

Regulations on water supply and water intended for human consumption (Drinking Water Regulations) (excerpts)

Legal basis: Laid down by the Ministry of Health and Care Services on 22 December 2016 under the Act of 19 December 2003 No. 124 relating to food production and food safety, etc. (Food Act) sections 5, 6, 7, 8, 9, 10, 14, 15, 16, 23, 24, 25, 26, 27, 28 and 32, cf. Formal Delegation of 19 December 2003 No. 1790, Act of 23 June 2000 No. 56 relating to health and social preparedness section 2-2 and Act of 24 June 2011 No. 29 relating to public health (Public Health Act) sections 4, 5, 6, 7, 8, 10, 31 and 32.

EEA references: EEA Agreement Annex XX point 7a (Directive 98/83/EC as amended by Directive (EU) 2015/1787).

Section 1. Purpose

The purpose of these Regulations is to protect human health by laying down requirements for safe supply of sufficient quantities of water intended for human consumption, which is wholesome, clear and without conspicuous odour, taste and colour.

Section 2. Scope of application

These Regulations cover all water intended for human consumption as defined in section 3 b), and all matters that could affect the water.

The Regulations do not cover natural mineral water or spring water as defined in the Regulations on natural mineral and spring water.

The Regulations apply to units on the Norwegian continental shelf and to Norwegian aircraft and ships, unless the water intended for human consumption on board these is specially regulated by other regulations.

Section 3. Definitions

For the purposes of these Regulations, the following definitions shall apply:

- a) "*distribution system*": technical installation which distributes or stores water intended for human consumption from the water treatment works up to the connection point to one-household water supplies or domestic distribution systems or to and including tapping points for which the water supplier is responsible;
- b) "*water intended for human consumption*": all water either in its original state or after treatment, intended for drinking, cooking, food preparation of other domestic purposes or in any food-production undertaking required to use water intended for human consumption. Water intended for human consumption does not include clean water and clean seawater as defined in the Regulations on food hygiene;
- c) "*one-household water supply*": system delivering water intended for human consumption to one single residence or holiday home only, consisting of one or more of the following elements: water catchment area, raw water source, technical installation for treatment of the water and technical installation for the distribution and storage of the water intended for human consumption. A one-household water supply also includes service pipe and technical installation that distributes or stores the water intended for human consumption from and including the connection point to the water supply system's distribution system or domestic distribution system;
- d) "*hygienic barrier*": natural or artificial barrier or measure which removes or inactivates pathogenic viruses, bacteria, parasites or other micro-organisms, or which dilutes, removes or transforms chemical substances to a level where they no longer pose a risk to human health;
- e) "*domestic distribution system*": technical installation which is not a one-household water supply and which distributes or stores the water intended for human consumption from and including the connection point to the water supply system's distribution system to the connection point to a one-household water supply or to and including tapping points for which the owner of the domestic distribution system is responsible. A domestic distribution system is inside a building or between buildings with the same owner, or on aircraft and ships that bunker water;
- f) "*produced water per day*": the volume of water intended for human consumption which is supplied from the water treatment works during an average day in the week of the year with the highest production, or

which in a corresponding week is received in a distribution system that alone constitutes a water supply system. For water supply systems without a water meter, the volume of water produced each day is estimated by multiplying the number of persons supplied in the week of the year where the water supply system supplies the most persons, by 0.2 m³;

- g) "*raw water*": water used for the production of water intended for human consumption;
- h) "*raw water source*": body of water from which the raw water is collected;
- i) "*vulnerable subscriber*": subscriber characterised by high risk of disease or other serious consequences if sufficient quantities of hygienically safe water intended for human consumption is not delivered;
- j) "*water treatment works*": technical installation which distributes or stores the water from the raw water source and to and including the technical installation that treats the water in a water supply system;
- k) "*water supply system*": system which is not a one-household water supply and which consists of one or more of the following elements: water catchment area, raw water source, water treatment works and distribution system. A water catchment area or raw water source is not by itself a water supply system;
- l) "*water catchment area*": area above and below the ground, where the water in the raw water source comes from;
- m) "*water supplier*": the natural or legal person or persons responsible for the compliance with the requirements for the water supply system.

