority.

(5) Recourse may no longer be had to sub-regulation (4) if failure to comply with any one parametric value for a given water supply has occurred on more than 30 days on aggregate during the previous 12 months.

(6) In the case where the competent authority has recourse to the derogations provided for in this regulation, then it shall ensure that the population affected by any such derogation is promptly informed in an appropriate manner of the derogation and of the conditions governing it. In addition the competent authority shall, where necessary, ensure that advice is given to particular population groups for which the derogation could present a special risk:

Provided that these obligations shall not apply in the circumstances described in regulation 4 unless the competent authorities decide otherwise.

(7) With the exception of derogations granted in accordance with the preceding sub-regulation (4), the competent authority shall inform the European Commission within two months of any derogation concerning an individual supply of water exceeding 1,000 m^3 a day as an average or serving more than 5,000 persons, including the information specified in sub-regulation (3).

(8) This regulation shall not apply to water intended for human consumption offered for sale in bottles or containers.

Quality assurance of treatment, equipment and materials.

11. The competent authority shall take all measures necessary to ensure that no substances or materials for new installations used in the preparation or distribution of water intended for human consumption or impurities associated with such substances or materials for new installations remain in water intended for human consumption in concentrations higher than is necessary for the purpose of their use and do not, either directly or indirectly, reduce the protection of human health provided for in these regulations; the interpretative document and technical specifications pursuant to Article 3 and Article 4 (1) of Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products shall respect the requirements of these regulations.

Information and reporting.

12. (1) The competent authority shall take the measures necessary to ensure that adequate and up-to-date information on the quality of water intended for human consumption is available to consumers.

(2) Without prejudice to Council Directive 90/313/EEC of 7 June 1990 on the freedom of access to information on the environment, the competent authority shall publish a report every three years on the quality of water intended for human consumption with the objective of informing consumers. The first report shall cover the years 2002, 2003 and 2004. Each report shall include, as a minimum, all individual supplies of water exceeding 1 000 m^3 a day as an average or serving more than 5 000 persons and it shall cover three calendar years and be published within one calendar year of the end of the reporting period.

(3) The competent authority shall send its reports to the European Commission within two months of their publication.

(4) The formats and the minimum information for the reports provided for in sub-regulation (2) shall be determined having special regard to the measures referred to in these regulations and shall, if necessary, be amended in accordance with the procedure laid down in Article 12 of the Directive.

(5) Together with the first report the competent authority shall also produce a report to be forwarded to the European Commission on the measures they have taken or plan to take to fulfill their obligations pursuant to regulation 7(3) and Schedule I, Part B, note 10.

Revokes L.N 23 of 2004.

13. The Quality of Water Intended for Human Consumption Regulations, 2004 are hereby being revoked.

Schedule I

Regulation 5

PARAMETERS AND PARAMETRIC VALUES

PART A

Microbiological parameters

Parameter	**Parametric value (number/100 ml)**
Escherichia coli (E. coli)	0
Enterococci	0
The following applies to water offered for sale in bottles or containers:	
Parameter	**Parametric value**
Escherichia coli (E. coli)	0/250 ml
Enterococci	0/250 ml
Pseudomonas aeruginosa	0/250 ml
Colony count 22 °C	100/ml
Colony count 37 °C	20/ml

PART B

Chemical parameters

Parameter	**Parametric value**	**Unit**	Notes
Acrylamide	0.10	µg/l	Note 1
Antimony	5.0	µg/l	
Arsenic	10	µg/l	
Benzene	1.0	µg/l	
Benzo(a)pyrene	0.010	µg/l	
Boron	1.0	mg/l	
Bromate	10	µg/l	Note 2
Cadmium	5.0	µg/l	
Chromium	50	µg/l	
Copper	2.0	mg/l	Note 3
Cyanide	50	µg/l	
1,2-dichloroethane	3.0	µg/l	
Epichlorohydrin	0.10	µg/l	Note 1
Fluoride	1.5	mg/l	Shall not apply until 31st December 2005
Lead	10	µg/l	Notes 3 and 4
Mercury	1.0	µg/l	
Nickel	20	µg/l	Note 3
Nitrate	50	mg/l	Note 5 Shall not apply until 31st December 2005
Nitrite	0.50	mg/l	Note 5
Pesticides	0.10	µg/l	Notes 6 and 7

Pesticides – Total	0.50	µg/l	Notes 6 and 8
Polycyclic aromatic hydrocarbons	0.10	µg/l	Sum of concentrations of specified compounds; Note 9
Selenium	10	µg/l	
Tetrachloroethene and Trichloroethene	10	µg/l	Sum of concentrations of specified parameters
Trihalomethanes – Total	100	µg/l	Sum of concentrations of specified compounds; Note 10
Vinyl chloride	0.50	µg/l	Note 1

Note 1: The parametric value refers to the residual monomer concentration in the water as calculated according to specifications of the maximum release from the corresponding polymer in contact with the water.

