Montréal

Division de l'expertise technique

MUNICIPAL DRINKING WATER PRODUCED BY DORVAL DRINKING WATER TREATMENT PLANT

2016

PARAMETERS	HEALTH CANADA RECOMMENDATIONS (2014)	QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40)	DRINKING WATER CONCENTRATION		
			MIN.	AVE.	MAX.
Physical Properties					
pH (units)	6.5 - 8.5	6.5 - 8.5	7.10	7.25	7.50
Turbidity (N.T.U.)	≤1.0	≤5 / ≤1 [2]	0.16	0.27	0.54
Biological Characteristics					
			ANNUAL AVERAGE		
Total coliforms (PRE-ABS /100ml)	>90% ABS [4]	>90% ABS [4]	100 % ABS		
E. coli (PRE-ABS /100ml)	ABS [4]	<1 or ABS [4]	100 % ABS		
Inorganic and Organic Chemical Characteristics (mg/l)					
Antimony (Sb)	≤0.006	≤0.006	0.00009	0.00009	0.00009
Aluminum (Al) **	<0.1	--	0.01940	0.03525	0.05610
Silver (Ag) **	--	--	<0.00003	<0.00003	<0.00003
Arsenic (As)	≤0.010	≤0.010	0.00041	0.00041	0.00041
Barium (Ba)	≤1.0	≤1.0	0.02000	0.02000	0.02000
Bore (B)	≤5	≤5.0	0.035	0.035	0.035
Cadmium (Cd)	≤0.005	≤0.005	<0.00003	<0.00003	<0.00003
Calcium (Ca) **	--	--	14.14	21.45	30.10
Chromium (Cr)	≤0.05	≤0.050	0.00005	0.00005	0.00005
Cobalt (Co) **	--	--	<0.00002	0.00002	0.00004
Copper (Cu) [7]	≤1.0 [1]	≤1.0	0.02420	0.02420	0.02420
Cyanides (CN^-)	≤0.2	≤0.20	<0.004	<0.004	<0.004
Iron (Fe) **	≤0.3 [1]	--	0.010	1.94	21.23
Fluorides (F^-)	≤1.5	≤1.50	0.724	0.724	0.724
Magnesium (Mg) **	--	--	1.99	4.57	7.62
Manganese (Mn) **	≤0.05 [1]	--	0.00032	0.00230	0.00443
Mercury (Hg)	≤0.001	≤0.001	<0.00003	<0.00003	<0.00003
Nickel (Ni) **	--	--	<0.00003	0.00042	0.00062
Nitrites (NO_2-N) + nitrates (NO_3-N)	≤1 + ≤10	≤10.0	0.06	0.24	0.43
Lead (Pb) [7]	≤0.010	≤0.010	0.00056	0.00056	0.00056
Potassium (K) **	--	--	0.63	1.06	1.60
Selenium (Se)	≤0.05	≤0.010	0.00020	0.00020	0.00020
Sodium (Na) **	≤200 [1]	--	3.86	8.48	13.10
Uranium (U)	≤0.02	≤0.020	0.00004	0.00004	0.00004
Zinc (Zn) **	≤5.0 [1]	--	<0.00017	0.00095	0.00177

PARAMETERS	HEALTH CANADA RECOMMENDATIONS (2014)		QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40)	DRINKING WATER MAXIMUM DETECTED (µg/L)
Carbamates				
Bendiocarb *	-		27	N.D.
Carbaryl *	90		70	N.D.
Carbofuran *	90		70	N.D.
Volatile Organic Compounds (VOC)				
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 [1]	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 [1]	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	0.33
Bromodichloromethane	-		See Note 3	10.55
Bromomethane	-		-	N.D.
Chloroacetonitrile	-		-	N.D.
Chlorobenzene	80	30 [1]	60	N.D.

PARAMETERS	HEALTH CANADA RECOMMENDATIONS (2014)		QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40)	DRINKING WATER MAXIMUM DETECTED (µg/L)
Volatile Organic Compounds (VOC)				
Chlorodibromomethane	-		See Note 3	3.96
Chloroethane	-		-	N.D.
Chloroform	-		See Note 3	40.05
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	-		-	N.D.
Carbon disulfide	-		-	N.D.
Ethylbenzene	140	1.6 [1]	-	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 [1]	-	N.D.
m-Xylene + p-Xylene + o-Xylene	90	200 [1]	-	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 [1]	-	N.D.
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) [6]	-		See Note 3	43.44
Trihalomethanes (THM) (total) – Annual mean concentration	100		80 [3]	38.06

PARAMETERS	HEALTH CANADA RECOMMENDATIONS (2014)		QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40)	DRINKING WATER MAXIMUM DETECTED (µg/L)
Phenolic Compounds				
2,3,4,6-Tetrachlorophenol *	100	1 [1]	70	N.D.
2,4 -Dichlorophenol *	900	0.3 [1]	700	N.D.
2,4,6-Trichlorophenol *	5	2 [1]	5	N.D.
Pentachlorophenol *	60	30 [1]	42	N.D.
Glyphosate				
Glyphosate *	280		210	N.D.
Polycyclic Aromatic Hydrocarbons (PAH)				
Benzo(a)pyrene *	0.01		0.01	N.D.
Triazine Herbicides				
Atrazine and metabolites *	5		3.5	N.D.
Cyanazine *	-		9	N.D.
Metribuzine *	80		60	N.D.
Simazine *	10		9	N.D.
Chlorophenoxy Acid and Trichloroacetate Pesticides				
2,4-D *	100		70	N.D.
Dicamba *	120		85	N.D.
Dinoseb *	-		7	N.D.
Picloram *	190		140	N.D.
Organochlorine Pesticides				
Metolachlor *	50		35	N.D.
Methoxychlor *	-		700	N.D.
Trifluralin *	45		35	N.D.
Organophosphorus Pesticides				
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.
Others				
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. PRE= presence
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.

PARAMETERS	HEALTH CANADA RECOMMENDATIONS (2014)	QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40)	DRINKING WATER CONCENTRATION		
			MIN.	AVE.	MAX.
Copper and Lead (mg/l)					
Copper (Cu)	≤1.0 [1]	≤1.0	0.00061	0.01627	0.09280
Lead (Pb)	≤0.010	≤0.010	0.00004	0.00025	0.00127