Section 4. Contamination

It is prohibited to contaminate water intended for human consumption. The prohibition applies to all activities, from the water catchment area to the tapping points, that could lead to a risk of contaminating the water intended for human consumption. Activities also include outdoor life and other exercise of the public right of access. Where protective measures pursuant to section 12 or restrictions pursuant to section 26 have been laid down, the prohibition applies to infraction thereof. Agricultural activities are permitted in the water catchment areas if they do not contaminate the water intended for human consumption or involve infraction of protective measures pursuant to section 12 or of restrictions pursuant to section 26.

The subscribers shall have suitable protection against backflow in accordance with the requirements of the Planning and Building Act and Regulations related to civil engineering to prevent the water intended for human consumption in the distribution system from being contaminated.

Section 5. Limit values

The water supplier shall ensure that the water intended for human consumption is wholesome, clear and without conspicuous odour, taste and colour. The water intended for human consumption shall:

- a) not contain viruses, bacteria, parasites, other micro-organisms or substances which in numbers or concentrations constitute a potential risk to health; and
- b) comply with the limit values of Appendix 1.

The water intended for human consumption shall be in compliance with the requirements of the first paragraph at the following points:

- a) at connection points to other water supply systems;
- b) at connection points to domestic distribution systems or one-household water supplies;
- c) at tapping points for which the water supplier is responsible;
- d) where the water emerges from a water tank for which the water supplier is responsible.

The owner of a domestic distribution system supply shall ensure that the domestic distribution system does not make the water intended for human consumption less safe with regard to health / wholesome. The domestic distribution system shall furthermore not contribute to the water intended for human consumption becoming less clear or getting a conspicuous odour, taste or colour.

The owner of a one-household water supply is personally responsible for the water intended for human consumption being wholesome, clear and without conspicuous odour, taste and colour.

Section 6. Risk identification and risk management

The water supplier shall identify the risks that need to be countered, removed or reduced to an acceptable level in order to ensure supply of sufficient quantities of water intended for human consumption which is wholesome, clear and without conspicuous odour, taste and colour.

The water supplier shall ensure that measures that counter, remove or reduce the risks to an acceptable level are identified and implemented.

Risk identification and risk management shall form the basis for emergency preparedness preparations as described in section 11.

The water supplier shall ensure that the risk identification and risk management is up-to-date.

Section 7. *Internal control*

The water supplier shall establish internal control at the water supply system, and ensure that this is followed up. The internal control shall ensure and demonstrate compliance with the requirements of these Regulations, and shall be adapted to the type and scope of the water supply system.

The internal control shall at least include:

- a) how the water supply system is organised, and how the responsibilities and authorities are placed;
- b) the routines that the water supplier has established to ensure compliance with the requirements of these Regulations;
- c) registrations demonstrating compliance with the routines;
- d) the routines to be followed if non-compliance with the requirements of these Regulations should occur; and
- e) the routines to be followed to prevent recurrence of non-compliance with the legislation.

The internal control shall be in the written form at water supply systems producing at least 10 m³ of water intended for human consumption per day, or supplying one or more vulnerable subscribers. The Norwegian Food Safety Authority may, if necessary, order smaller water supply systems to document the internal control in writing.

The water supplier shall ensure that the internal control is up-to-date, and that each person contributing to producing and supplying the water intended for human consumption is working in accordance therewith.

Section 8. *Competence and training*

The water supplier shall ensure that the water supply system has, or has access to by way of agreement, the necessary competence.

The water supplier shall ensure that all persons that participate in activities covered by these Regulations are given training that reflects their work tasks. All persons shall be familiar with the meaning of the requirements of sections 5, 10 and 11.

Section 9. *Supply reliability*

The water supplier shall ensure that the water supply system is so equipped and dimensioned, and that it has operating plans and emergency preparedness plans in place, as to be able to supply sufficient quantities of water intended for human consumption at all times.

The water supplier shall arrange for the water supply system to be capable of supplying emergency water for drinking and personal hygiene without using the ordinary distribution system.

During crises or catastrophes in peacetime or in the event of war, the water supply can be sustained to ensure water for necessary purposes even if the concentration of one or more of the parameters exceed the limit values in Appendix 1. This may only be done upon agreement with the municipal medical officer in accordance with section 27 of the Public Health Act subparagraph (b) and the Norwegian Food Safety Authority, and after the subscribers have been notified in accordance with the requirements of section 23 second paragraph.

Section 10. *Preventive measures*

The water supplier shall ensure that the water treatment works and all relevant parts of the distribution system are sufficiently physically secured, and that all control systems are sufficiently secured against unauthorised access and use.

