



ROYAL DECREE 140/2003 OF 7 FEBRUARY by which health criteria for the quality of water intended for human consumption are established.

General Health Act 14/1986 of 25 April set out the obligation of the Health Public Administration to direct their actions primarily to the promotion of health and the prevention of illnesses.

The mentioned Act stipulates that actions and products that, directly or indirectly, may have adverse effects to health should be under the Public Administration monitoring and the latter must carry out health actions for the improvement of the water supply systems.

Royal Decree 1138/1990 of 14 September by which Technical and Health Regulations for the supply and quality control of drinking water intended for public consumption is approved, so that the Community Directive 80/778/EEC of 15 July is transposed into our national law.

The publication of Directive 98/83/EC of 3 November 1998 requires the transposition into Spanish domestic law by means of producing a new text that depicts the new scientific and technical specifications and make possible a legal framework in agreement with current needs and progress made in the last few years concerning water intended for human consumption, and setting out the necessary monitoring and sanitary measures for the protection of consumers health, this is the main purpose of this provision.

Given the importance of this subject to human health it is necessary the establishment on a national scale of the quality criteria of water intended for human consumption.

These criteria will be applied to water regardless of its origin or purification treatment, whether it is used in the food industry or supplied from a public or private distribution network, a reservoir or a tanker.

Parameters and parametric values are set to comply with at the point where the water intended for human consumption is made available to the appropriate user. These values are generally based on the World Health Organisation's guidelines and on public-health considerations applying, in some cases, the precautionary principle to ensure a high level of protection to the health of the population.

The monitoring programmes of the quality of water intended for human consumption should be appropriate to each water supply needs and should meet the quality criteria laid down in this provision.

The substances used in water purification treatment and in the construction products installed in water supplies and installations within the premises can affect the quality and health parameters of water, for this reason they shall be regulated by specific standards without prejudice to this provision.

In the event of non-compliance with the quality criteria imposed by this provision, it will be necessary to investigate the underlying cause and ensure that the necessary remedial action is taken as soon as possible to protect the health of the population supplied. Under certain conditions derogations could be granted, provided that the supply of water in the supply zone cannot otherwise be maintained by any other reasonable means, and provided there is not a potential risk to the health of the population.

The decisions on the quality control of water intended for human consumption, as well as the adoption of remedial action in view of the detected failures, will be implemented at local level, pursuant to the powers attributed to local authorities in *Ley 7/1985, Reguladora de las Bases del Régimen Local* (Act which lays down the regulatory basis of the local code), following, where appropriate, the indications of the competent autonomous health administration and having their assistance.

Consumers should be informed in an appropriate manner on the quality of water intended for human consumption, derogations, remedial action and preventive measures as well as on any aspect that affects the supply and that may imply a risk to the health of the population.

The Department of Health and Consumer Affairs coordinates the National Information System of Water Intended for Consumption and produces annual National Reports intended for public information and they should be forwarded to the European Commission, for the fulfilment of the Community obligations.

This Royal Decree, that has nature of basic standard, is dictated under the protection of article 149.1.16^a of the Spanish Constitution and in keeping with Articles 18.6, 19.2, 23, 24, 40.2, 40.13 and the second additional provision of General Health Act 14/1986 of 25 April.

For drawing up this Royal Decree the Autonomous Communities and the sectors concerned have been heard, and the "*Comisión Interministerial para la Ordenación Alimentaria*" (CIOA) (Interministerial Management Food Committee) has issued its perceptive report.



In accordance with a proposal by the Ministers of Health and Consumer Affairs, Agriculture Fisheries and Food, Environment, Economy, and Science and Technology, with

previous approval of the Minister of Public Administration and in accordance with the Council of State and subject to deliberation of the Council of Ministers of 7 February.

I DECREE:

Article 1 Purpose.

The purpose of this Royal Decree is to set out the health criteria that water intended for human consumption and the installations allowing the supply from the catchment area to the tap should comply, as well as the monitoring of the installations, by ensuring that it is wholesome, good quality and clean, in order to protect human health from the adverse effects of any contamination of water.

Article 2 Definitions.

For the purposes of this provision:

1. Water intended for human consumption shall mean:
 - a) All water either in its original state or after treatment, intended for drinking, cooking, food preparation, personal hygiene or other domestic practices, regardless of its origin and whether it is supplied to consumers from a public or private distribution network, from tankers, or from public or private water storage tanks.
 - b) All water used in any food-production undertaking for the manufacture, processing, preservation or marketing of products or substances intended for human consumption, as well as all water used for cleaning surfaces, objects and materials that may be in contact with foodstuff.
 - c) All water supplied for human consumption as part of a commercial or public activity, regardless of the average volume of water supplied a day.
2. *Health Authority* shall mean the competent autonomous health administration or other competent bodies of the Autonomous Communities in the field covered by its powers.
3. *Water supplier and/or Water suppliers* shall mean the person, public authority or private institution who is responsible for the supply or part of it, or for any other activity bound to the supply of water intended for human consumption.
4. *Water supply* shall mean a system of installations for the catchment of water, water mains, water treatment works, storage, transport and distribution of water intended for human consumption up to the mains meter point of the consumer premises, with the quality and amount of water laid down in this provision.
5. *Water used for the production of Water Intended for Human Consumption* shall mean the water that regardless of its origin, with or without treatment, is going to be used for human consumption.
6. *Natural Source* shall mean the catchments not used with commercial purposes and not connected to reservoirs, tankers or distribution networks.
7. *Sampling Point* shall mean the location for sampling and monitoring the quality of water intended for human consumption.
8. *Parametric Value* shall mean the maximum or minimum level set for each individual parameter to be monitored.
9. *Result* shall mean the quantified value of a parameter with a specific method of analysis and expressed in the units determined in Annex I.
10. *Pesticides* shall mean organic insecticides, organic herbicides, organic fungicides, organic nematocides, organic acaricides, organic algicides, organic rodenticides, organic slimicides, metabolites, degradation and reaction products and related products *inter alia* growth regulators.
11. *Substance* shall mean any product (substance or compound) that is added to water or is used for water purifying treatment or improvement as well as those used to clean surfaces, equipments, containers or utensils, that are in contact with water intended for human consumption.
For this purposes they are divided into the following groups:
 - a) "Water Disinfectants " means products used for the disinfection of water intended for human consumption.
 - b) "Surface Disinfectants" means products used for the disinfection of equipments, containers, appliances for consumption, surfaces or pipework related to production, transport, storage and distribution of water intended for human consumption.
 - c) "Algicidas and anti-scalant products" means products that either eliminate or prevent the development of algae in water used for the production of water



intended for human consumption or have anti-scalant or disinfectant action.

- d) "Other substances" means any product that is not included in the previous sections.
12. *Drinking Water Treatment Plant* (ETAP, acronym in Spanish) shall mean the processes for water purification treatment placed before the Distribution network and/or reservoir. The plant should contain other units than the disinfection.
13. *Construction Product in contact with Water Intended for Human Consumption* shall mean any construction or coating product, or used in the processes of assembly of the catchments, water mains, ETAPs, supply and distribution networks, reservoirs, tankers and installations within the premises that are situated between the catchment and the consumers' tap.
14. *Water mains* shall mean any system of pipework, which carry water from the catchment to the ETAP, or in its absence, to the water tower.
15. *Reservoir* shall mean any receptacle or rain tank located in the upper part or intermediate sections of the distribution network and whose purpose is storing water intended for human consumption.
16. *Distribution Network* shall mean the system of pipework designed for the distribution of water intended for human consumption from the ETAP or the reservoir to the user mains meter point.
17. *Delivery Point* shall mean the place where a water supplier of a part of the supply delivers water to the water supplier of the following part or to consumers.
18. *Mains Meter Point* shall mean the pipework that connects the installation within the premises with the stopcock of the distribution network.
19. *Installation within the premises* shall mean the system of pipework, deposits, fittings and appliances that are installed after the mains meter point and the corresponding stopcock that connects with the distribution network.
20. *Treatment Equipment in Buildings* shall mean any element or fitting installed after the piped water supply or stopcock or at the entry to the installation within the premises or in the consumer's tap, in order to change or optimize the quality of the water intended for human consumption.
21. *Supply Zone* shall mean a geographically defined area where a census has been conducted by the health authority following a proposal of the water supplier of the supply or the water supplier of a part of it, not bigger than the provincial area, within which water intended for human

consumption comes from one or more sources and within which water quality may be considered as being uniform during most of the year.

Each supply zone will be defined by four factors:

- Single Name within each province.
- Identification Code
- Number of inhabitants supplied.
- Average volume of water supplied each day by taking into account the annualization.

Article 3 Scope of implementation.

1 The scope of this provision includes waters defined in Article 2.1.

2 It shall be excluded from the scope of this Royal Decree:

- All water that are governed by Royal Decree 1074/2002 of 18 October by which the process of production, circulation and trade of drinking water put into bottles.
- All water that are governed by Medicines Act 25/1990 of 20 December.
- All natural mineral water and waters of spa establishments that are medicinal products governed by Royal Decree law 743/1928 of 25 April that approves the Status relating to the exploitation of springs of mineral and medicinal waters and by Mining Act 22/1973 of 21 July.
- All water intended exclusively for those purposes for which the health authorities are satisfied that the quality of the water has no influence, either directly or indirectly, on the health of the consumers concerned.
- All water used in the food industry, which is clear for the health authority that the quality of such water does not affect the wholesomeness of the foodstuff.
- All water intended for human consumption coming from individual and domestic supplies or from a natural source supplying less than 10 m³ of water a day as an average, or serving less than 50 persons, except where potential risks to human health which would be caused by the quality of water, in which case the health authority will require the local administration to take, for these supplies, the necessary action to comply with this Royal Decree.

