Guidelines for Canadian Drinking Water Quality

Summary Table

Prepared by the

Federal-Provincial-Territorial Committee on
Drinking Water
of the
Federal-Provincial-Territorial Committee on
Health and the Environment

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Introduction

The *Guidelines for Canadian Drinking Water Quality* are published by Health Canada on behalf of the Federal-Provincial-Territorial Committee on Drinking Water (CDW). This summary table is updated regularly and published on Health Canada's website (www.healthcanada.gc.ca/waterquality). It supersedes all previous versions, as well as the published booklet of the *Sixth Edition of the Guidelines for Canadian Drinking Water Quality*.

These guidelines are based on current, published scientific research related to health effects, aesthetic effects, and operational considerations. Health-based guidelines are established on the basis of comprehensive review of the known health effects associated with each contaminant, on exposure levels and on the availability of treatment and analytical technologies. Aesthetic effects (e.g., taste, odour) are taken into account when these play a role in determining whether consumers will consider the water drinkable. Operational considerations are factored in when the presence of a substance may interfere with or impair a treatment process or technology (e.g., turbidity interfering with chlorination or UV disinfection) or adversely affect drinking water infrastructure (e.g., corrosion of pipes).

The Federal-Provincial-Territorial Committee on Drinking Water establishes the Guidelines for Canadian Drinking Water Quality specifically for contaminants that meet all of the following criteria:

1. exposure to the contaminant could lead to adverse health effects;
2. the contaminant is frequently detected or could be expected to be found in a large number of drinking water supplies throughout Canada; and
3. the contaminant is detected, or could be expected to be detected, at a level that is of possible health significance.

If a contaminant of interest does not meet all these criteria, the Federal-Provincial-Territorial Committee on Drinking Water may choose not to establish a numerical guideline or develop a Guideline Technical Document. In that case, a Guidance Document may be developed.

Guidance Documents undergo a process similar to Guideline Technical Documents, including public consultations through the Health Canada website. They are offered as information for drinking water authorities, and help provide guidance relating to contaminants, drinking water management issues or emergency situations. Consultation documents, Guideline Technical Documents and Guidance documents are available from the Health Canada website (www.healthcanada.gc.ca/waterquality).

In general, the highest priority guidelines are those dealing with microbiological contaminants, such as bacteria, protozoa and viruses. Any measure taken to reduce concentrations of chemical contaminants should not compromise the effectiveness of disinfection.

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New, revised, reaffirmed and upcoming guidelines

Guidelines for several chemical, physical and microbiological parameters are new or have been revised since the publication of the *Sixth Edition of the Guidelines for Canadian Drinking Water Quality* in 1996. These new and revised guidelines are presented in Table 1.

Table 1. New and revised guidelines

Parameter	Guideline (mg/L)	Previous guideline (mg/L)	CHE approval
Microbiological parameters[a]			
Bacteriological		0 coliforms/100 mL	
E.coli	0 per 100 mL		2006
Total coliforms	0 per 100 mL		2006
Heterotrophic plate count	No numerical guideline required		2006
Emerging pathogens	No numerical guideline required		2006
Protozoa	No numerical guideline required	None	2004
Enteric viruses	No numerical guideline required	None	2004
Turbidity	0.3/1.0/0.1 NTU[b]	1.0 NTU	2004
Chemical and physical parameters			
Aluminum	0.1/0.2[c]	None	1999
Antimony	0.006	None	1997
Arsenic	0.01	0.025	2006
Benzene	0.005	0.005	2009
Bromate	0.01	None	1999
Chlorate	1	None	2008
Chlorine	No numerical guideline required	None	2009
Chlorite	1	None	2008
Cyanobacterial toxins—microcystin-LR	0.0015	None	2002
Fluoride	1.5	1.5	1996
Formaldehyde	No numerical guideline required	None	1998
Haloacetic Acids—Total (HAAs)	0.08	None	2008
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	0.1	None	2010
Methyl *tertiary*-butyl ether (MTBE)	0.015	None	2006
Trichloroethylene (TCE)	0.005	0.05	2005
Trihalomethanes—Total (THMs)[d]	0.1	0.1	2006