Section 11. *Emergency preparedness*

The water supplier shall ensure that necessary preparations for emergency preparedness are carried out and that emergency preparedness plans are prepared in accordance with the Health and Social Preparedness Act and the Regulations on requirements for emergency preparedness planning.

Water suppliers owning water supply systems that produce at least 10 m³ of water intended for human consumption per day, or that supply one or more vulnerable subscribers, shall prepare a plan for emergency preparedness drills in accordance with section 7 of the Regulations on requirements for emergency preparedness planning. The water supplier shall ensure that this plan is kept up-to-date and followed.

Section 12. *Protective measures*

The water supplier shall ensure that the water intended for human consumption is protected against contamination.

The water supplier shall plan necessary measures to protect the water catchment area and the raw water source. The measures shall be based on the risk identification of section 6.

The water supplier shall implement relevant protective measures and inform affected municipalities when measures requiring follow-up pursuant to section 26 are required.

The water supplier shall inform the general public about the prohibition against contamination, where this is relevant. This may for instance be done through notices in the water catchment area.

The water supplier shall see to that subscribers who according to the risk identification of section 6 may constitute a particular danger for contamination of the water intended for human consumption through backflow, have suitable protection against this. The water supplier may set restrictions for maximum quantity of water to be extracted when testing sprinkler systems.

Section 13. *Water treatment*

The water supplier shall ensure that the raw water is so treated that the water intended for human consumption satisfies the requirements of section 5. The water treatment and source protection pursuant to section 12 shall combined provide sufficient hygienic barriers. This means that the water treatment shall be adapted to:

- a) the raw water quality;
- b) the risks identified pursuant to section 6; and
- c) the quantity of produced water per day.

A water treatment method that removes or inactivates pathogenic viruses, bacteria, parasites or other micro-organism shall always be included, unless the water supply system has a groundwater source and the risk identification pursuant to section 6 indicates that it is not necessary.

The water supplier shall ensure that a plan is prepared for how the water treatment works shall be operated and maintained, and that this plan is kept up-to-date and followed.

Section 14. *Water treatment chemicals*

Water suppliers and the owners of domestic distribution systems shall ensure that only water treatment chemicals approved by the Norwegian Food Safety Authority are used. A list of approved water treatment chemicals can be found on the website of the Norwegian Food Safety Authority.

Manufacturers and importers shall apply to the Norwegian Food Safety Authority for approval for water treatment chemicals. The application shall include at least the documentation described in Appendix 3. Water treatment chemicals may only be approved if the use thereof does not result in harmful quantities of substances in the water intended for human consumption. Disinfectants shall be approved in accordance with the Biocide Regulations. The Norwegian Food Safety Authority may withdraw the approval if new information so indicates.

Section 15. *Distribution system and domestic distribution system*

The water supplier shall ensure that the water supply system's distribution system is in satisfactory condition and is operated in a satisfactory way to prevent contamination of the water intended for human consumption and to contribute to sustainable use of groundwater and surface water.

The water supplier shall ensure that a plan is prepared for how the distribution system shall be maintained and renewed, and that this plan is kept up-to-date and followed.

The owner of a domestic distribution system shall ensure that the domestic distribution system is in satisfactory condition, and that it does not contribute to contamination of water intended for human consumption in the distribution system.

Section 16. *Materials*

Water suppliers and owners of domestic distribution systems shall ensure that the materials that come into contact with the water intended for human consumption are safe with regard to health. The materials shall not release substances to the water intended for human consumption in quantities that are hazardous to health or in quantities that contribute to the water intended for human consumption becoming less clear or getting a conspicuous odour, taste or colour.

Section 17. *Registration*

The water supplier shall register the water supply systems on a form prescribed by the Norwegian Food Safety Authority.

The water supplier shall register any water supply system not registered per 1 July 2017 within 1 July 2018.

New water supply systems shall be registered prior to start of construction. The registration may trigger a requirement for plan approval in accordance with section 18.

The following information shall be registered:

- a) the name of the water supply system;
- b) the name and address of the water supplier;
- c) the organisation number of the water supply system pursuant to the Central Coordinating Register for Legal Entities Act, or the birth date of the water supplier if the water supply system does not have an organisation number;
- d) the quantity of water that the water supply is dimensioned to produce and the number of subscribers;
- e) type of raw water source;
- f) the coordinates of intake points in all the raw water sources, including wells, that form part of the water supply system; and
- g) the type of water treatment used.