Article 4 Responsibilities and powers.

Without prejudice to General Health Act 14/1986 of 25 April and Ley 7/1985, de 2 de abril, Reguladora de las Bases del Régimen Local, the following responsibilities in the field covered by this Royal Decree are laid down:

1 The town councils are responsible for ensuring that the water supplied through any distribution network, tanker or mobile



reservoir within its territorial scope is fit for consumption at the delivery point to consumers.

2 When the catchment, mains, treatment, distribution or self-monitoring of water intended for consumption is the responsibility of one or various water suppliers from outside the town council, the latter shall ensure the enforcement of this Royal Decree by water suppliers.

The responsibility of the water supplier finishes at the point of delivery to another water supplier or at the general stopcock of the consumers' piped water supply.

3 Town councils shall ensure the fulfilment of the obligations of the holders of establishments that maintain commercial or public activities in relation to which is set out in this provision. The holders of those establishments shall make available to users water fit for consumption.

4 Self-monitoring the quality of the water and monitoring at the tap is the responsibility of the town councils for the water consumed within its municipality when the management of the water supply is made directly.

5 When the management of the water supply is done indirectly, the self-monitoring of the quality of water intended for human consumption is under the responsibility of the water suppliers, each water supplier is responsible for its own section.

6 If the quality of the water intended for human consumption undergoes changes resulting in the water being unfit, either temporary or permanently, for consumption according to paragraphs 1, 2 and 3 of this article, the water supplier shall inform the population and/or the other water suppliers concerned, as well as the town council, when appropriate, about the event of non-compliance, the remedial action and preventive measures foreseen, through the resources and in the form that he considers most suitable, in accordance with the health authority, in order to avoid any risk that affects the protection of human health.

7 The owners of the rest of real estates that are not covered in paragraph 3, are responsible for maintaining the installations within the premises in order to avoid changes in the quality of water intended for human consumption from the piped water supply to the tap.

Article 5 Quality criteria of water intended for human consumption.

Water intended for human consumption should be wholesome and clean.

For the purposes of this Royal Decree, water intended for human consumption shall be wholesome and clean if it is free from any micro-organisms, parasites and from any substances which, in numbers or concentrations, constitute a potential danger to human health, and meets the requirements set out in Annex I, Parts A and B.

Article 6 Point of compliance of the quality criteria of water intended for human consumption.

Water intended for human consumption at the disposal of the consumer, should satisfy the requirements of quality indicated in this provision in the following points:

- a) In the case of water supplied from a distribution network, at the point, within the premises or a public or private establishment and homes, at which it emerges from the taps that are normally used for human consumption.
- b) In the case of water supplied from a tanker, private and public mobile reservoirs, at the point at which it is available to consumers.
- c) In the case of water used in a food-production undertaking, at the point where the water is used in the undertaking.

Article 7 Catchment of water intended for human consumption.

1. Without prejudice for what is set out by the health authority in each case, water used for the production of water intended for human consumption can be of any origin, provided that it does not pose any risk for the health of the population supplied.

The amount of water will be sufficient for the hygienic needs of the population and the fulfilment of activities in the supply zone; the minimum amount should be 100 liters/day/capita.

2 Competent bodies of the hydrographic basin (Water District Authorities) and Water Authorities of the Autonomous Communities shall provide regularly the health authority and the water supplier with the results of the analytical tests of the water used for the production of water intended for human consumption, with respect to parametric values laid down in the Royal Decree 927/1988 of 29 July, by which Public Administration Regulation relating to water and the Hydrological planification is approved, and all legislation applicable.

If there is reason to suspect the presence of any pollutants of water, that poses a risk for the health of the population, the Competent bodies of the hydrographic basin and Water Authorities of the Autonomous Communities in co-ordination with the health authority shall determine and assess the presence of those substances.

3 Any project for a new catchment must have a report on the most relevant characteristics that might have affected the water quality of the catchment area besides what is laid down in Article 13.

The quality of water from the catchment shall be such that it may be made drinkable with the treatments for drinking water established in the water supply.

4 The public authority or private institution responsible for the construction of the catchment shall take suitable protection



measures and clearly indicate the catchment point of water intended to supply the population, as established by the health authority, in order to avoid pollution and deterioration of the quality of water.

The water supplier of the catchment area should apply the water-protection measures of his own competence without prejudice to the powers of the Competent bodies of the hydrographic basin and Water Authorities of the Autonomous Communities.

Article 8 Water mains.

1 Water mains should be disinfected and clean before use.

The products used in construction, coating, solders and accessories shall not pass on to water substances or properties that contaminate or deteriorate the quality of water coming from the catchment area.

2 In the case of opened water mains, the water supplier shall have to close them down whenever the health authority considers that there is a risk to the health of the population.

Article 9 Substances used for water treatment.

1 Any substance or compound that is added to water intended for human consumption shall comply with the corresponding UNE-EN standards for each product and in force at the time.

The Department of Health and Consumer Affairs shall update the list that appears in Annex II through regulatory development.

2. The substances or compounds already offered for sale at the time of the entry into force of this provision will have a period of one year to comply with the UNE-EN standards that affect them.

3 Without prejudice for the above, any substance or compound added to water intended for human consumption and the industry related to them, will have to comply with Royal Decree 1054/2002 of 11 October which regulates the evaluation process for the registering, authorizing and marketing biocides, and Royal Decree 363/1995 of 10 March by which it is approved the Regulation on notification of new substances and classification, packaging and labeling of dangerous substances, and Royal Decree 1078/1993 of 2 July by which it is approved the Regulation on classification, packaging and labeling of dangerous compounds, and Royal Decree 1712/1991 of 29 November on health register of foodstuffs, as well as any other legislation that might have been implemented.

4 The supplier of the water purification treatment must have a photocopy of the health certificate or an authorization for each substance used or, if applicable, of the company that is marketing the substance.

Article 10. Purification treatment of the water intended for human consumption.

1 If the quality of water from the catchment area has a turbidity exceeding 1 nephelometric turbidity unit (NTU) as an average per year, it will have to be submitted, at least, to a filtration through sand or another appropriated technique, according to the health authority, before disinfection and distribution to the population. Likewise, when there is a risk to human health, although the annual average values of turbidity are below 1 NTU, the health authority can require the installation of a prior filtration method, depending on the results of the method of assessing risk.

2 Water intended for human consumption and distributed by public or private distribution networks, tankers or reservoirs shall be disinfected. In these cases, the by-products derived from the disinfection must have the possible lowest levels, without compromising at any moment the effectiveness of the disinfection.

When there is not risk of pollution or microbial growth throughout the distribution network from the beginning to the consumers' tap, the water supplier may ask the health authority to be exempt from having residual disinfectant.

3 The processes of purification treatment should not pass any substance or properties that could pollute or deteriorate the quality of water and mean non-compliance with the requirements specified in Annex I and pose a risk to the health of the population supplied.

Neither have the effect directly or indirectly of polluting or deteriorating the surface or groundwater used for the production of water intended for human consumption.

4 Treatment equipment in buildings shall not pass on to water substances, germs or undesirable or harmful properties to human health and shall meet the requirements set out in Article 14.

Marketing of these equipments shall be subject to prior approval.

Article 11. Reservoirs and tankers for water intended for human consumption.

1 The public or private, fixed or mobile reservoirs of the distribution and supply networks, installations within the premises, and tankers for water intended for human consumption shall meet the requirements set out in Article 14.

Any reservoir of an installation within the premises shall be placed above the level of the sewer system, being always covered and with a drainage system that permits its total emptying, cleanliness and disinfection.

2. The public authority or private institutions responsible for the construction of the reservoir shall install the protection measures



and sign posted visibly, in order to identify it as a point of water storage for human consumption, and to avoid pollution or deterioration of stored water quality.

The water supplier shall maintain these protection measures.

3. When in order to supply water it is necessary to use tankers or mobile reservoirs, they shall be only used to transport water and shall be clearly indicated and sufficiently visible the indication "*transport of water intended for human consumption*", accompanied by the symbol of a white tap on blue background.

The supplier of the tanker or mobile reservoir shall apply for the relevant administrative authorization to join in this activity.

In each water supply of this type, the water supplier must have the binding report from the health authority.

Throughout, appropriate water-protection measures shall be taken by the person responsible for the transport of water in order to avoid quality deterioration of the water intended for human consumption, remedial action indicated by the health authority shall be taken as well.

4 The water supplier of the public or private reservoirs of the supply or distribution network, tankers, and owner of the reservoir in installations within the premises, shall watch regularly the state of the structure, closing elements, valves, canalizations and the installation as a whole. All shall be periodically cleaned with products that meet the requirements set out in Article 9. The cleaning shall have a disinfectant and disinfectant function, followed of rinsing with water.