Note 2: Where possible, lower values should be aimed without compromising disinfection.

For the water referred to in regulation 7 (1)(a), (b) and (d), the value must be met, at the latest, 10 calendar years after the entry into force of Council Directive 98/83/EC. The parametric value for bromate from five years after the entry into force of Council Directive 98/83/EC until ten years after its entry into force is 25ug/l.

Note 3: The value applies to a sample of water intended for human consumption obtained by an adequate sampling method at the tap and taken so as to be representative of a weekly average value ingested by consumers. `

Note 4: For the water referred to in regulation 7 (1)(a), (b) and (d), the value must be met, at the latest, fifteen calendar years after the entry into force of the Directive . The parametric value for lead from five years after the entry into force of the Directive until fifteen years after its entry into force is 25ug/l.

Water suppliers must ensure that all appropriate measures are taken to reduce the concentration of lead in water intended for human consumption as much as possible during the period needed to achieve compliance with the parametric value.

When implementing the measures to achieve compliance with that value water suppliers must progressively give priority where lead concentrations in water intended for human consumption are highest.

Note 5: Water suppliers must ensure that the condition that [nitrate]/50 + [nitrite]/3 $\leq$ 1, the square brackets signifying the concentrations in mg/l for nitrate (NO_3) and nitrite (NO_2), is complied with and that the value of 0,10 mg/l for nitrites is complied with ex water treatment works.

Note 6: 'Pesticides' means:
- organic insecticides,
- organic herbicides,
- organic fungicides,
- organic nematocides,
- organic acaricides,
- organic algicides,
- organic rodenticides,
- organic slimicides,
- related products (*inter alia*, growth regulators)

and their relevant metabolites, degradation and reaction products.

Only those pesticides which are likely to be present in a given supply need be monitored.

Note 7: The parametric value applies to each individual pesticide. In the case of aldrin, dieldrin, heptachlor and heptachlor epoxide the parametric value is 0.030 µg/l.

Note 8: 'Pesticides – Total' means the sum of all individual pesticides detected and quantified in the monitoring procedure.

Note 9: The specified compounds are:
- benzo(b)fluoranthene,
- benzo(k) fluoranthene,
- benzo(ghi)perylene,
- indeno(1,2,3-cd)pyrene.

Note 10: Where possible, lower values should be aimed without compromising disinfection.

The specified compounds are: chloroform, bromoform, dibromochloromethane, bromodichloromethene.

For the water referred to in regulation 7(1)(a),(b) and (d) the value must be met at the latest, ten calendar years after the entry into force of the Directive . The parametric value for total THMs from five years after the entry into force of the Directive until ten years after its entry into force is 150ug/l.

Water suppliers must ensure that all appropriate measures are taken to reduce the concentration of THMs in water intended for human consumption as much as possible during the period needed to achive compliance with the parametric value.

When implementing the measures to achieve this value, water suppliers must give priority to those areas where THM concentrations in water intended for human consumption are highest.

PART C

Indicator parameters

Parameter	**Parametric value**	**Unit**	Notes
Aluminium	200	µg/l	
Ammonium	0.50	mg/l	
Chloride	250	mg/l	Note 1
Clostridium perfringens (including spores)	0	Number/100 ml	Note 2
Colour	Acceptable to consumers and no abnormal change		
Conductivity	2500	µS cm^{-1} at 20 ^{o}C	Note 1
Hydrogen ion concentration	≥ 6.5 and ≤ 9.5	PH units	Notes 1 and 3
Iron	200	µg/l	
Manganese	50	µg/l	
Odour	Acceptable to consumers and no abnormal change		
Oxidisability	5.0	mg/l O_2	Note 4
Sulphate	250	mg/l	Note 1
Sodium	200	mg/l	
Taste	Acceptable to consumers and no abnormal change		
Colony count 22 ^{o}C	No abnormal change		

Coliform bacteria	0	Number/100 ml	Note 5
Total organic carbon (TOC)	No abnormal change		Note 6
Turbidity	Acceptable to consumers and no abnormal change		Note 7

RADIOACTIVITY

Parameter	**Parametric value**	**Unit**	Notes
Tritium	100	Bq/l	Notes 8 and 10
Total indicative dose	0.10	MSv/year	Notes 9 and 10

Note 1: The water should not be aggressive.