Parameter	Guideline (mg/L)	Previous guideline (mg/L)	CHE approval
Uranium	0.02	0.1	2000
Radiological parameters			
Cesium-137 (^{137}Cs)	10 Bq/L	10 Bq/L	2009
Iodine-131 (^{131}I)	6 Bq/L	6 Bq/L	2009
Lead-210 (^{210}Pb)	0.2 Bq/L	0.1 Bq/L	2009
Radium-226 (^{226}Ra)	0.5 Bq/L	0.6 Bq/L	2009
Strontium-90 (^{90}Sr)	5 Bq/L	5 Bq/L	2009
Tritium (^{3}H)	7000 Bq/L	7000 Bq/L	2009

[a]Refer to section on Guidelines for microbiological parameters.
[b]Based on conventional treatment/slow sand or diatomaceous earth filtration/membrane filtration.
[c]This is an operational guidance value, designed to apply only to drinking water treatment plants using aluminum-based coagulants. The operational guidance values of 0.1 mg/L applies to conventional treatment plants, and 0.2 mg/L applies to other types of treatment systems.
[d]The separate guideline for BDCM was rescinded based on new science. See addendum to the THM document.

In certain situations, the Federal-Provincial-Territorial Committee on Drinking Water may choose to develop guidance documents: for contaminants that do not meet the criteria for guideline development, and for specific issues for which operational or management guidance is warranted.

Table 2. Guidance documents

Parameter or issue	CHE approval
Boil water advisories	2009
Chloral hydrate	2008
Corrosion Control	2009
Drinking water avoidance advisories	2009
Potassium from water softeners	2008

The Federal-Provincial-Territorial Committee on Drinking Water has established a science-based process to systematically review older guidelines to assess the need to update them. Table 3 provides the list of parameters whose guidelines remain appropriate and have been reaffirmed as a result of this review. Health Canada and the FPT Committee on Drinking Water will continue to monitor research on these parameters and recommend any revision(s) to the guidelines that is deemed necessary.

Table 3. Reaffirmed guidelines (2005)

Asbestos	Chloride	Diuron	Odour	2,3,4,6-Tetrachlorophenol
Azinphos-methyl	Colour	Ethylbenzene	Paraquat	Toluene
Bendiocarb	Cyanazine	Gasoline	Pentachlorophenol	2,4,6-Trichlorophenol
Benzo(a)pyrene	Diazinon	Glyphosate	Phorate	Trifluralin
Bromoxynil	Dicamba	Iron	Picloram	Xylenes
Cadmium	2,4-Dichlorophenol	Magnesium	Silver	Zinc
Calcium	Diclofop-methyl	Malathion	Taste	
Carbaryl	Dimethoate	Methoxychlor	Temperature	
Carbofuran	Diquat	Metribuzin	Terbufos	

Table 4 outlines documents which are being or have been developed and are awaiting approval through the Federal-Provincial-Territorial process.

Table 4. Upcoming documents (not yet finalized/approved)

Parameter or subject	Document type (GTD or guidance)	Current status
Ammonia	GTD	In preparation[b]
Carbon tetrachloride	GTD	In preparation[a]
Chromium	GTD	In preparation[b]
Dichloroethane, 1,2-	GTD	In preparation[b]
Dichloromethane	GTD	In preparation[a]
E.coli	GTD	In preparation[b]
Enteric viruses	GTD	In preparation[a]
Fluoride	GTD	In preparation[a]
Heterotrophic plate count	guidance	In preparation[b]
Nitrate/Nitrite	GTD	In preparation[b]
N-Nitrosodimethylamine (NDMA)	GTD	In preparation[a]
Protozoa	GTD	In preparation[b]
Selenium	GTD	In preparation[b]
Tetrachloroethylene	GTD	In preparation[b]
Total coliforms	GTD	In preparation[b]
Turbidity	GTD	In preparation[b]
Vinyl chloride	GTD	In preparation[b]

[a]Final guideline technical document or guidance document in preparation for final approval/posting.
[b]Guideline technical document or guidance document being prepared for public consultation.

Guidelines for microbiological parameters

Currently available detection methods do not allow for the routine analysis of all microorganisms that could be present in inadequately treated drinking water. Instead, microbiological quality is determined by testing drinking water for *Escherichia coli*, a bacterium that is always present in the intestines of humans and other animals and whose presence in drinking water would indicate faecal contamination of the water.