Article 12. Distribution of water intended for human consumption.

1 The public or private distribution networks shall be if possible of enmeshed design, eliminating any point or situation that facilitate pollution or deterioration of the distributed water. They shall have suitable mechanisms that allow their close down for sectors, in order to be able to isolate sections in case of anomalous situations, and to allow drainage by sectors to protect the population from possible risks to human health.

2 Before putting it in working order and after any maintenance or reparations that may mean a risk of contamination of water intended for human consumption, the affected sections of pipework should be washed and disinfected with substances indicated in Article 9, and the construction products of the pipework shall respect the requirements of Article 14.

3 The characteristics and operating performance of the installations within the premises shall not pollute or deteriorate the quality of water intended for human consumption with germs or substances that poses any risk to human health.

Article 13. Previous health inspections of new installations.

1. In any conceptual design of a new catchment, mains, ETAP, supply or distribution network (with a length greater than 500 meters), reservoir of the distribution network, or remodeling of what is in use, the health authority shall produce a binding health report, two months before the water supplier presents the documentation.

2 When the new installation starts working, the health authority shall produce a Report based on the inspection, assessment and follow-up of the analytical results made by the water supplier, as long as it is required, relating to the parameters indicated by the health authority.

3 These requirements shall apply to the installations mentioned in Articles 7, 8, 10, 11 and 12, except for what is specified in Article 11 (paragraph 3) and installations within the premises.

Article 14. Construction products in contact with water intended for human consumption.

1 Products that are in contact with water intended for human consumption, by themselves or the installation practices that are used, shall not pass on to the water intended for human consumption substances or properties that contaminate or deteriorate the quality of water and mean a breach of the requirements specified in Annex I or a risk to the health of the population supplied.

2 For construction products referring to activities described in Articles 10.4, 11 and 12 the authorizations for the use and installation of these products shall be subject to provisions regulated by the *Comisión Interministerial de Productos de Construcción* (CIPC) (Interministerial Construction Products Committee) and, where appropriate, by what is set out in Royal Decree 363/1995 of 10 March by which the Regulations on notification of new substances, classification, packaging and labeling of dangerous substances is approved, or in Royal Decree 1078/1993 of 2 July by which the Regulations on classification, packaging and labeling of dangerous preparations are approved or any other legislation or rules that does not contravene what is set out in this Royal Decree.

Article 15. Staff.

The staff that work in the water supply in direct contact with water intended for human consumption should satisfy the technical and health requirements set out in Royal Decree 202/2000 of 11 February by which the standards relating to the manipulators of foodstuffs are established.

Article 16. Laboratories for the quality control of water intended for human consumption.



1 Any public or private laboratory that carry out check monitoring, audit of self-monitoring, health supervision and monitoring at the consumers' tap, must establish a system to ensure the quality and validate it before an external quality control unit, that shall make an audit from time to time.

A competent body must credit all public authority or private institution that carries out the audit.

2 If laboratories referred to in paragraph 1 are not credited by UNE-EN ISO/IEC 17025 or by the current standards for the laboratory parameters that indicates this provision, must have, at least, the certification from the UNE-EN ISO 9001 or by the current standards.

The laboratories that exceed 5.000 annual samples shall be credited by UNE-EN ISO/IEC 17025 or by the current standards for the parameters set out in this provision and with the specifications indicated in Annex IV, analyzed in that laboratory.

Any credited laboratory and the certified laboratories that handle more than 500 samples a year shall communicate the printed form in Annex III filled in and a photocopy of the scope of the accreditation or the administrative certificate to the Directorate-General for Public Health of the Department of Health and Consumer Affairs.

3 The methods of analysis used by the laboratories shall respect the requirements specified in Annex IV.

The Interterritorial Council of the National Health System, within the Paper of Environmental Health, shall examine other official methods of analysis different from which are in Annex IV for certain parameters whose results are as reliable as those obtained with the methods specified in that Annex, as well as the methods of analysis for the parameters specified in Annex IV, (C).

Article 17. Quality control of water intended for human consumption.

1 Generally, the parameters set out in Annex I will be monitored in each supply. Those parameters or pollutants that are likely to be present in water intended for human consumption and may pose a risk to human health shall be monitored when the health authority decides to do so.

2. Monitoring of the quality of water intended for human consumption includes the following sections:

- a) Self-monitoring of water intended for human consumption
- b) Health supervision
- c) Water monitoring at the consumers' tap

3 All the results derived from the monitoring of the quality of water intended for consumption shall be collected in a register system for each case, preferably in electronic support and in accordance with the National Information System of Water Intended for Consumption

4 In any sample of water intended for human consumption for self-monitoring, health supervision and monitoring at the consumers' tap, water could be characterized as:

- a) "*Fit for consumption*" when it does not contain any kind of micro-organism, parasite or substance, in an amount or concentration that may mean a danger to human health; and comply with the parametric values specified in Annex I, Parts A, B and D or with the parametric values for which the health authority have granted derogations and without prejudice to what is set out in Article 27.7, as measured in the analysis.
- b) "*Unfit for consumption*" when it does not meet the requirements of paragraph a). If one or several quantified parameters monitored in water "*unfit for consumption*" reaches a level that the health authority considers that they have produced or may produce adverse effects on the health of the population, it shall be characterized as water "*unfit for consumption and with risks to human health*".

Article 18. Self-monitoring

1 Self-monitoring of the quality of water intended for human consumption is under the responsibility of the water supplier of each one of the parts of the water supply, the supplier shall ensure that the analysis described in this Article are carried out by one or several laboratories.

2 Without prejudice to Article 6, for water intended for human consumption supplied through a distribution network, the water suppliers may take samples within the supply zone, at points different to which refers the aforementioned article, for particular parameters if it can be demonstrated that the validity of the results does not affect the representativeness of the quality of water intended for human consumption from the ex-ETAP or reservoir to the point of delivery to consumers.

3 Sampling points for self-monitoring shall be representative of the water supply or parts of it and the water supplier with the supervision the health authority shall set them.

- A) In the case of distribution networks, at least, the following sampling points shall be set:
 - a) 1 at the point at which emerges from the ETAP or water tower.
 - b) 1 at the point at which emerges from the regulation and/or distribution reservoir.
 - c) 1 at each one of the points of delivery between the different water suppliers.
 - d) 1 in the distribution network. In the water supplies that provide more than 20.000 m³/day, the number of sampling points shall be 1 for each 20.000 m³ or



part thereof of the volume of water distributed a day as an average per year.

- B) Sampling points for self-monitoring in the food industry shall be set by the latter with the supervision of the health authority.
- C) In the case of tankers and mobile reservoirs, the sampling points are under the responsibility of the water supplier and the sampling points for self-monitoring shall be those defined in Article 6 of this Royal Decree.

The health authority may require the water supplier or the food industry to change the location of certain sampling points, or to increase the number of them if they do not have the necessary representativeness.

4 The types of analyses for self-monitoring are the following:

1st Organoleptic examination: consisting in the valuation of the organoleptic characteristics of water intended for human consumption on the basis of the odour, taste, colour and turbidity.

2nd Check monitoring: the purpose of this type of analyses is to provide the Supplier and the health authority with information on the organoleptic and microbiological quality of the water intended for human consumption, as well as information on the effectiveness of drinking-water treatment.

- A) Basic parameters included in this type of analyses: odour, taste, turbidity, colour, conductivity, hydrogen ion concentration or pH, ammonium, *Escherichia coli* (*E.coli*) and coliform bacteria.
- B) Parameters that shall at least be determined at the point at which emerges from the ETAP/water tower or in their absence at the point at which emerges from the regulation and/or distribution reservoir:
- Iron: when used as flocculant.
 - Aluminum: when used as flocculant.
 - Colony count 22°C.
 - Clostridium perfringens* (including spores).
- C) Parameters according to the disinfection method:
- Nitrite: when chloramination is used.
 - Residual free chlorine: when the chlorine or its by-products are used.
 - Residual combined chlorine: when the chloramination is used.

The health authority whenever considers necessary to safeguard the health of the population supplied may include for each water supply other check monitoring parameters.

3rd Audit monitoring: the purpose is to provide the water supplier and the health authority with the information to

determine whether or not all of this Provision's parametric values of the distributed water intended for human consumption are being complied with. For that purpose the parameters set in Annex I, and additional parameters that the health authority considers appropriately in order to safeguard the health of the population supplied shall be measured.

After at least two years of self-monitoring and in the case of parameters of the audit monitoring, the water supplier may submit a request to the health authority in order to reduce up to 50 percent the frequency of analyses indicated in this provision, for certain parameters, because of the improbable presence of that parameter in drinking water in a concentration that might have implied a risk of non-compliance with the parametric value.

5 Each supplier of the water supply or part of it shall draw up, before 1 January of 2005, a Water-Supply Self-monitoring and Management Protocol. The protocol shall include anything related with the monitoring of the quality of water intended for human consumption, and the control of the water supply, and it must be at the disposal of the health authority and in agreement with the Health Surveillance Autonomical Programme on Water Intended for Human Consumption.

6 In view of a probable risk to the health of the population, the water supplier may be request by the health authority for additional samplings in order to safeguard the health of the population.

Article 19. Health supervision.