The water supplier shall ensure that the registered information is up-to-date. Changes in the fourth paragraph (d) may trigger a requirement for plan approval in accordance with section 18.

Section 18. *Plan approval*

Water supply systems that will be dimensioned to produce at least 10 m³ of water intended for human consumption per day, or to supply one or more vulnerable subscribers, are subject to plan approval. The water supplier at water supply systems that are subject to plan approval shall:

- a) apply to the Norwegian Food Safety Authority for approval of the start-up and operating plan. The plan shall document that the water supply system will satisfy the requirements of these Regulations. The water supplier shall apply on a form prescribed by the Norwegian Food Safety Authority;
- b) inform affected municipalities, so that they may comment on the plan in accordance with section 26;
- c) see to that the plan is approved by the Norwegian Food Safety Authority prior to start of construction; and
- d) register that the water supply system is ready to be put into operation. This shall be done on a form prescribed by the Norwegian Food Safety Authority before it is put into operation.

In the event of changes that impact the production of sufficient quantities of wholesome water intended for human consumption at water supply systems subject to plan approval, the water supplier shall comply with the provisions of the first paragraph (a) to (d).

Water supply systems in operation without approved plan as per 1 January 2017 are exempt from the requirements of the first paragraph.

Section 19. Sampling plan

The water supplier shall prepare a sampling plan for the water supply system. The sampling plan shall be based on the risk identification of section 6, and shall contain an overview of:

- a) the samples necessary to ensure and demonstrate that the water supply system satisfies the requirements of section 5. This includes the minimum requirements for raw water samples mentioned in section 20 and the minimum requirements for samples of water intended for human consumption mentioned in section 21. If a water supply system is receiving water intended for human consumption from another water supply system, the water supplier at these water supply systems may cooperate on the sampling plan;
- b) where the samples shall be taken in the water treatment works and the distribution system to ensure that the water intended for human consumption is in accordance with the requirements of section 5. If the water supplier can demonstrate that the concentration of a given substance in the water intended for human consumption does not increase as it progresses through the distribution system, the samples for analysis of these substances may be taken straight after the water treatment;
- c) when the samples shall taken. The samples of the raw water and the water intended for human consumption shall be distributed all through the year or period of use in order to be as representative as possible;
- d) the parameters for the analyses of the different samples.

The water supplier shall ensure that the sampling plan is kept up-to-date and followed.

Section 20. Minimum requirements for raw water samples

The water supplier shall take raw water samples in accordance with the sampling plan mentioned in section 19. The minimum requirement for the number of raw water samples is:

Minimum number of raw water samples

<i>Produced water per day (m³)</i>	<i>Raw water samples per year</i>
a) Up to and including 10	1
b) From 10 up to and including 2,000	4
c) From 2,000 up to and including 6,000	8
d) From 6,000	12

The raw water samples shall as a minimum be analysed for *E. coli*. At water supply systems with a minimum of 10 m³ produced water per day, the raw water samples shall in addition as a minimum be analysed for intestinal enterococci, coliform bacteria, pH, turbidity and colour. The sampling and analysis of raw water shall be carried out in accordance with international or national standards when such exist. Where Appendix 1 or Appendix 2 set out requirements for analytical methods, these shall be used. The laboratories used shall be accredited for the analyses in question.

Section 21. Minimum requirements for samples of water intended for human consumption

The water supplier shall take samples of water intended for human consumption in accordance with the sampling plan mentioned in section 19. The minimum required parameters are divided into sampling group A and B according to how often the samples shall be taken. The minimum requirement for sampling frequency of water intended for human consumption is:

Minimum number of samples of water intended for human consumption

<i>Produced water per day (m³)</i>	<i>Samples per year for sampling group A X is m³ produced water per day</i>	<i>Samples per year for sampling group B X is m³ produced water per day</i>
a) Up to and including 10, but no vulnerable subscribers	1	

b) From 10 up to and including 100, or less with vulnerable subscribers	4	0.5 = 1 every two years
c) From 100 up to and including 1,000	4	1
d) From 1,000 up to and including 10,000	$4 + (3X / 1,000)$	$1 + (X / 3,300)$
e) From 10,000 up to and including 100,000	$4 + (3X / 1,000)$	$3 + (X / 10,000)$
f) From 100,000	$4 + (3X / 1,000)$	$10 + (X / 25,000)$