Note 2: This parameter need not be measured unless the water originates from or is influenced by surface water. In the event of non-compliance with this parametric value, the water supplier concerned must investigate the supply to ensure that there is no potential danger to human health arising from the presence of pathogenic micro-organisms, e.g. cryptosporidium. The competent authority shall include the results of all such investigations in the reports it is bound to submit under regulation 12(2)

Note 3: For still water put into bottles or containers, the minimum value may be reduced to 4.5 pH units.

For water put into bottles or containers which is naturally rich in or artificially enriched with carbon dioxide, the minimum value may be lower.

Note 4: This parameter need not be measured if the parameter TOC is analysed.

Note 5: For water put into bottles or containers the unit is number/250 ml.

Note 6: This parameter need not be measured for supplies of less that 10,000 m^3 a day.

Note 7: In the case of surface water treatment, water suppliers should aim for a parametric value not exceeding 1.0 NTU (nephelometric turbidity units) in the water ex treatment works.

Note 8: Monitoring frequencies to be set later in Schedule II.

Note 9: Excluding tritium, potassium –40, radon and radon decay products; monitoring frequencies, monitoring methods and the most relevant locations for monitoring points to be set later in Schedule II.

Note 10: 1. The proposals required by note 8 on monitoring frequencies, and note 9 on monitoring frequencies, monitoring methods and the most relevant locations for monitoring points in Schedule II shall be adopted in accordance with the procedure laid down in Article 12 of the Directive. When elaborating these proposals, the European Commission shall take into account *inter alia* the relevant provisions under existing legislation or appropriate monitoring programmes including monitoring results as derived from them. The European Commission shall submit these proposals at the latest within 18 months following the date referred to in Article 18 of the Directive.

2. A Member State is not required to monitor drinking water for tritium or radioactivity to establish total indicative dose where it is satisfied that, on the basis of other monitoring carried out, the levels of tritium of the calculated total indicative dose are well below the parametric value. In that case, it shall communicate the grounds for its decision to the European Commission, including the results of this other monitoring carried out.

Schedule II

Regulation 8

MONITORING

TABLE A

Parameters to be analysed

1. *Check monitoring*

The purpose of check monitoring is regularly to provide information on the organoleptic and microbiological quality of the water supplied for human consumption as well as information on the effectiveness of drinking-water treatment (particularly of disinfection) where it is used, in order to determine whether or not water intended for human consumption complies with the relevant parametric values laid down in these regulations.

The following parameters must be subject to check monitoring. The HEALTH AUTHORITY may add other parameters to this list if he deems it appropriate.

Aluminium (Note 1)
Ammonium
Colour
Conductivity
Clostridium perfringens (including spores) (Note 2)
Escherichia coli (E. coli)
Hydrogen ion concentration
Iron (Note 1)
Nitrite (Note 3)
Odour
Pseudomonas aeruginosa (Note 4)
Taste
Colony count 22 ^{o}C and 37 ^{o}C (Note 4)
Coliform bacteria
Turbidity

Note 1: Necessary only when used as flocculant (*).

Note 2: Necessary only if the water originates from or is influenced by surface water (*).

Note 3: Necessary only when chloramination is used as a disinfectant (*).

Note 4: Necessary only in the case of water offered for sale in bottles or containers.

(*) In all other cases, the parameters are in the list for audit monitoring

2. *Audit monitoring*

The purpose of audit monitoring is to provide the information necessary to determine whether or not all of these regulamentary parametric values are being complied with. All parameters set in accordance with regulation 6 (2) and (3) must be subject to audit monitoring unless it can be established by the competent authority, for a period of time to be determined by the competent authority, that a parameter is not likely to be present in a given supply in concentrations which could lead to the risk of a breach of the relevant parametric value. This paragraph does not apply to the parameters for radioactivity, which, subject to Notes 8, 9 and 10 in Schedule I, Part C, will be monitored in accordance with monitoring requirements adopted under Article 12 of the Directive.