Bacteriological guidelines

Escherichia coli

The maximum acceptable concentration (MAC) of *Escherichia coli* in public, semi-public, and private drinking water systems is none detectable per 100 mL.

Testing for *E. coli* should be carried out in all drinking water systems. The number, frequency, and location of samples for *E. coli* testing will vary according to the type and size of the system and jurisdictional requirements.

Total coliforms

The MAC of total coliforms in water leaving a treatment plant in a public system and throughout semi-public and private supply systems is none detectable per 100 mL.

For distribution systems in public supplies where fewer than 10 samples are collected in a given sampling period, no sample should contain total coliform bacteria. In distribution systems where greater than 10 samples are collected in a given sampling period, no consecutive samples from the same site or not more than 10% of samples should show the presence of total coliform bacteria.

Testing for total coliforms should be carried out in all drinking water systems. The number, frequency, and location of samples for total coliform testing will vary according to the type and size of the system and jurisdictional requirements.

Heterotrophic plate count

No MAC is specified for heterotrophic plate count (HPC) bacteria in water supplied by public, semi-public, or private drinking water systems. Instead, increases in HPC concentrations above baseline levels are considered undesirable.

Emerging pathogens

No MAC for current or emerging bacterial waterborne pathogens has been established. Current bacterial waterborne pathogens include those that have been previously linked to gastrointestinal illness in human populations. Emerging bacterial waterborne pathogens include, but are not limited to, *Legionella*, *Mycobacterium avium* complex, *Aeromonas hydrophila*, and *Helicobacter pylori*.

Protozoa

Although *Giardia* and *Cryptosporidium* can be responsible for severe and, in some cases, fatal gastrointestinal illness, it is not possible to establish MACs for these protozoa in drinking water at this time. Routine methods available for the detection of cysts and oocysts suffer from low recovery rates and do not provide any information on their viability or human infectivity. Nevertheless, until better monitoring data and information on the viability and infectivity of cysts and oocysts present in drinking water are available, measures should be implemented to reduce the risk of illness as much as possible. If the presence of viable, human-infectious cysts or oocysts is known or suspected in source waters, or if

Giardia or *Cryptosporidium* has been responsible for past waterborne outbreaks in a community, a treatment and distribution regime and a watershed or wellhead protection plan (where feasible) or other measures known to reduce the risk of illness should be implemented. Treatment technologies in place should achieve at least a 3-log reduction in and/or inactivation of cysts and oocysts, unless source water quality requires a greater log reduction and/or inactivation.

Viruses

Although enteric viruses can be responsible for severe and, in some cases, fatal illnesses, it is not possible to establish MACs for enteric viruses in drinking water at this time. Treatment technologies and watershed or wellhead protection measures known to reduce the risk of waterborne outbreaks should be implemented and maintained if source water is subject to faecal contamination or if enteric viruses have been responsible for past waterborne outbreaks. Where treatment is required, treatment technologies should achieve at least a 4-log reduction and/or inactivation of viruses.

Turbidity

Waterworks systems that use a surface water source or a groundwater source under the direct influence of surface water should filter the source water to meet the following health-based turbidity limits, as defined for specific treatment technologies. Where possible, filtration systems should be designed and operated to reduce turbidity levels as low as possible, with a treated water turbidity target of less than 0.1 NTU at all times. Where this is not achievable, the treated water turbidity levels from individual filters:

1. For **chemically assisted filtration**, shall be less than or equal to **0.3 NTU** in at least 95% of the measurements made, or at least 95% of the time each calendar month, and shall not exceed 1.0 NTU at any time.
2. For **slow sand or diatomaceous earth filtration**, shall be less than or equal to **1.0 NTU** in at least 95% of the measurements made, or at least 95% of the time each calendar month, and shall not exceed 3.0 NTU at any time.
3. For **membrane filtration**, shall be less than or equal to **0.1 NTU** in at least 99% of the measurements made, or at least 99% of the time each calendar month, and shall not exceed 0.3 NTU at any time. If membrane filtration is the sole treatment technology employed, some form of virus inactivation[*] should follow the filtration process.