The samples of the water intended for human consumption for sampling group A shall be analysed for the parameters marked with sampling group A in Appendix 1 and Appendix 2. The samples of the water intended for human consumption for sampling group B shall be analysed for the parameters marked with sampling group B in Appendix 1 and Appendix 2. The sampling of water intended for human consumption shall be carried out in accordance with NS-ISO 5667-5 and NS-EN ISO 19458. The analysis of samples of water intended for human consumption shall be carried out in accordance with international or national standards when such exist. Where Appendix 1 or Appendix 2 set out requirements for analytical methods, these shall be used. The laboratories used shall be accredited for the analyses in question.

The number of analyses in sampling groups A and B may be reduced, with the exception of the analyses for *E.coli*. In order to take advantage of this possibility, the water supplier shall carry out a risk assessment in accordance with NS-EN 15975-2 or equivalent method. The risk assessment shall be based on the results from the raw water samples pursuant to section 20 and take into account the results of the monitoring programs established in accordance with the Water Regulations section 17 and section 18. The risk assessment shall be accepted by the Norwegian Food Safety Authority before the water supplier may reduce the number of analysis in sampling group A or B.

If the risk assessment establishes that there is no risk to health:

- a) the frequency of the analyses for a parameter may be reduced. In order to do this, all representative samples of water intended for human consumption from a period of 3 years must be lower than 60 per cent of the limit value or action limit for the parameter in question. At least two samples shall be analysed;
- b) analyses of a parameter may be removed from the sampling plan mentioned in section 19, so that the water intended for human consumption is no longer monitored with respect to this parameter. In order to do this, all representative samples of water intended for human consumption from a period of 3 years must be lower than 30 per cent of the limit value or action limit for the parameter in question. At least two samples shall be analysed.

Section 22. Measures

If the water intended for human consumption is not in compliance with the requirements of section 5 first paragraph, or if the action limits of Appendix 2 are exceeded, the water supplier shall immediately investigate the cause of the deviation.

In the event of deviation from the requirements of section 5 first paragraph, the water supplier shall as soon as possible implement measures to rectify the deviation.

In the event of deviation from the action limits of Appendix 2, the water supplier shall, concurrent with the investigation of the cause, consider whether the deviation may represent a risk to health. If the deviation may represent a risk to health, the water supplier shall as soon as possible implement measures to rectify the deviation.

Section 23. Duty to inform subscribers

The water supplier shall without delay notify the subscribers upon suspicion of deviation from the requirements of section 5 first paragraph or in the event of exceedance of the action limits of Appendix 2 that may represent a risk to health. The water supplier shall advice the subscribers on how to react. If the water supplier does not comply with this duty to inform, the Norwegian Food Safety Authority may inform the subscribers on the expense of the water supply system.

The water supplier shall ensure that the subscribers at all times have access to up-to-date information on the quality of the water intended for human consumption.

If a risk assessment has been carried out that results in the number of analyses in sampling group A or B being reduced pursuant to section 21, the subscribers shall be given access to a summary of this risk assessment.

Section 24. *Duty to inform the Norwegian Food Safety Authority*

The water supplier shall without delay notify the Norwegian Food Safety Authority upon suspicion of deviation from the requirements of section 5 first paragraph or in the event of exceedance of the action limits of Appendix 2 that may represent a risk to health. The water supplier shall at the same time provide information about the measures being implemented in accordance with the requirements of section 22 and about the advice given to the subscribers.

If the Norwegian Food Safety Authority so requests, the water supplier shall give the Norwegian Food Safety Authority the information they need to be able to carry out their responsibilities pursuant to these Regulations.

Section 25. *Reporting*

For water supply systems producing at least 10 m³ of water per day, the water supplier shall report the results of the analyses of the raw water samples of section 20 and the samples of the water intended for human consumption of section 21. The water supplier shall also report other relevant data necessary in order to honour Norway's international reporting commitments. The reporting shall be done on a form prescribed by the Norwegian Food Safety Authority by 15 February the following year.

Section 26. *The municipality's responsibility*

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Section 27. *The county's responsibility*

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Section 28. *Supervision and administrative decisions*

The Norwegian Food Safety Authority carries out supervision and may render necessary administrative decisions in accordance with the Food Act sections 23 to 26, for all the provisions of these Regulations with the exception of sections 26 and 27.