The health authority is responsible for the health supervision of water intended for human consumption and shall ensure that periodic health inspections of the water supply are made. The health authority in charge of the aforementioned supervision includes the managed supply zones and/or the heritage of the State.

The health authority shall draw up and put at the disposal of water suppliers, before 1 January of 2004, the Health Surveillance Programme on water intended for human consumption for its territory, and shall communicate the Programme to the Department of Health and Consumer Affairs.

The Department of Health and Consumer Affairs should be notified of any changes in the Programme and of any possible autonomous regulatory development of this provision.

Article 20. Monitoring at the consumers' tap.

1. For waters intended for human consumption available through a public or private distribution network, the town council or in its defect another local entity shall take all measures necessary to



ensure that monitoring of the quality of water at the consumer's tap is carried out and a regular report on the results produced.

2 Parameters to be analysed at the consumers' tap:

- a) Odour
- b) Taste
- c) Colour
- d) Turbidity
- e) Conductivity
- f) pH
- g) Ammonium
- h) Coliform bacteria
- i) *Escherichia coli* (E.coli)
- j) Copper, chromium, nickel, iron, lead or any parameter: when it is suspected that the installation within the premises has this type of material.
- k) Residual free chlorine and/or residual combined chlorine when chlorine or its by-products are used for the treatment of drinking water.

In the event of non-compliance with these parametric values, a sample will be taken at the point of delivery to the consumer.

Article 21. Frequency of sampling.

1 The minimum number of samples for the self-monitoring shall be representative of the water supply or parts of it and of the food industry, and must be distributed uniformly throughout the year.

- a) Minimum frequency of sampling for check monitoring and audit monitoring shall be carried out according to what is specified in Annex V.
- b) The frequency of sampling of the residual disinfectant could be increased when considered necessary by the health authority.
- c) The organoleptic examination shall be done at least twice a week and whenever another type of analyses within this period is not made.

When the health authority judges that a risk to the health of the population might have existed, it shall ensure that the water supplier increases the frequency of sampling for those parameters that the health authority considers necessary.

2 The frequency of sampling for water in tankers and mobile reservoir shall be indicated in each case by the health authority.

3 The number of annual samples taken at the consumers' tap shall be, at least, the number set in Annex V.

Article 22. Circumstances for derogations from the parametric values set out

The water supplier may ask the Health Administration for a temporary derogation from parametric values set out if failure to comply with any one parametric value of a parameter set out in

Annex I, Part B for a given water supply has occurred on more than 30 days on aggregate during the previous 12 months and provided that the supply of water intended for human consumption in the area concerned cannot otherwise be maintained by any other reasonable way. The health authority shall establish a new parametric value, provided that the derogation may not be a danger for the health of the population supplied.

The Directorate-General for Public Health of the Department of Health and Consumer Affairs manages the National Census of the circumstances for derogations granted by the health authority.

Article 23. Derogation granted.

1. The water supplier shall submit to the health authority a request consisting, at least, of:

- a) Copy of the water supplier document to the town council, where appropriate, communicating the request for the derogation granted.
- b) The request that shall comply with specifications of the printed form set out in Annex VI, Part A.
- c) Original and copy of a "Documentary report" with the following sections:

- | | |
|-----|--|
| 1st | Results of the parameter of the last six months. |
| 2nd | Report on the grounds for the request, justified, if necessary, with a technical opinion. |
| 3rd | Report justifying that the water supply cannot be kept in another reasonable way. |
| 4th | Communique and forms of transmission of the derogation to the population concerned. |
| 5th | Programme of specific sampling increasing the frequency of sampling for that water supply zone for the requested period. |
| 6th | Plan for remedial action, measures for the evaluation of the Plan, timetable for the work and estimate of the cost. |

2 The health authority shall take a decision and notify the granted request within two months, from the presentation of the documentation in the register of the competent body for its procedure.

3 Having granted the derogation the health authority shall communicate within fifteen working days the granted derogation to the Directorate-General for Public Health of the Department of Health and Consumer Affairs. The communication shall be made in the printed form set out in Annex VI, Part B and in the case of a water supply that distributes more than 1000 m³ a day as an average per year, it will be accompanied by a copy of the "Documentary report" adjoined with the list of the relevant food industries concerned.



4 The Department of Health and Consumer Affairs shall notify the derogation granted to the water supplies that distribute more than 1000 m³ a day as an average per year to the European Commission according to current Community provisions.

5 Derogations shall be limited to as short a time as possible and shall not exceed three years, towards the end of which the applicant shall submit a "progress review", together with the total cost of the measures taken, to the health authority.

6 Having granted the derogation, the water supplier shall ensure that the consumers and other suppliers affected by the new state of the derogation are informed, and in co-ordination with the health authority the supplier shall ensure that health advice is given to the general population and to particular population groups for which the derogation could present a special risk for its health.

The deadline for communication shall be within two days from the notification of the derogation granted.

Article 24. First extension of the derogation.

1 When three years have not been sufficient to remedy the cause that grounded the request for the derogation, the water supplier may request an extension of derogation to the health authority. In that event, two months before it finishes the first granted period, the water supplier shall submit the following documentation:

- a) Copy of the water supplier document to the town council, where appropriate, communicating the request for the extension.
- b) The request that shall comply with specifications of the printed form set out in Annex VI, Part A.
- c) Original and copy of a new updated "Documentary report".

On finishing the first granted period, the water supplier shall communicate original and copy of the "progress review" conducted to the health authority, which will outline progress made from the granted of the derogation.

2 The health authority shall take a decision and notify the granted request within two months, from the entry of the documentation in the register of the competent body for its procedure. No such extension of the derogation shall exceed three years.

From the granted of the derogation the procedure to be followed is the same as what is laid down in Article 23, paragraphs 3, 4, 5, and 6.

Article 25. Second extension of the derogation.

1 In exceptional circumstances, when the cause that grounded the request has not been redressed in the two granted periods, the water supplier may ask for a second extension that along with favourable Reports from the town council, where appropriate, and

the health authority will enable the Department of Health and Consumer Affairs to ask the European Commission for a derogation for a period not exceeding three years.

2 In that event, three months before it finishes the second granted period, the supplier shall submit to the health authority the following documentation:

- a) Copy of the water supplier document to the town council, where appropriate, communicating the request for the second extension.
- b) The request that shall comply with specifications of the printed form set out in Annex VI, Part A.
- c) Original and copy of a new updated "Documentary report".

On finishing the second granted period, the water supplier shall communicate original and copy of the new "progress review" to the health authority.

3 The health authority shall communicate the request, the "Documentary report" and the "progress review", together with a Technical report from the health authority supporting the procedure of the request for the second extension of the derogation, to the Directorate-General for Public Health of the Department of Health and Consumer Affairs.

4 The Department of Health and Consumer Affairs in co-ordination with the health authority, the water supplier and the town council shall produce, where appropriate, a Report on the need of a second extension that shall communicate to the European Commission together with the rest of the documentation.

5 The Department of Health and Consumer Affairs shall notify the decision taken by the European Commission to the health authority, the water supplier and the town council within one week.

Communication to consumers and the water suppliers concerned on this second extension of the derogation shall be made according to what is laid down in Article 6, (23).

Article 26. State of short-term derogation.

1. When the health authority considers the non-compliance with parametric value to be trivial and when remedial action is sufficient to remedy the problem within 30 days, the water supplier shall request a short-term derogation from the health authority, provided that the parametric value must not constitute a potential danger to human health.

2 The request for short-term derogation shall include, at least, the following:

- a) The request that shall comply with specifications of the printed form set out in Annex VI, Part A.
- b) The remedial action Plan with the timetable of work stipulated.



- c) The proposal of official notice on the state of the short-term derogation to be forwarded to the population concerned.

3 The health authority shall notify within 10 days the positive outcome of the request, counting from the entry of the documentation in the register of the competent body for its procedure.

4 Having granted the derogation and notified it to the water supplier, the latter shall inform within 24 hours consumers and other suppliers concerned about the new state and in co-ordination with the health authority, shall ensure that health advice is given to particular population groups for which the derogation could present a special risk to human health.

Article 27. Failures and remedial and preventive measures.

1 Any failure in the supply or in the quality of the water intended for human consumption detected by the water supplier, the town council, the holder of the activity or the health authority must be confirmed.

This confirmation shall be made, whenever necessary, by taking a sample of water within 24 hours of detecting the failure.

2 After the confirmation of the failure, the water supplier or the holder of the activity, if a public or commercial activity exists, or the town council, in the case of private homes, shall investigate immediately the reason for the failure, showing evidence of that in a book of incidences, and shall notify the characteristics of the situation in a printed form that shall respect the model set out in Annex VII to the health authority within 24 hours. The health authority shall determine the means of forwarding for the parameters laid down in Annex I, Parts A, B and D.

In the case of parameters listed in Annex I, Part C communications shall be made weekly.

3 Having reported the failure to the health authority or in the event that the health authority detects it, the authority shall decide whether to declare a "situation of alert".

The health authority will consider the importance of the failure, the repercussion on the health of the population concerned and if necessary to conduct a study to assess the risk due to non-compliance.

4 In every situation of alert or non-compliance, the health authority will consider the possibility of prohibiting the supply or consumption of water, restricting the use, implementing appropriate treatment techniques to change the nature or properties of water before it is supplied so as to reduce or eliminate the risk of non-compliance and potential risk to the health of the population.

