

PARAMETERS	HEALTH CANADA RECOMMENDATIONS (2014)	QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40)	DRINKING WATER		
			CONCENTRATION		
			MIN.	AVE.	MAX.
<b>Physical Properties</b>					
Conductivity (µS/cm) **	--	--	234	314	353
Color (T.C.U.) **	≤15 <sup>1</sup>	--	<0.3	0.98	5.00
Agressivity Index **	--	--	11.5	12.0	12.3
Ryznar Index	--	--	7.8	8.8	9.4
Langelier's Saturation Index	--	--	-0.87	-0.37	0.24
pH (units)	6.5 - 8.5	6.5 - 8.5	7.40	7.95	8.20
Solids (mg/l) **			90	141	155
Total Solids(mg/l) **			166	183	264
Temperature (°C) **			0.00	6.12	21.00
Turbidity (N.T.U.)	≤1.0	≤5 / ≤1 <sup>2</sup>	0.15	0.24	0.54
<b>Biological Characteristics</b>					
			<b>ANNUAL AVERAGE</b>		
Total coliforms (C.F.U./100ml)	>90% ABS <sup>4</sup>	>90% ABS <sup>4</sup>	99.9% ABS		
E. coli (C.F.U./100ml)	ABS <sup>4</sup>	<1 or ABS <sup>4</sup>	100% ABS		
HPC (C.F.U./ml)	--	--			
<b>Inorganic and Organic Chemical Characteristics (mg/l)</b>					
Antimony (Sb)	≤0.006	≤0.006	0.00013	0.00014	0.00015
Alkalinity (eq. CaCO <sub>3</sub> ) **	--	--	80	92	101
Aluminum (Al) **	<0.1	--	0.00465	0.06977	0.28850
Silver (Ag) **	--	--	<0.00003	<0.00003	0.00009
Arsenic (As)	≤0.010	≤0.010	0.00076	0.00082	0.00087
Barium (Ba)	≤1.0	≤1.0	0.02086	0.02098	0.02110
Bore (B)	≤5	≤5.0	<0.02	<0.02	<0.02
Bromated (BrO <sub>3</sub> ) *	≤0.01	≤0.010	<0.0001	0.00043	0.00170
Cadmium (Cd)	≤0.005	≤0.005	<0.00003	<0.00003	<0.00003
Calcium (Ca) **	--	--	28.40	31.95	35.68
Total Organic Carbon (TOC) **	--	--	1.51	2.01	2.66
Chlorides (Cl) **	≤250 <sup>1</sup>	--	25.46	24.70	28.65
Chromium (Cr)	≤0.05	≤0.050	0.00001	0.00015	0.00028
Cobalt (Co) **	--	--	<0.00002	<0.00002	0.00002
Copper (Cu) <sup>7</sup>	≤1.0 <sup>1</sup>	≤1.0	0.05767	0.08849	0.11930
Cyanides (CN <sup>-</sup> )	≤0.2	≤0.20	<0.004	<0.004	<0.004
Total Hardness (eq. CaCO <sub>3</sub> ) **	--	--	107	116	132
Iron (Fe) **	≤0.3 <sup>1</sup>	--	0.01	0.02	0.03
Fluorides (F <sup>-</sup> )	≤1.5	≤1.50	0.13	0.13	0.13
Magnesium (Mg) **	--	--	7.40	8.21	9.11
Manganese (Mn) **	≤0.05 <sup>1</sup>	--	0.00003	0.00036	0.00077
Mercury (Hg)	≤0.001	≤0.001	<0.00003	<0.00003	<0.00003
Nickel (Ni) **	--	--	0.00042	0.00051	0.00061
Nitrites (NO <sub>2</sub> -N) + nitrates (NO <sub>3</sub> -N)	≤1 + ≤10	≤10.0	0.26	0.33	0.52
Lead (Pb) <sup>7</sup>	≤0.010	≤0.010	0.00070	0.00085	0.00100
Potassium (K) **	--	--	1.43	1.58	1.78