Supervision with the provisions of sections 26 and 27 is laid down in the provisions of the Public Health Act sections 31 and 32 and the Civil Protection Act section 29.

Section 29. *Exemptions*

The Norwegian Food Safety Authority may in special cases grant exemptions from provisions of these Regulations, provided it does not conflict with Norway's international commitments.

Section 30. *Penalties*

Wilful or negligent violation of the provisions of these Regulations, or of individual decisions issued pursuant to these Regulations, is punishable in accordance with the Food Act section 28, the Public Health Act section 18 and the Health and Social Preparedness Act section 6-5.

Section 31. *Entry into force*

These Regulations enter into force on 1 January 2017. The obligation to register pursuant to section 17 enters into force on 1 July 2017.

The Regulations of 4 December 2001 No. 1371 on water supply and water intended for human consumption are repealed on 1 January 2017.

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Appendix 1 Limit values

	Limit value	Unit	Sampling group	Analytical method	Uncertainty of measurement (per cent of limit value)	Remarks
1,2-dichloroethane	3.0	µg/l	B		40	
Acrylamide	0.10	µg/l	B			The parameter does not to be analysed, but shall be calculated if the risk identification of section 6 indicates that the parameter may be relevant. The maximum amount of monomers is calculated based on what the specifications say about the transfer of the polymer upon contact.
Antimony	5.0	µg/l	B		40	
Arsenic	10	µg/l	B		30	
Benzene	1.0	µg/l	B		40	
Benzo(a)pyrene	0.010	µg/l	B		50	If the value of uncertainty of measurement cannot be met, the best available technique shall be selected (up to 60 per cent).
Lead	10	µg/l	B		25	The sample shall be taken in a manner yielding a representative picture of a weekly average for the water used.
Boron	1.0	mg/l	B		25	
Bromate	10	µg/l	B		40	
Cyanide	50	µg/l	B		30	The method determines total amount of cyanide, regardless of chemical form.
<i>E. coli</i>	0	Count/ 100 ml	A	NS-EN ISO 9308-1 or NS-EN ISO 9308-2		Analytical method approved in accordance with the Regulations of 12 April 2001 No. 1372 on water supply and water intended for human consumption may be used until 30 June 2017.
Epichlorohydrin	0.10	µg/l	B			The parameter does not to be analysed, but shall be calculated if the risk identification of section 6 indicates that the parameter may be relevant. The maximum amount of monomers is calculated based on what the specifications say about the transfer of the polymer upon contact.
Colour	Acceptable to subscribers		A			The Norwegian Food Safety Authority recommends that the colour value should not exceed 20 mg/l Pt. See also Appendix 2.
Fluoride	1.5	mg/l	B		20	
Intestinal enterococci	0	Count/ 100 ml	A	NS-EN ISO 7899-2		
Cadmium	5.0	µg/l	B		25	
Copper	2.0	mg/l	B		25	The sample shall be taken in a manner yielding a representative picture of a weekly average for the water used.
Chromium	50	µg/l	B		30	
Mercury	1.0	µg/l	B		30	
Odour	Acceptable to subscribers		A			See also Appendix 2.
Nickel	20	µg/l	B		25	The sample shall be taken in a manner yielding a representative picture of a weekly average for the water used.
Nitrate	50	mg/l	B		15	
Nitrite	0.5	mg/l	A or B		20	In sampling group A only in the cases where chloramine is used. Otherwise in sampling group B.