5. The water supplier, the town council or the property owner with a commercial or public activity, shall communicate the situation of alert and the remedial and preventive measures to consumers

and other suppliers concerned within 24 hours of the valuation by the health authority.

Furthermore, health guidelines shall be forwarded in co-ordination with the health authority to the population or particular population groups for which non-compliance may pose any risk to human health.

6. Having taken the remedial action, the water supplier, the property owner or the town council shall take a new sample at the point where the problem has occurred to check the situation of normality and inform the health authority that will evaluate the closing of the "situation of alert", communicating it to consumers and other water suppliers affected within 24 hours.

7 In case of failure to meet the parametric values set in Annex I, Part C, the health authority shall evaluate the qualification of water as "fit or unfit for human consumption" according to the risk to human health.

Article 28. Penalty system.

Without prejudice to other standards that might be implemented, the infringements against what is set out in this Royal Decree shall constitute an administrative infringement regarding health, in accordance with what is typified in General Health Act 14/1986 of 25 April, section VI of Title I and shall be the object of an administrative sanction, prior to a suitable administrative file instruction.

Article 29. Consumer information.

Information given to consumers should be reliable, adequately, appropriately and updated on every aspect described in this Royal Decree, through any means of communication referred to by each one of the administrations involved and the suppliers of the water supply.

Article 30. National Information System on Water Intended for Consumption.

1. The Department of Health and Consumer Affairs imposes a system of information relating to supply zones and monitoring of the quality of water intended for human consumption named National Information System on Water Intended for Consumption (SINAC, acronym in Spanish).

All parties considered in this provision and involved in the supply of water intended for human consumption shall be obliged to provide the SINAC with data in electronic support.

The water supplier, the town council and the health authority shall ensure that data from the self-monitoring, health supervision or monitoring at the consumers' tap are collected in the SINAC.



2. The Directorate-General for Public Health of the Department of Health and Consumer Affairs shall coordinate the SINAC according to what is specified in the following sections.

a) A Technical Committee shall be formed for the maintenance and supervision of the implementation and shall be responsible for the definition and development of the information; representatives of users from basic, autonomous and ministerial levels shall constitute it.

b) The scope of the SINAC includes the following entities and relevant bodies that take part in the system:

- 1st Town councils
- 2nd Water suppliers of the whole supply or parts of it.
- 3rd Autonomous health authorities.
- 4th Department of Health and Consumer Affairs.

c) The information unit of the SINAC is the supply zone.

d) The SINAC is structured on three levels, each with the following functionalities:

- 1st Basic level: collection and load of basic data; purification and internal validation of data; consultations; outputs, development of its own data. Administration of access to own basic users. The information of the basic levels is clustered at the autonomous level of which they depend.
- 2nd Autonomous level: collection and load of autonomous data; consultations; outputs, development of its own data; administration of access to autonomous and basic users. The information of the autonomous levels is clustered at the ministerial level.
- 3rd Ministerial level: Load of ministerial data, consultations, outputs, statistical development of national scope, circulation of the information to national and international relevant bodies, administration of access to ministerial users.

An administrator of the implementation shall administer with the following criteria: users, groups of users (Autonomous Communities, provinces, levels, entities, functions and fields), tables, files of exchange, parameterizations, etc.

Each work unit at each level can have access to all the information that it has generated or that affects it, but not to information from other units and shall be responsible for its own information that must not be modify by other unit of equal or different level.

e) Information from the SINAC is divided into 10 clusters of information:

- 1st Specifications of the Supply Area
- 2nd Catchments
- 3rd Drinking water treatment
- 4th Reservoirs and Tankers
- 5th Distribution networks
- 6th Laboratories
- 7th Samplings and Analytical bulletins
- 8th Situations of failure and/or Alert
- 9th Situations of Derogation
- 10th Health Inspections

The basic data of each one of the clusters could be modified by agreements of the Technical Committee.

f) The information of this system shall be considered gradually and structured in clusters of information (blocks or homogeneous groups of information); these clusters in fields (sections or attributes); and some of these fields in tables (variables, categories or field contents).

g) For public authorities or private institutions that have their own information system, the internal structure of the information contained in the SINAC shall be declared so that they may transfer the data relating to the analysis bulletins into the system by a file of exchange.

3. A Ministerial Order by the Department of Health and Consumer Affairs shall carry out the development of this article.

First additional provision. National Programmes.

National programmes of epidemiological and health supervision shall be planned in order to prevent specific risks to human health associated with water consumption.

National programmes shall be planned, developed and assessed by the Department of Health and Consumer Affairs in co-ordination with competent bodies from the Autonomous Communities, within the Environmental Health Paper, dependent on the Interterritorial Council of the National Health System, following a proposal by the Directorate-General for Public Health of the Department of Health and Consumer Affairs, on the basis of the scientific and technical progress.

Second additional provision. Sampling for radioactivity.

The Directorate-General for Public Health of the Department of Health and Consumer Affairs shall publish, within five years of the entry into force of this provision, the samplings, frequencies, types and methods of analysis for the parameters corresponding to radioactivity.



Until the publication of sampling for radioactivity, the health authority, within its territory, will be able to provide the monitoring of parameters set out for radioactivity in the water supply, if there is reason to suspect that they may be present in levels, which constitute a potential risk to the health of the population supplied.

Third additional provision. Sampling for parameters related to materials.

For the cases of chromium, copper, nickel, lead and any other parameter considered by the health authority that it might have been related to materials in contact with water intended for human consumption, the Directorate-General for Public Health of the Department of Health and Consumer Affairs shall impose a harmonised sampling method that shall be published within five years of the entry into force of this provision.

These sampling methods shall achieve that the values applied for the right monitoring of parameters related to materials of installations within the premises are those obtained as the weekly average value ingested by consumers and obtained from suitable samplings at the consumers' tap and in a representative way.

Fourth additional provision. Health protocols.

The Environmental Health Paper shall draw up, before January 2005, health guidelines for the most frequent situations of non-compliance and incidences that will serve as a guidance to the health authority and the water supplier for studies of assessing risk, health advice, remedial and preventive measures, protection measures, at the same time the Paper shall also publish guidelines to forward information to consumers on water intended for human consumption, treatment works and information referred to in this Royal Decree.

Fifth additional provision. Flight evaluation report.

The Autonomous Communities shall periodically publish a Report on the quality of the water intended for human consumption and the characteristics of supply zones of their own territory. Each Autonomous Community on the basis of the SINAC will decide the format and content.

The Directorate-General for Public Health of the Department of Health and Consumer Affairs shall publish a national Report every year on the quality of the water intended for human consumption and the characteristics of the supply zones on the basis of the SINAC, to be forwarded to the European Commission once published.

Sixth additional provision. Review of the quality criteria.

At least every five years, the Environmental Health Paper shall review the quality criteria of water intended for human consumption and health requirements of the treatment installations, in the light of scientific and technical progress and shall make proposals for amendments when necessary.

First transitional provision. Update of installations.

Before the 1 of January 2004 it shall be carry out the adaptation of the treatment for drinking water laid down in Article 10, the protection measures laid down in Articles 7.4, 8.2 and 11.2 and the introduction of a system to ensure the quality in the laboratories that carry out check and audit monitoring analysis of the self-monitoring, health supervision and monitoring at the consumers' tap, laid down in Article 16.

Before the 1 of January 2012 the reforms and necessary adaptations shall be carried out in public or private distribution networks and in installations within the premises of public buildings and establishments with public or commercial activity, derived from the built-in demands in Articles 8, 11, 12 and 14 and in Annex I of this Royal Decree.

Second transitional provision. Sampling at installations within the premises.

The health authority must ensure that the local administration takes samples of water intended for human consumption before the 1 of January 2012, in periodic seasons, with representativeness of each water supply in premises, public or private establishments, private homes built before 1980, having special attention to the determination of parameters related to materials used in the installations within the premises and those related to poor maintenance of installations within the premises that might pose a risk to human health.

Third transitional provision. Compliance with parametric values.

After the entry into force of this Royal Decree all water supply shall meet the requirements relating to parametric values set out in this Decree, except for: antimony, arsenic, benzene, bromate, 1,2-dichloroethane, microcystin, nickel, lead, tetrachloroethene, trichloroethene and trihalomethanes, for these parameters the time limit for compliance is set out in Annex I, Part B.

Fourth transitional provision. Censuses of substances used for water treatment and census of construction products in contact with water intended for human consumption.

The companies that market substances used for the treatment of the water intended for human consumption or construction products in contact with the water intended for human consumption shall communicate the printed form set out in



Annex VIII or in Annex IX to the Directorate-General of Public Health of the Department of Health and Consumer Affairs, within three months from the entry into force of this Royal Decree. In this way a census of substances used for water treatment shall be elaborated as well as a census of construction products in contact with water intended for human consumption. The Department of Health and Consumer Affairs shall update those censuses.

Fifth transitional provision. Valid granted derogations.

The health authority shall review and update the valid granted derogations at the entry into force of this Royal Decree, communicating, before six months, to the Directorate-General of Public Health of the Department of Health and Consumer Affairs the derogations that remain granted on the basis of Article 23 and that correspond to water supply zones that supply more than 1.000 m³ a day of water intended for human consumption.