TABLE B1

Minimum frequency of sampling and analyses for water intended for human consumption supplied from a distribution network or from a tanker or used in a food-production undertaking

The competent authority must take samples at the points of compliance as defined in regulation 7 (1) to ensure that water intended for human consumption meets the requirements of these regulations. However, in the case of a distribution network, the competent authority may take samples within the supply zone or at the treatment works for particular parameters if it can be demonstrated that there would be no adverse change to the measured value of the parameters concerned.

<table>
<tr><th colspan="2">Volume of water distributed or produced each day within a supply zone
(Notes 1 and 2)
m^3</th><th>Check monitoring number of samples per year
(Notes 3, 4 and 5)</th><th>Audit monitoring number of samples per year
(Notes 3 and 5)</th></tr>
<tr><td></td><td>≤ 100</td><td>(Note 6)</td><td>(Note 6)</td></tr>
<tr><td>> 100</td><td>≤ 1000</td><td>4</td><td>1</td></tr>
<tr><td>> 1000</td><td>≤ 10000</td><td rowspan="3">4
+ 3 for each 1000 m^3/d and part thereof of the total volume</td><td>1
+ 1 for each 3300 m^3/d and part thereof of the total volume</td></tr>
<tr><td>> 10000</td><td>≤ 100000</td><td>3
+ 1 for each 10000 m^3/d and part thereof of the total volume</td></tr>
<tr><td>> 100000</td><td></td><td>10
+ 1 for each 25000 m^3/d and part thereof of the total volume</td></tr>
</table>

Note 1: A supply zone is a geographically defined area within which water intended for human consumption comes from one or more sources and within which water quality may be considered as being approximately uniform.

Note 2: The volumes are calculated as averages taken over a calendar year. The competent authority may use the number of inhabitants in a supply zone instead of water to determine the frequency, assuming a water consumption of 200 l/day/capita.

Note 3: In the event of intermittent short-term supply the monitoring frequency of water distributed by tankers is to be decided by the competent authority.

Note 4: For the different parameters in Schedule I, the competent authority may reduce the number of samples specified in the table if:

(a) The values of the results obtained from samples taken during a period of at least two successive years are constant and significantly better than the limits laid down in Schedule I, and

(b) No factor is likely to cause a deterioration of the quality of the water.

The lowest frequency applied must not be less than 50% of the number of samples specified in the table except in the particular case of note 6.

Note 5: As far as possible, the number of samples should be distributed equally in time and location.

Note 6: The frequency is to be decided by the competent authority.

TABLE B2

Minimum frequency of sampling and analyses for water put into bottles or containers intended for sale

Volume of water produced for offering for sale in bottles or containers each day ([1]) m^3	**Check monitoring number of samples per year**	**Audit monitoring number of samples per year**
≤ 10	1	1
> 10 ≤ 60	12	1
> 60	1 for each 5 m^3 and part thereof of the total volume	1 for each 100 m^3 and part thereof of the total volume

([1]) The volumes are calculated as averages taken over a calendar year

Schedule III

Regulation 8

SPECIFICATIONS FOR THE ANALYSIS OF PARAMETERS

The competent authority must ensure that any laboratory at which samples are analysed has a system of analytical quality control that is subject from time to time to checking by a person who is not under the control of the laboratory and who is approved by it for that purpose.

1. PARAMETERS FOR WHICH METHODS OF ANALYSIS ARE SPECIFIED

The following principals for methods of microbiological parameters are given either for reference whenever a CEN/ISO method is given or for guidance, pending the possible future adoption of further CEN/ISO international methods for these parameters. Laboratories may use alternative methods, providing the provisions of regulation 8(4) of these regulations are met.

Coliform bacteria and *Escherichia coli (E. coli)* (ISO 9308-1)

Enterococci (ISO 7899-2)

Pseudomonas aeruginosa (prEN ISO 12780)

Enumeration of culturable misroorganisms – Colony count 22 ^{o}C (prEN ISO 6222)

Enumeration of culturable misroorganisms – Colony count 37 ^{o}C (prEN ISO 6222)

Clostridium perfringens (including spores)

Membrane filtration followed by anaerobic incubation of the membrane on m-CP agar (Note 1) at 44 ± 1 ^{o}C for 21 ± 3 hours. Count opaque yellow colonies that turn pink or red after exposure to ammonium hydroxide vapours for 20 to 30 seconds.