Guidelines for chemical and physical parameters

Table 5 provides the complete list of all current numerical Guidelines for chemical and physical parameters. Guidelines are either health-based and listed as Maximum Acceptable Concentrations (MAC), based on aesthetic considerations and listed as aesthetic objectives (AO) or established based on operational considerations and listed as Operational Guidance Values (OG). Parameters for which the health-based guideline was developed as an interim maximum acceptable concentration (IMAC) are identified with an asterisk (*) in the table below. The use of these 'interim' MACs was discontinued by the Federal-Provincial-Territorial Committee on Drinking Water in 2003. For more information on specific guidelines, please refer to the guideline technical document for the parameter of concern.

[*]Some form of virus inactivation is required for all technologies. The difference is that chemically assisted, slow sand and diatomaceous earth filters are credited with log virus reductions and membrane filters receive no credit.

Table 5. Health-based and aesthetic guidelines for chemical/physical parameters

Parameter	MAC (mg/L)	AO [or OG] (mg/L)	Year of approval (or reaffirmation)
Aldicarb	0.009		1994
Aldrin + dieldrin	0.0007		1994
Aluminum[a]		[0.1/0.2]	1998
*Antimony[b]	0.006		1997
Arsenic	0.01		2006
*Atrazine + metabolites	0.005		1993
Azinphos-methyl	0.02		1989 (2005)
Barium	1		1990
Bendiocarb	0.04		1990 (2005)
Benzene	0.005		2009
Benzo[a]pyrene	0.00001		1988 (2005)
*Boron	5		1990
*Bromate	0.01		1998
*Bromoxynil	0.005		1989 (2005)
Cadmium	0.005		1986 (2005)
Carbaryl	0.09		1991 (2005)
Carbofuran	0.09		1991 (2005)
Carbon tetrachloride	0.005		1986
Chloramines—total	3		1995
Chlorate	1		2008
Chloride		≤250	1979 (2005)
Chlorite	1		2008
Chlorpyrifos	0.09		1986
Chromium	0.05		1986
Colour[d]		≤15 TCU	1979 (2005)
Copper[b]		≤1.0	1992
*Cyanazine	0.01		1986 (2005)
Cyanide	0.2		1991
Cyanobacterial toxins–Microcystin-LR[c]	0.0015		2002
Diazinon	0.02		1986 (2005)
Dicamba	0.12		1987 (2005)
1,2-Dichlorobenzene[e]	0.2	≤0.003	1987
1,4-Dichlorobenzene[e]	0.005	≤0.001	1987
*1,2-Dichloroethane	0.005		1987

Parameter	MAC (mg/L)	AO [or OG] (mg/L)	Year of approval (or reaffirmation)
1,1-Dichloroethylene	0.014		1994
Dichloromethane	0.05		1987
2,4-Dichlorophenol,	0.9	≤0.0003	1987 (2005)
*2,4-Dichlorophenoxyacetic acid (2,4 -D)	0.1		1991
Diclofop-methyl	0.009		1987 (2005)
*Dimethoate	0.02		1986 (2005)
Dinoseb	0.01		1991
Diquat	0.07		1986 (2005)
Diuron	0.15		1987 (2005)
Ethylbenzene		≤0.0024	1986 (2005)
Fluoride	1.5		1996
*Glyphosate	0.28		1987 (2005)
Haloacetic Acids–Total (HAAs)	0.08		2008
Iron		≤0.3	1978 (2005)
Lead[b]	0.01		1992
Malathion	0.19		1986 (2005)
Manganese		≤0.05	1987
Mercury	0.001		1986
Methoxychlor	0.9		1986 (2005)
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	0.1		2010
Methyl tertiary-butyl ether (MTBE)		0.015	2006
*Metolachlor	0.05		1986
Metribuzin	0.08		1986 (2005)
Monochlorobenzene	0.08	≤0.03	1987
Nitrate[f]	45		1987
Nitrilotriacetic acid (NTA)	0.4		1990
Odour		Inoffensive	1979 (2005)
*Paraquat (as dichloride)[g]	0.01		1986 (2005)
Parathion	0.05		1986
Pentachlorophenol	0.06	≤0.030	1987 (2005)
pH[h]		6.5–8.5	1995
Phorate	0.002		1986 (2005)
*Picloram	0.19		1988 (2005)
Selenium	0.01		1992
*Simazine	0.01		1986