Sixth transitional provision. Users of the SINAC.

From the 1 of June 2003 users belonging to water supply zones with more than 500 inhabitants will be able to request the entry as users of the SINAC to their autonomous administrators and from the 1 of January 2004 the rest of the users of smaller water supply zones.

Single repeal provision. Regulatory repeal

Done at Madrid, 7 February 2003.

All provisions of equal or inferior rank oppose to what is set out in this Royal Decree are hereby repealed and in particular Technical and Health Regulation for the supply and quality control of drinking water intended for public consumption approved under Royal Decree 1138/1990 of 14 September.

First final provision. Regulatory empowerment

The Department of Health and Consumer Affairs, of Agriculture, Fisheries and Food, of Environment, Economy, and Science and Technology are empowered to dictate, in the field covered by their respective powers, the necessary provisions for the development of what is set out in this Royal Decree.

Second final provision. Competing title.

This Royal Decree, that has nature of basic regulation, is dictated under the protection of what is set out in Article 149.1.16^a of the Constitution and in keeping with Articles 18.6, 19.2, 23, 24, 40.2, 40.13 and the second additional provision of the General of Health Act 14/1986 of 25 April.

Third final provision. Entry into force.

This Royal Decree shall enter into force the day following its publication in the *Boletín Oficial del Estado* (Official Gazette of the Spanish Government)



Annex I
Parameters and Parametric Values.

A. Microbiological Parameters.

	Parameter	Parametric Value	Notes
1	<i>Escherichia coli</i>	0 CFU/ 100 ml	
2	Enterococci	0 CFU/ 100 ml	
3	<i>Clostridium perfringens</i> (Including spores)	0 CFU/ 100 ml	1 and 2

NOTES:

- (1) When the determination is positive and the turbidity is greater than 5 NTU, cryptosporidium or other microorganisms or parasites must be investigated in the water ex ETAP or reservoir, if the health authority deems it appropriate.
- (2) Until the 1 of January 2004 *Clostridium sulfite reductase* could be measured instead of *Clostridium perfringens*. The conditions described in note 1 and the parametric value will be the same for both.

B.1. Chemical parameters.

	Parameter	Parametric value	Notes
4	Antimony Up to 31/12/2003	5,0 µg/l 10,0 µg/l	
5	Arsenic Up to 31/12/2003	10 µg/l 50 µg/l	
6	Benzene Up to 31/12/2003	1,0 µg/l - µg/l	
7	Benzo(α)pyrene	0,010 µg/l	
8	Boron	1,0 mg/l	
9	Bromate: From 01/01/2009 From 01/01/2004 to 31/12/2008 Up to 31/12/2003	10 µg/l 25 µg/l - µg/l	1
10	Cadmium	5,0 µg/l	
11	Cyanide	50 µg/l	
12	Copper	2,0 mg/l	
13	Chromium	50 µg/l	
14	1,2-Dichloroethane Up to the 31/12/2003	3,0 µg/l - µg/l	
15	Fluoride	1,5 mg/l	
16	Polycyclic aromatic hydrocarbons (PAH) Sum of: Benzo(b)fluoranthene Benzo(ghi)perylene Benzo(k)fluoranthene Indeno(1,2,3-cd)pyrene	0,10 µg/l µg/l µg/l µg/l µg/l	
17	Mercury	1,0 µg/l	
18	Microcystin Up to 31/12/2003	1 µg/l - µg/l	2
19	Nickel Up to 31/12/2003	20 µg/l 50 µg/l	
20	Nitrate	50 mg/l	3
21	Nitrites Distribution network In the water ex ETAP/reservoir	0,5 mg/l 0,1 mg/l	3 and 4
22	Pesticides - Total	0,50 µg/l	5 and 6



	Parameter	Parametric value	Notes
23	Individual pesticide Except for the case of: Aldrin Dieldrin Heptachlor Heptachlor epoxide	0,10 μg/l 0,03 μg/l 0,03 μg/l 0,03 μg/l 0,03 μg/l	6
24	Lead From 01/01/2.014 From 01/01/2.004 to 31/12/2013 Up to 31/12/2003	10 μg/l 25 μg/l 50 μg/l	
25	Selenium	10 μg/l	
26	Trihalomethanes (THMs): Sum of: from 01/01/2.009 From 01/01/2004 to 31/12/2008 Up to 31/12/2003 Bromodichloromethane Bromoform Chloroform Dibromochloromethane	100 μg/l 150 μg/l - μg/l μg/l μg/l μg/l	7 and 8
27	Trichloroethene + Tetrachloroethene: Up to 31/12/2003 Tetrachloroethene Trichloroethene	10 μg/l - μg/l μg/l μg/l	

NOTES:

- (1) It shall be measured when ozone is used in the purification of drinking water and it shall be measured at least in the water ex ETAP.
- (2) It shall be only measured if there is reason to suspect of eutrophication in water from the catchment, microcystin shall be measured in the water ex ETAP or water tower.
- (3) The condition that $[\text{nitrate}]/50 + [\text{nitrite}]/3 < 1$, the square brackets signifying the in mg/l for nitrate (NO₃) and nitrite (NO₂), must be met.
- (4) Necessary only when chloramination is used as a disinfectant.
- (5) The sum of all pesticides defined in Article 2 (10), which are likely to be present in water.
- (6) The Autonomous Communities shall ensure that necessary measures are taken in order to make them available to the health authority and the suppliers of the water supply, the list of plant protection pesticides mainly used in each one of the seasons against agricultural plagues and that they may be present in the water resources likely to be used for the production of water intended for human consumption.
- (7) Shall be measured when chlorine or its derivatives are used in the purification treatment.
If chlorine dioxide is used, chlorites in the water ex ETAP or water tower shall be measured.
- (8) Whenever the levels are above the parametric value, 2,4,6-triclorofenol or other by-products of the disinfection shall be measured in the water ex ETAP or water tower.

B.2. Chemical Parameters that are monitored according to specifications of the product.

	Parameter	Parametric Value	Notes
28	Acrylamide	0,10 μg/l	1
29	Epichlorohydrin	0,10 μg/l	1
30	Vinyl chloride	0,50 μg/l	1

NOTE

- (1) These parametric values refer 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.

The company that commercialises these products shall provide water suppliers and the fitters of the installations within the premises with the documentation that credits the maximum release of the commercial product that is in contact with the water intended for human consumption when it is used according to the specifications of use provided by the manufacturer.



C. Indicator parameters.

	Parameter	Parametric Value		Notes
31	Coliform bacteria	0 CFU/	100 ml	
32	Colony count 22 °C At the ex ETAP In the distribution network	100 CFU/ No abnormal change	1 ml	
33	Aluminum	200	µg/l	
34	Ammonium	0,50	mg/l	
35	Total organic carbon	No abnormal change	mg/l	1
36	Residual combined chlorine	2,0	mg/l	2, 3 and 4
37	Residual free chlorine	1,0	mg/l	2 and 3
38	Chloride	250	mg/l	
39	Colour	15	mg/l Pt/Co	
40	Conductivity	2.500	µS/cm at 20°C	5
41	Iron	200	µg/l	
42	Manganese	50	µg/l	
43	Odour	3 at 25°C	Index of dilution	
44	Oxidisability	5,0	mg O ₂ / l	1
45	pH: Minimum parametric value Maximum parametric value	6,5 9,5	pH units pH units	5 and 6
46	Taste	3 at 25 °C	Index of dilution	
47	Sodium	200	mg/l	
48	Sulphate	250	mg/l	
49	Turbidity: At the ex ETAP and/or reservoir In the distribution network	1 5	NTU NTU	

NOTES:

- (1) Total organic carbon shall be measured for supplies of more than 10.000 m³ a day otherwise oxidisability shall be measured.
- (2) The parametric values refer to levels in the distribution network. These parameters could be also analysed in situ.
In a food-production undertaking, this parameter need not be measured in water of the food processes
- (3) It shall be analysed when chlorine or its by-products are used in the water purification treatment.
If chlorine dioxide is used, chlorites shall be measured in the water ex ETAP.
- (4) It shall be measured only when chloramination is used as a disinfectant.
- (5) The water should not be corrosive nor contain incrusting substances. The result to calculate the Index of Langelier should be included between +/- 0.5.
- (6) For a food-production undertaking, the minimum value may be reduced to 4.5 pH units.

D Radioactivity.

	Parameter	Parametric Value		Notes
50	Total indicative dose	0,10	mSv/year	1
51	Tritium	100	Bq/l	
52	Gross alpha activity	0,1	Bq/l	
53	Gross beta activity	1	Bq/l	2

NOTES:

- (1) Excluding tritium, potasio⁴⁰, radon and radon decay products.
- (2) Excluding potasio⁴⁰ and tritium



Annex II
UNE-EN Standards of substances used for the treatment of water intended for human consumption.