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Selenium (Se)	≤0.05	≤0.010	<0.00021	<0.00021	0.00039
Silica (SiO <sub>2</sub> ) **	--	--	0.55	0.90	1.20
Sodium (Na) **	≤200 <sup>1</sup>	--	13.43	14.74	16.39
Sulfates (SO <sub>4</sub> ) **	≤500 <sup>1</sup>	--	22.80	22.15	27.16
Uranium (U)	≤0.02	≤0.020	0.00032	0.00034	0.00036
Zinc (Zn) **	≤5.0 <sup>1</sup>	--	<0.00017	0.00059	0.00171

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<b>Carbamates</b>				
Bendiocarb *	-		27	N.D.
Carbaryl *	90		70	N.D.
Carbofuran *	90		70	N.D.
<b>Volatile Organic Compounds (VOC)</b>				
1,1,1,2-Tétrachloroethane	-		-	N.D.
1,1,1-Trichloroethane	-		-	N.D.
1,1,2,2-Tétrachloroethane	-		-	N.D.
1,1,2-Trichloroethane	-		-	N.D.
1,1-Dichloroethane	-		-	N.D.
1,1-Dichloroethylene	14		10	N.D.
1,1-Dichloropropene	-		-	N.D.
1,2,3-Trichlorobenzene	-		-	N.D.
1,2,3-Trichloropropane	-		-	N.D.
1,2,4-Trichlorobenzene	-		-	N.D.
1,2,4-Triméthylbenzene	-		-	N.D.
1,2-Dibromo-3-chloropropane	-		-	N.D.
1,2-Dibromoethane	-		-	N.D.
1,2-Dichlorobenzene	200	3 <sup>1</sup>	150	N.D.
1,2-Dichloroethane	5		5	N.D.
1,2-Dichloropropane	-		-	N.D.
1,3,5-Triméthylbenzene	-		-	N.D.
1,3-Dichlorobenzene	-		-	N.D.
1,3-Dichloropropane	-		-	N.D.
1,4-Dichlorobenzene	5	1 <sup>1</sup>	5	N.D.
1-Chlorobutane	-		-	N.D.
1-Propene,3-chloro	-		-	N.D.
2,2-Dichloropropane	-		-	N.D.
2-Butanone	-		-	N.D.
2-Chlorotoluene	-		-	N.D.
2-Nitropropane	-		-	N.D.
4-Chlorotoluene	-		-	N.D.
4-Isopropyltoluene	-		-	N.D.
Acrylonitrile	-		-	N.D.
Benzene	5		0.5	N.D.
Bromobenzene	-		-	N.D.
Bromochloromethane	-		-	N.D.
Bromoform	-		See Note 3	0.95
Bromodichloromethane	-		See Note 3	13.70
Bromomethane	-		-	N.D.
Chloroacetonitrile	-		-	N.D.
Chlorobenzene	80	30 <sup>1</sup>	60	N.D.
Chlorodibromomethane	-		See Note 3	6.17
Chloroethane	-		-	N.D.