Pesticides, individually	0.10	µg/l	B		30-80	The limit value applies to each individual pesticide. It also applies to their relevant metabolites, degradation and reaction products. For aldrin, dieldrin, heptachlor and heptachlor epoxide, the limit value is 0.030 µg/l. It is only necessary to analyse for pesticides that with a certain level of probability may be present in the water supply system in question. The uncertainty of measurement for pesticides varies.
Pesticides, total	0.50	µg/l	B		30-80	The sum of the individual pesticides analysed in the water supply system's sampling plan. The limit value also applies to the pesticides' relevant metabolites, degradation and reaction products. It is only necessary to analyse for pesticides that with a certain level of probability may be present in the water supply system in question. The uncertainty of measurement for pesticides varies.
Polyaromatic hydrocarbons (PAH)	0.10	µg/l	B		50	The sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene and indeno(1,2,3-cd)pyrene. The uncertainty of measurement applies to individual substances, specified at 25 per cent of the limit value.
Selenium	10	µg/l	B		40	
Taste	Acceptable to subscribers		A			See also Appendix 2.
Tetrachloroethene	10	µg/l	B		30	The sum of tetrachloroethene and trichloroethene shall not exceed 10 µg/l. The uncertainty of measurement applies to individual substances, specified at 50 per cent of the limit value.
Trichloroethene	10	µg/l	B		40	The sum of tetrachloroethene and trichloroethene shall not exceed 10 µg/l. The uncertainty of measurement applies to individual substances, specified at 50 per cent of the limit value.
Trihalomethanes, total	100	µg/l	B		40	The sum of chloroform, bromoform, dibromochloromethane and bromodichloromethane. The uncertainty of measurement applies to individual substances, specified at 25 per cent of the limit value.
Turbidity	Acceptable to subscribers		A	NS-EN ISO 7027	30	The Norwegian Food Safety Authority recommends that the turbidity when the water emerges from the water treatment works not exceed 1 NTU at water supply systems using surface water. The uncertainty of measurement is estimated at at the level of 1 NTU. See also Appendix 2.
Vinyl chloride	0.50	µg/l	B			The parameter does not to be analysed, but shall be calculated if the risk identification of section 6 indicates that the parameter may be relevant. The maximum amount of monomers is calculated based on what the specifications say about the transfer of the polymer upon contact.

Appendix 2 Action limits

	Action limit	Unit	Sampling group	Analytical method	Uncertainty of measurement (per cent of action limit)	Remarks
Aluminium	0.2	mg/l	A or B		25	In sampling group A in the cases where aluminium is used as a water treatment chemical. Otherwise in sampling group B.

Ammonium	0.50	mg/l	A or B		40	In sampling group A in the cases where chloramine is used. Otherwise in sampling group B.
<i>Clostridium perfringens</i> (including spores)	0	Count/ 100 ml	B	NS-EN ISO 14189		It is only mandatory to analyse for <i>clostridium perfringens</i> if the raw water is surface water, or is affected by surface water. If the action limit is exceeded, the water supplier shall check whether pathogenic micro-organisms or parasites, such as <i>Cryptosporidium</i> , are present. Analytical method approved in accordance with the Regulations of 12 April 2001 No. 1372 on water supply and water intended for human consumption may be used until 30 June 2017.
Colour	No abnormal change		A			The Norwegian Food Safety Authority recommends that the colour value not exceed 20 mg/l Pt. See also Appendix 1.
Iron	0.2	mg/l	A or B		30	In sampling group A only in the cases where iron is used as a water treatment chemical. Otherwise in sampling group B.
Colony count at 22°C	100 and no abnormal change	Count/ml	A	NS-EN ISO 6222		
Chloride	250	mg/l	B		15	The water shall not be corrosive.
Coliform bacteria	0	Count/ 100 ml	A	NS-EN ISO 9308-1 or NS-EN ISO 9308-2		Analytical method approved in accordance with the Regulations of 12 April 2001 No. 1372 on water supply and water intended for human consumption may be used until 30 June 2017.
Conductivity	250	mS/m at 20°C	A		20	The water shall not be corrosive.
Odour	No abnormal change		A			See also Appendix 1.
Manganese	0.05	mg/l	B		30	
Sodium	200	mg/l	B		15	
pH	6.5-9.5		A		0.2	The uncertainty of measurement is not in per cent of pH, but in pH-units. The water shall not be corrosive.
Taste	No abnormal change		A			See also Appendix 1.
Sulphate	250	mg/l	B		15	The water shall not be corrosive.
Total organic carbon (TOC)	No abnormal change		B	CEN 1484	30	The uncertainty of measurement shall be estimated at the level of 3 mg/l of TOC.
Turbidity	No abnormal change		A	NS-EN ISO 7027	30	The Norwegian Food Safety Authority recommends that the turbidity when the water emerges from the water treatment works not exceed 1 NTU at water supply systems using surface water. The uncertainty of measurement is estimated at the level of 1 NTU. See also Appendix 1.

Appendix 3 Application for approval of water treatment chemicals shall include the following documentation:

- information about applicant, including contact information;
- trade name of product;
- name of manufacturer;
- information about use and maximum dosage;
- information about chemical composition, which includes a complete overview of all components with CAS numbers and percentages of product; and
- certificates of analyses for all components.