Code of Standard	SUBSTANCES OR COMPOUNDS
UNE-EN 13194:2001	ACETIC ACID.
UNE-EN 939:2000	HYDROCHLORIC ACID.
UNE-EN 974:1998	PHOSPHORIC ACID.
UNE-EN 899:1997	SULFURIC ACID.
UNE-EN 1405:1998	SODIUM ALGINATE.
UNE-EN 1406:1998	MODIFIED STARCHES.
UNE-EN 882:1997	SODIUM ALUMINATE.
UNE-EN 12905:2000	EXPANDED ALUMINOSILICATE.
UNE-EN 12126:1999	LIQUEFIED AMMONIA.
UNE-EN 12122:1999	AMMONIA.
UNE-EN 12909:2000	ANTHRACITE.
UNE-EN 12911:2000	MANGANESE GREENSAND.
UNE-EN 12912:2000	BARITE.
UNE-EN 1204:1998	CALCIUM BIS- DIHYDROGEN ORTHOPHOSPHATE.
UNE-EN 12518:2000	LIME.
UNE-EN 12903:2000	POWDERED ACTIVATED CARBON.
UNE-EN 12915:2000	GRANULAR ACTIVATED CARBON.
UNE-EN 12907:2000	PYROLYSED COAL MATERIAL.
UNE-EN 1018:1998	CALCIUM CARBONATE.
UNE-EN 897:1999	SODIUM CARBONATE.
UNE-EN 938:2000	SODIUM CHLORITE.
UNE-EN 937:1999	CHLORINE.
UNE-EN 891:1999	IRON (III) CHLORIDE SULFATE
UNE-EN 881:1997	ALUMINIUM CHLORIDE, ALUMINIUM CHLORIDE HYDROXIDE AND ALUMINIUM CHLORIDE HYDROXIDE SULFATE (MONOMERIC).
UNE-EN 1421:1996	AMMONIUM CHLORIDE.
UNE-EN 888:1999	IRON (III) CHLORIDE
UNE-EN 1201:1998	POTASSIUM DIHYDROGEN ORTHOSPHATE.
UNE-EN 1198:1998	SODIUM DIHYDROGEN ORTHOPHOSPHATE.
UNE-EN 1205:1998	SODIUM ACID PYROPHOSPHATE.
UNE-EN 1019:1996	SULFUR DIOXIDE.
UNE-EN 936:1998	CARBON DIOXIDE.
UNE-EN 12671:2000	CHLORINE DIOXIDE.
UNE-EN 12121:1999	SODIUM DISULFITE.
UNE-EN 1017:1998	HALF-BURN DOLOMITE.
UNE-EN 13176:2001	ETHANOL.
UNE-EN 12173:1999	SODIUM FLUORIDE.
UNE-EN 1203:1998	TRIPOTASSIUM ORTHOPHOSPHATE.
UNE-EN 1200:1998	TRISODIUM ORTHOPHOSPHATE.
UNE-EN 12910:2000	GARNET.
UNE-EN 898:1998	SODIUM HYDROGEN CARBONATE.
UNE-EN 12120:1999	SODIUM HYDROGEN SULFITE.
UNE-EN 1202:1998	POTASSIUM HYDROGEN ORTHOPHOSPHATE.
UNE-EN 1199:1998	SODIUM HYDROGEN ORTHOPHOSPHATE.
UNE-EN 896:1999	SODIUM HYDROXIDE.
UNE-EN 900:2000	CALCIUM HYPOCHLORITE.
UNE-EN 901:2000	SODIUM HYPOCHLORITE.
UNE-EN 12901:2000	INORGANIC SUPPORTING AND FILTERING MATERIALS.
UNE-EN 12876:2000	OXYGEN.
UNE-EN 1278:1999	OZONE.
UNE-EN 12914:2000	POWDERED PERLITA.
UNE-EN 12672:2001	POTASSIUM PERMANGANATE.
UNE-EN 902:2000	HYDROGEN PEROXIDE.
UNE-EN 12926:2001	SODIUM PEROXODISULFATE.
UNE-EN 12678:2000	POTASSIUM PEROXOMONOSULFATE.
UNE-EN 12906:2000	PUMICE.
UNE-EN 1207:1998	TETRAPOTASSIUM PYROPHOSPHATE.
UNE-EN 1206:1998	TETRASODIUM PYROPHOSPHATE.
UNE-EN 1408:1998	POLY (DIALLYLDIMETHYLAMMONIUM CHLORIDE).



Code of Standard	SUBSTANCES OR COMPOUNDS
UNE-EN 1407:1998	ANIONIC AND NON-IONIC POLYACRYLAMIDES.
UNE-EN 1410:1998	CATIONIC POLYACRYLAMIDES.
UNE-EN 1409:1998	POLYAMINES.
UNE-EN 1208:1998	SODIUM CALCIUM POLYPHOSPHATE.
UNE-EN 1212:1998	SODIUM POLYPHOSPHATE.
UNE-EN 883:1997	ALUMINUM CHLORIDE POLYHYDROXIDE AND ALUMINUM CHLORIDE POLYHYDROXIDE SULFATE.
UNE-EN 12933:2000	TRICHLOROISOCYANURIC *
UNE-EN 12931:2000	SODIUM DICHLOROISOCYANURATE, ANHYDROUS *.
UNE-EN 12932:2000	SODIUM DICHLOROISOCYANURATE, DIHYDROUS *.
UNE-EN 1209:1998	SODIUM SILICATE.
UNE-EN 878:1997	ALUMINIUM SULFATE
UNE-EN 12123:1999	AMMONIUM SULFATE.
UNE-EN 12386:1999	COPPER SULFATE.
UNE-EN 889:1999	IRON (II) SULFATE.
UNE-EN 890:1999	IRON (III) SULFATE.
UNE-EN 12124:1999	SODIUM SULFITE.
UNE-EN 12913:2000	POWDERED DIATOMACEOUS EARTH.
UNE-EN 12125:1999	SODIUM THIOSULFATE.
UNE-EN 1211:1998	POTASSIUM TRIPOLYPHOSPHATE.
UNE-EN 1210:1998	SODIUM TRIPOLYPHOSPHATE.

* Chemical Products used in urgent cases

Annex III

Laboratories for the quality control of water intended for human consumption.

1. Laboratory
 - a) Name
 - b) Address
 - c) Postal Code/City
 - d) Telephone
 - e) Fax
 - f) E-mail
2. Type of guaranty:
 - a) Accreditation by the UNE-EN ISO/IEC 17025 (or 45001)
 - b) Certification by the UNE EN ISO 9001
3. Characteristics of the Accreditation and/or Certification
 - a) Accreditation or Certification number
 - b) Date of obtaining the accreditation or the certification
 - c) Date of last renewal
 - d) Only in the case of Accreditation, indicate the parameters for which it is credited
4. Provide, the photocopy of the scope of Accreditation or certification

Date and signature

Send to:

Directorate-General for Public Health of the Department of Health and Consumer Affairs



Annex IV Methods of analysis.

Parameters for which methods of analysis are specified

The following methods of analysis are given either for reference whenever a UNE, ISO or CEN methods are given or guidance, pending the possible adoption of new national methods for these parameters.

The laboratories may use alternative methods, provided that they are validated or credited or its equivalent has been demonstrated and what is set out in Article 16.3 is complied with.

Coliform bacteria and <i>Escherichia coli</i> (<i>E.coli</i>)	UNE EN ISO 9308-1: 2000
Enterococci	UNE EN ISO 7899-2: 2001
Enumeration of culturable microorganisms–Colony count 22°C.	UNE EN ISO 6222: 1999

Clostridium perfringens (including the spores)

Membrane filtration followed by anaerobic incubation of membrane on m-CP agar (Note 1) at (44 +/- 1) °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
Mg SO ₄ · 7H ₂ O	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°C for 15 minutes.

Allow the medium to cool and add:

D-cycloserine	400 mg
Polymyxine-B sulphate	25 mg
Indoxyl-β-D-glucoside to be dissolved in 8 ml sterile water before addition	60 mg
Filter - sterilised 0,5% phenolphthalein diphosphate solution	20 ml
Filter - sterilised 4,5% Fe Cl ₃ 6H ₂ O	2 ml

B Parameters for which performance characteristics are specified

B.1. For the following parameters, the specified performance are that the method of analysis used must, as a minimum, be capable of measuring concentrations equal to the Parametric Value (PV) 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 Annex I, Parts B and C.

PARAMETERS	TRUENESS % OF PV (Note 1)	PRECISION % OF PV (Note 2)	LIMIT OF DETECTION % OF PV (Note 3)	CONDITIONS	NOTES
Acrylamida				To be controlled by product specification	
Aluminum	10	10	10		
Ammonium	10	10	10		
Antimony	25	25	25		
Arsenic	10	10	10		
Benzene	25	25	25		
Benzo(a)pyrene	25	25	25		
Boron	10	10	10		
Bromate	25	25	25		



PARAMETERS	TRUENESS % OF PV (Note 1)	PRECISION % OF PV (Note 2)	LIMIT OF DETECTION % OF PV (Note 3)	CONDITIONS	NOTES
Cadmium	10	10	10		
Cyanide	10	10	10		4
Chloride	10	10	10		
Vinyl chloride				To be controlled by product specification	
Copper	10	10	10		
Conductivity	10	10	10		
Chromium	10	10	10		
1,2-dichloroethane	25	25	10		
Epichlorohydrin				To be controlled by product specification	
Fluoride	10	10	10		
Iron	10	10	10		
PAH	25	25	25		5 and 9
Manganese	10	10	10		
Mercury	20	10	20		
Nickel	10	10	10		
Nitrate	10	10	10		
Nitrite	10	10	10		
Oxidisability	25	25	10		6
Pesticides	25	25	25		7 and 9
Lead	10	10	10		
Selenium	10	10	10		
Sodium	10	10	10		
Sulphate	10	10	10		
Tetrachloroethene	25	25	10		8
THMs	25	25	10		5
Trichloroethene	25	25	10		8
Turbidity	25	25	25		

B.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.