Parameter	MAC (mg/L)	AO [or OG] (mg/L)	Year of approval (or reaffirmation)
Sodium[i]		≤200	1992
Sulphate[j]		≤500	1994
Sulphide (as H_2S)		≤0.05	1992
Taste		Inoffensive	1979 (2005)
Temperature		≤15°C	1979 (2005)
*Terbufos	0.001		1987 (2005)
Tetrachloroethylene	0.03		1995
2,3,4,6-Tetrachlorophenol	0.1	≤0.001	1987 (2005)
Toluene		≤0.024	1986 (2005)
Total dissolved solids (TDS)		≤500	1991
Trichloroethylene	0.005		2005
2,4,6-Trichlorophenol	0.005	≤0.002	1987 (2005)
*Trifluralin	0.045		1989 (2005)
Trihalomethanes-total (THMs)[k]	0.1		2006
Turbidity[l]			2004
*Uranium	0.02		1999
Vinyl chloride	0.002		1992
Xylenes—total		≤0.3	1986 (2005)
Zinc[b]		≤5.0	1979 (2005)

[a]This is an operational guidance value, designed to apply only to drinking water treatment plants using aluminum-based coagulants. The operational guidance values of 0.1 mg/L applies to conventional treatment plants, and 0.2 mg/L applies to other types of treatment systems.
[b]Faucets should be thoroughly flushed before water is taken for consumption or analysis.
[c]The guideline is considered protective of human health against exposure to all microcystins that may be present.
[d]TCU = true colour unit.
[e]In cases where total dichlorobenzenes are measured and concentrations exceed the most stringent value (0.005 mg/L), the concentrations of the individual isomers should be established.
[f]Equivalent to 10 mg/L as nitrate–nitrogen. Where nitrate and nitrite are determined separately, levels of nitrite should not exceed 3.2 mg/L.
[g]Equivalent to 0.007 mg/L for paraquat ion.
[h]No units.
[i]It is recommended that sodium be included in routine monitoring programmes, as levels may be of interest to authorities who wish to prescribe sodium-restricted diets for their patients.
[j]There may be a laxative effect in some individuals when sulphate levels exceed 500 mg/L.
[k]Expressed as a running annual average. The guideline is based on the risk associated with chloroform, the trihalomethane most often present and in greatest concentration in drinking water.
[l]Refer to section on Guidelines for microbiological parameters for information related to various treatment processes.

Parameters without guidelines

Some chemical and physical parameters for which a Guideline Technical Document is available have been identified as not requiring a numerical guideline, because currently available data indicate that it poses no health risk or aesthetic problem at the levels generally found in drinking water in Canada.

Table 6. Parameters without numerical guidelines

Ammonia	Asbestos
Calcium	Chlorine
Formaldehyde	Gasoline
Hardness[a]	Magnesium
Radon	Silver

[a]Public acceptance of hardness varies considerably. Generally, hardness levels between 80 and 100 mg/L (as $CaCO_3$) are considered acceptable; levels greater than 200 mg/L are considered poor but can be tolerated; those in excess of 500 mg/L are normally considered unacceptable. Where water is softened by sodium ion exchange, it is recommended that a separate, unsoftened supply be retained for culinary and drinking purposes.

Archived parameters

The Federal-Provincial-Territorial Committee on Drinking Water has established a science-based process to systematically review older guidelines and archive older guidelines which are no longer required. Guidelines are archived for parameters which are no longer found in Canadian drinking water supplies at levels that could pose a risk to human health, including pesticides which are no longer registered for use in Canada, and for mixtures of contaminants that are addressed individually. Table 7 provides the list of parameters whose guidelines have been archived as a result of this review.

Table 7. Parameters that have been archived[a]

Chlordane (total isomers)[b]	Polychlorinated biphenyls (PCBs)
Dichlorodiphenyltrichloroethane (DDT) + metabolites[b]	Polycyclic aromatic hydrocarbons (PAH)[c]
Endrin[b]	Resin acids
Heptachlor + heptachlor epoxide[b]	Tannin
Lignin[b]	Temephos[d]
Lindane[b]	Total organic carbon (TOC)
Methyl-parathion[b]	Toxaphene[b]
Mirex	Triallate[d]
Pesticides (total)	2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)[d]
Phenols (total)	2,4,5-Trichlorophenoxypropionic acid (2,4,5-TP)[b]
Phthalic acid esters (PAE)	

[a]Published in the 1978 version of the *Supporting Documentation* for these parameters (available upon request).
[b]In 1978 'Pesticides' Supporting Documentation.
[c]Other than benzo[a]pyrene.
[d]No documentation available.