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<b>Volatile Organic Compounds (VOC)</b>				
Chloroform	-		See Note 3	49.54
Chloromethane	-		-	N.D.
Vinyl chloride	2		2	N.D.
cis-1,2-Dichloroethylene	-		-	N.D.
cis-1,3-Dichloropropene	-		-	N.D.
Dibromomethane	-		-	N.D.
Dichlorodifluoromethane	-		-	N.D.
Dichloromethane	50		50	N.D.
Diethylether	-		-	0.15
Carbon disulfide	-		-	N.D.
Ethylbenzene	140	1.6 <sup>1</sup>	-	N.D.
Hexachlorobutadiene	-		-	N.D.
Hexachloroethane	-		-	N.D.
Isopropylbenzene	-		-	N.D.
Methacrylonitrile	-		-	N.D.
Methyl acrylate	-		-	N.D.
Methyl methacrylate	-		-	N.D.
MTBE(methyl tert-butyl ether)	-	15 <sup>1</sup>	-	N.D.
m-Xylene + p-Xylene + o-Xylene	90	200 <sup>1</sup>	-	N.D.
Naphthalene	-		-	N.D.
n-Butylbenzene	-		-	N.D.
n-Propylbenzene	-		-	N.D.
Propionitrile	-		-	N.D.
sec-Butylbenzene	-		-	N.D.
Styrene	-		-	N.D.
tert-Butylbenzene	-		-	N.D.
Tetrachloroethylene	30		25	N.D.
Carbon tetrachloride	2		5	N.D.
Tetrahydrofurane	-		-	N.D.
Toluene	60	24 <sup>1</sup>	-	0.05
trans-1,2-Dichloroethylene	-		-	N.D.
trans-1,3-Dichloropropene	-		-	N.D.
Trans-1,4-dichloro-2-butene	-		-	N.D.
Trichloroethylene	5		5	N.D.
Trichlorofluoromethane	-		-	N.D.
Trihalomethanes (THM) (total)	-		See Note 3	65.23
Trihalomethanes (THM) (total) – Annual mean concentration	100		80 <sup>3</sup>	46.58
<b>Phenolic Compounds</b>				
2,3,4,6-Tetrachlorophenol *	100	1 <sup>1</sup>	70	N.D.
2,4 -Dichlorophenol *	900	0.3 <sup>1</sup>	700	N.D.
2,4,6-Trichlorophenol *	5	2 <sup>1</sup>	5	N.D.
Pentachlorophenol *	60	30 <sup>1</sup>	42	N.D.

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<b>Glyphosate</b>			
Glyphosate *	280	210	N.D.
<b>Polycyclic Aromatic Hydrocarbons (PAH)</b>			
Benzo(a)pyrene *	0.01	0.01	N.D.
<b>Triazine Herbicides</b>			
Atrazine and metabolites *	5	3.5	N.D.
Cyanazine *	-	9	N.D.
Metribuzine *	80	60	N.D.
Simazine *	10	9	N.D.
<b>Chlorophenoxy Acid and Trichloroacetate Pesticides</b>			
2,4-D *	100	70	N.D.
Dicamba *	120	85	N.D.
Dinoseb *	-	7	N.D.
Picloram *	190	140	N.D.
<b>Organochlorine Pesticides</b>			
Metolachlor *	50	35	N.D.
Methoxychlor *	-	700	N.D.
Trifluralin *	45	35	N.D.
<b>Organophosphorus Pesticides</b>			
Azinphos-methyl *	20	17	N.D.
Chlorpyrifos *	90	70	N.D.
Diazinon *	20	14	N.D.
Dimethoate *	20	14	N.D.
Diuron *	150	110	N.D.
Malathion *	190	140	N.D.
Parathion *	-	35	N.D.
Phorate *	2	1.4	N.D.
Terbufos *	1	0.5	N.D.
<b>Others</b>			
Bromoxynil *	5	3.5	N.D.
Methyl-Diclofop *	9	7	N.D.
Diquat *	70	50	N.D.
Paraquat *	10	7	N.D.

- \*: Analyzed by an outside accredited laboratory.
- \*\* : At the exit of water treatment plant.
- N.D.: Not detected, lower than the detection limit method.
- D.: Detected, but cannot determine quantity.

**Notes:**

- 1: Esthetical or organoleptic reasons.
- 2: Turbidity must be equal or under 5 NTU and must not overpass 1.0 NTU for more than 5 % of total measures taken within 30 days.
- 3: The annual mean concentration of total THM (chloroform, bromodichloromethane, chlorodibromomethane and bromoform) must not exceed 80 µg/L (samples taken at the end of drinking water distribution network).
- 4: ABS: absence.
- 5: Health reasons objectives.
- 6: Maximum obtained for a sampling site.
- 7: Lead and copper level at the center of water distribution network. When water samples are taken from old pipes (before 1970) results are shown below.

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			MIN.	AVE.	MAX.
			<b>Copper and Lead (mg/l)</b>		
Copper (Cu)	≤1.0 <sup>1</sup>	≤1.0	0.00650	0.04460	0.12650
Lead (Pb)	≤0.010	≤0.010	0.00021	0.00745	0.02032