Note 1: The composition of m-CP agar is:

Basal medium	
Tryptose	30 g
Yeast extract	20 g
Sucrose	5 g

L-cysteine hydrochloride	1 g
$MgSO_4 \cdot 7H_2O$	0.1 g
Bromocresol purple	40 mg
Agar	15 g
Water	1000 ml

Dissolve the ingredients of the basal medium, adjust pH to 7.6 and autoclave at 121 ^{o}C for 15 minutes. Allow the medium to cool and add:

D-cycloserine	400 mg
Polymyxine-B sulphate	25 mg
Indoxyl-β-D-glucoside	60 mg
To be dissolved in 8 ml sterile water before addition	
Filter – sterilised 0.5% phenolphthalein diphoate solution	20 ml
Filter – sterilised 4.5% $FeCl_3 \cdot 6H_2O$	2 ml

2. PARAMETERS FOR WHICH PERFORMANCE CHARACTERISTICS ARE SPECIFIED

2.1. For the following parameters, the specified performance characteristics are that the method of analysis used must, as a minimum, be capable of measuring concentrations equal to the parametric value with a trueness, precision and limit of detection specified. Whatever the sensitivity of the method of analysis used, the result must be expressed using at least the same number of decimals as for the parametric value considered in Schedule I, Parts B and C.

Parameters	**Trueness % of parametric value (Note 1)**	**Precision % of parametric value (Note 2)**	**Limit of detection % of parametric value (Note 3)**	**Conditions**	**Notes**
Acrylamide				To be controlled by product specification	
Aluminium	10	10	10		
Ammonium	10	10	10		
Antimony	25	25	25		
Arsenic	10	10	10		
Benzo(a)pyrene	25	25	25		
Benzene	25	25	25		
Boron	10	10	10		
Bromate	25	25	25		
Cadmium	10	10	10		
Chloride	10	10	10		
Chromium	10	10	10		
Conductivity	10	10	10		
Copper	10	10	10		
Cyanide	10	10	10		Note 4
1,2-dichloroethane	25	25	10		

Epichlorohydrin				To be controlled by product specification	
Fluoride	10	10	10		
Iron	10	10	10		
Lead	10	10	10		
Manganese	10	10	10		
Mercury	20	10	20		
Nickel	10	10	10		
Nitrate	10	10	10		
Nitrite	10	10	10		
Oxidisability	25	25	10		Note 5
Pesticides	25	25	25		Note 6

Parameters	**Trueness % of parametric value (Note 1)**	**Precision % of parametric value (Note 2)**	**Limit of detection % of parametric value (Note 3)**	**Conditions**	**Notes**
Polycyclic aromatic hydrocarbons	25	25	25		Note 7
Selenium	10	10	10		
Sodium	10	10	10		
Sulphate	10	10	10		
Tetrachloroethene	25	25	10		Note 8
Trichloroethene	25	25	10		Note 8
Trihalomethanes – Total	25	25	10		Note 7
Vinyl chloride				To be controlled by product specification	

2.2. For hydrogen ion concentration the specified performance characteristics are that the method of analysis used must be capable of measuring concentrations equal to the parametric value with a trueness of 0.2 pH unit and a precision of 0.2 pH unit.

Note 1 (*): Trueness is the systematic error and is the difference between the mean value of the large number of repeated measurements and the true value.

Note 2 (*): Precision is the random error and is equally expressed as the standard deviation (within and between batch) of the spread of results about the mean. Acceptable precision is twice the relative standard deviation.

(*) These terms are further defined in ISO 5725.

Note 3: Limit of detection is either:
- three times the relative within batch standard deviation of a natural sample containing a low concentration of the parameter, or
- five times the relative batch standard deviation of a blank sample.

Note 4: The method should determine total cyanide in all forms.

Note 5: Oxidation should be carried out for 10 minutes at 100 ^{o}C under acid conditions using permanganate.

Note 6: The performance characteristics apply to each individual pesticide and will depend on the pesticide concerned. The limit of detection may not be achievable for all pesticides at present, but water suppliers are to aim to achieve this standard.

Note 7: The performance characteristics apply to the individual substances specified at 25% of the parametric value in Schedule I.

Note 8: The performance characteristics apply to the individual substances specified at 50% of the parametric value in Schedule I.

3. PARAMETERS FOR WHICH NO METHOD OF ANALYSIS IS SPECIFIED

Colour
Odour
Taste
Total organic carbon
Turbidity (Note 1)

Note 1: For turbidity monitoring in treated surface water the specified performance characteristics are that the method of analysis used must, as a minimum, be capable of measuring concentrations equal to the parametric value with a trueness of 25%, precision of 25% and a 25% limit of detection.

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