Guidelines for radiological parameters

Natural sources of radiation are responsible for the large majority of radiation exposure (>98%), excluding medical exposure. Guidelines for radiological parameters focus on routine operational conditions of existing and new water supplies and does not apply in the event of contamination during an emergency involving a large release of radionuclides into the environment.They have been developed taking into account new studies and approaches, including dosimetric information released by the International Commission on Radiological Protection (ICRP) in 1996 (ICRP, 1996). Maximum acceptable concentrations (MACs) in drinking water have been established for the natural and artificial radionuclides that are most commonly detected in Canadian water supplies, using internationally accepted equations and principles and based solely on health considerations. They are calculated using a reference dose level of 0.1 mSv for 1 year's consumption of drinking water, assuming a consumption of 2 L/day at the MAC.

To facilitate the monitoring of radionuclides in drinking water, the reference level of dose is expressed as an activity concentration, which can be derived for each radionuclide from published radiological data. The National Radiological Protection Board has calculated dose conversion factors (DCFs) for radionuclides based on metabolic and dosimetric models for adults and children. Each DCF provides an estimate of the 50-year committed effective dose resulting from a single intake of 1 Bq[†] of a given radionuclide.

The MACs of radionuclides in public water supplies are derived from adult DCFs, assuming a daily water intake of 2 L, or 730 L/year, and a maximum committed effective dose of 0.1 mSv, or 10% of the International Commission on Radiological Protection limit on public exposure:

$$\text{MAC (Bq/L)} = \frac{1 \times 10^{-4}\ \text{(Sv/year)}}{730\ \text{(L/year)} \times \text{DCF (Sv/Bq)}}$$

The radiological effects of two or more radionuclides in the same drinking water source are assumed to be additive. Thus, the following summation formula should be satisfied in order to demonstrate compliance with the guidelines:

$$\sum_i \frac{C_i}{MAC_i} \leq 1$$

where C_i and MAC_i are the observed and maximum acceptable concentrations, respectively, for each contributing radionuclide. Only those radionuclides that are detected with at least 95% confidence should be included in the summation. Detection limits of undetected radionuclides should not be substituted for the concentrations C_i. Otherwise, a situation could arise where a sample fails the summation criterion even though no radionuclides are present.

Water samples may be initially analysed for the presence of radioactivity using techniques for gross alpha and gross beta determinations rather than measurements of individual radionuclides. Compliance with the guidelines may be inferred if the measurements are less than 0.5 Bq/L for gross alpha

[†]Becquerel (Bq) is the unit of activity of a radioactive substance, or the rate at which transformations occur in the substance. One becquerel is equal to one transformation per second and approximately equal to 27 picocuries (pCi).

activity and less than 1 Bq/L for gross beta activity. Alpha emissions are generally associated with naturally occurring radionuclides, whereas beta emissions are generally associated with artificial radionuclides. Although facilitating routine examination of large numbers of samples, these procedures do not allow for confirmation of the identities of the contributing radionuclides. These measurements are generally suitable either as a preliminary screening procedure to determine if further radioisotope-specific analysis is necessary or, if radionuclide analyses have been carried out previously, for detecting changes in the radiological characteristics of the drinking water source. The sampling and analyses for individual radionuclides should be carried out often enough to accurately characterize the annual exposure. If the source of the radioactivity is known or expected to be changing rapidly with time, then the sampling frequency should reflect this factor. If there is no reason to expect concentrations to vary with time, then sampling may be carried out seasonally, semi-annually or annually. If measured concentrations are consistent and well below the MACs, this would be an argument for reducing the sampling frequency. In contrast, the sampling frequency should be maintained, or even increased, if concentrations are approaching individual MACs or if the sum of ratios of the observed concentration to the MAC for each contributing radionuclide approaches 1.

Table 8. Health based guidelines for radiological parameters

Radiological parameters	
Cesium-137 (^{137}Cs)	10 Bq/L
Iodine-131 (^{131}I)	6 Bq/L
Lead-210 (^{210}Pb)	0.2 Bq/L
Radium-226 (^{226}Ra)	0.5 Bq/L
Strontium-90 (^{90}Sr)	5 Bq/L
Tritium (^{3}H)	7000 Bq/L