NOTES:

- (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 (*)
- (2) Precision is the random error and is usually 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.
- (3) Limit of detection is either:
 - three times the relative standard deviation within batch of a natural sample containing a low concentration of the parameter,
 - or
 - five times the relative standard deviation within batch of a blank sample.
- (4) The method should determine total cyanide in all forms, from the 1 of January 2004.
- (5) The specific performance characteristics apply to the individual substances specified at 25% of the parametric value in Annex I.
- (6) Oxidation should be carried out for 10 minutes boiling under acid conditions using permanganate.
- (7) The performance characteristics apply to each individual pesticide and will depend on the pesticide concerned.
- (8) The performance characteristics apply to the individual substances specified at 50% of the parametric value in Annex I.
- (9) The limit of detection may not be achievable for some pesticides and polycyclic aromatic hydrocarbons at present, but laboratories should strive this standard.



C Parameters for which no method of analysis is specified.

Total organic carbon
Residual free chlorine
Combined residual chlorine
Clostridium Sulfite Reductase
Colour
Cryptosporidium
Microcystin
Odour
Taste

Annex V

Minimum number of samples for water intended for human consumption supplied from a distribution network or used in a food-production undertaking.

Note:

In the case of water supply through a distribution network, the frequency is calculated using the number of inhabitants in a supply zone, assuming a water consumption of 200 liters/day/capita.

Self-monitoring

1 Check monitoring

a) In the water ex ETAP⁽¹⁾ or water tower:

Volume of water treated each day m ³	Minimum number of samples per year
< 100	1
> 100 - < 1.000	2
> 1.000	2 for each 1.000 m ³ /d and part thereof of the total volume

b) In the water ex regulation and/or distribution reservoir⁽²⁾

Capacity of the deposit in m ³	Minimum number of samples per year
< 100	To be decided by Health Authority
> 100 - < 1.000	1
> 1.000 - < 10.000	6
> 10.000 - < 100.000	12
> 100.000	24

c) In the distribution network and food-production undertaking

Volume of water distributed each day m ³	Minimum number of samples per year
< 100	1
> 100 - < 1.000	2
> 1.000	1 + 1 for each 1.000 m ³ /day and part thereof of the total volume

Notes:

- (1) When a ETAP does not exist, the minimum frequency indicated for the check monitoring at the ETAP will be added to the minimum frequency set out in paragraphs b) and c) in keeping with what the health authority establishes.
- (2) When an ETAP exists the minimum frequency in reservoirs it could be reduced as far as the health authority establishes.



2 Audit monitoring

- a) In the water ex ETAP or water tower:

Volume of water treated each day m ³	Minimum number of samples per year
< 100	To be decided by the Health Authority
> 100 - < 1.000	1
> 1.000 - < 10.000	1 for each 5.000 m ³ / d and part thereof of the total volume
> 10.000 - < 100.000	2 + 1 for each 20.000 m ³ / d and part thereof of the total volume
> 100.000	5 + 1 for each 50.000 m ³ / d and part thereof of the total volume

- b) In the ex regulation and/or distribution reservoir

Capacity of the deposit in m ³	Minimum number of samples per year
< 1.000	To be decided by the Health Authority
> 1.000 - < 10.000	1
> 10.000 - < 100.000	2
> 100.000	6

- c) In the distribution network or food-production undertaking

Volume of water distributed each day m ³	Minimum number of samples per year
< 100	To be decided by the Health Authority
> 100 - < 1.000	1
> 1.000 - < 10.000	1 for each 5.000 m ³ /d and part thereof of the total volume
> 10.000 - < 100.000	2 + 1 for each 20.000 m ³ /d and part thereof of the total volume
> 100.000	5 + 1 for each 50.000 m ³ /d and part thereof of the total volume

B Monitoring at consumers' taps

Number of inhabitants supplied	Minimum number of samples per year
≤500	4
> 500 - ≤5.000	6
> 5.000	6 + 2 for each 5.000 inhabitant and part

Annex VI

A. Request for grant derogation.

1. Water supplier
 - a) Relevant body
 - b) Address
 - c) Postal Code and City (Province)
 - d) Telephone
 - e) Fax
 - f) E-mail
2. Supply zone
 - a) Name
 - b) Code
 - c) Population concerned
 - d) Volume of water distributed each day (m³)
3. Type of derogation
 - a) Grant
 - b) 1^a Extension
 - c) 2^a Extension
 - d) Short-term derogation
4. Characteristics of the derogation
 - a) Parameter
 - b) New proposed parametric value
 - c) Limit of time of the derogation
 - d) Grounds for the request for the derogation
5. Enclose Documentary Report (original and copy)
6. In case of an extension, enclose Progress Review (original and copy)

Date and signature

Send to:



Health authority

B Communication of the derogation granted.

1. Water supplier
 - a) Relevant body
2. Supply zone
 - a) Name
 - b) Code of the supply zone
 - c) Population concerned
 - d) Volume of water distributed each day (m³)
3. Type of derogation
 - a) Grant
 - b) 1^a Extension
 - c) 2^a Extension
4. Characteristics of the derogation
 - a) Parameter
 - b) New granted parametric value
 - c) Date of the authorization
 - d) Limit of time of the authorization
 - e) Grounds for the request for the granted derogation
5. In all the cases to be send it to the Commission of the European Union, enclosing:
 - a) Complete Documentary Report
 - b) List of the relevant food-production undertakings
6. In case of extensions, enclose the Progress Review

Date and signature of the Authority granting the derogation

Send to:

Directorate-General for Public Health. Department of Health and Consumer Affairs

Annex VII Notification of Failures.

1. Water supplier
 - a) Relevant body
 - b) Address
 - c) Postal Code and City (Province)
 - d) Telephone
 - e) Fax
 - f) E-mail
2. Laboratory
 - a) Relevant body
3. Supply zone
 - a) Name
 - b) Code of the Supply zone
4. Characteristics of the failure
 - a) Sampling point/s where the failure has been detected
 - b) Date of the sampling
 - c) Grounds that caused the failure
 - d) Parameter/s and quantified value
 - e) Date of confirmation of the failure
 - f) Time limit proposed to redress the failure
5. Enclose:
 - a) Remedial and preventive measures.
 - b) Proposal communication to forward to consumers.

Date and Signature

Send to:

Health authority



Annex VIII
Substances used in drinking water treatment.

1. Applicant
 - a) Name
 - b) Address:
 - c) Postal Code, City (Province)
 - d) Telephone
 - e) Fax
 - f) E-mail
 - g) Company health register number
2. Substance or product
 - a) Manufacturer
 - b) Product trade name
 - c) Classification of the product *
 - d) Labeling of the product:
 - (1) Phases of risk (R)
 - (2) Advise of handling precautions (S)
 - e) Size of the package
 - f) Presentation of the product
 - g) Method of use
 - h) Dose of implementation
- i) Purpose of the product
- j) Health register number or authorization of the product (if applicable)
- k) Incompatibilities with other products and/or materials
3. Notification to the European Union
The date of notification to the European Union must be indicated in the case of substances included in the definition of Article 2.11. a), b) and c) that are under Regulation 1896/2000 of the Commission of 7 September 2000, relating to the first phase of the programme considered in Article 16 (2) of European Parliament and Council Directive 98/8EC on Biocides (OJ L 228, 08/09/2000).
4. Enclose:
 - a) Qualitative and quantitative composition to 100%, including impurities, N° CAS and N° EC.
 - b) Original label of the product

* Royal Decree 363/1995 and Royal Decree 1425/1998.

Date and signature

Send to:
Directorate-General for Public Health of the Department of Health and Consumer Affairs

Annex IX
Construction products in contact with water intended for human consumption

1. Applicant
 - a) Name
 - b) Address
 - c) Postal Code, City (Province)
 - d) Telephone
 - e) Fax
 - f) E-mail
 - g) Company health register number
2. Product
 - a) Manufacturer
 - b) Product trade name
 - c) Type of use/s:
 - (1) For pipework
 - (2) For reservoir
 - (3) For lining and jointed section
 - (4) For coatings
 - (5) For accessories
 - (6) For membranes
 - (7) Others (specify)
- d) Location/s advised by the manufacturer for the product
- e) Is the product in direct contact with water intended for human consumption?
- f) Classification of the product * (if applicable)
- g) Health register number or authorization of the product (if applicable)
- h) Incompatibilities with other products, substances and/or disinfectants
- i) Releasing tests of the product into water (if there is any)
- j) Chemical reaction tests of the product to 20 ppm of chlorine (if there is any)
3. Enclose:
 - a) Qualitative and quantitative composition to 100%, including impurities, N° CAS and N° EC.
 - b) Original label of the product

* Royal Decree 363/1995 and Royal Decree 1425/1998.

Date and signature

Send to:
Directorate-General for Public Health belonging to the Department of Health and Consumer Affairs