Montréal
Division de l'expertise technique

MUNICIPAL DRINKING WATER PRODUCED BY LACHINE DRINKING WATER TREATMENT PLANT (X0008089)

2020

PARAMETERS	HEALTH CANADA RECOMMENDATIONS (2020)	QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40)	DRINKING WATER CONCENTRATION		
			MIN.	AVE.	MAX.
Physical Properties					
pH (units)	7,0-10,5 [4]	6,5 - 8,5	6,94	7,16	7,34
Turbidity (N.T.U.) [2]	≤1,0	≤5	0,07	0,15	0,51
Biological Characteristics					
			ANNUAL AVERAGE		
Total coliforms (C.F.U./100ml)	>90% ABS [4]	>90% ABS [4]	99,63 % ABS [8]		
E. coli (C.F.U./100ml)	ABS [4]	<1 or ABS [4]	100 % ABS [8]		
Inorganic and Organic Chemical Characteristics (mg/l)					
Antimony (Sb)	0.006	≤0.006	0,00012	0,00012	0,00012
Aluminum (Al) **	<0.1	--	0,01320	0,01664	0,02320
Silver (Ag) **	--	--	0,00003	0,00003	0,00003
Arsenic (As)	0.010	≤0.010	0,00037	0,00037	0,00037
Barium (Ba)	2	≤1.0	0,01860	0,01860	0,01860
Bore (B)	5	≤5.0	<0,02	<0,02	<0,02
Bromated (BrO_3) *	0.01	≤0.010	<0,006	<0,006	<0,006
Cadmium (Cd)	0,007	≤0.005	<0,00004	<0,00004	<0,00004
Calcium (Ca) **	--	--	9,50	14,24	26,10
Chromium (Cr)	0.05	≤0.050	0,00011	0,00011	0,00011
Cobalt (Co) **	--	--	0,00002	0,00002	0,00003
Copper (Cu) [7]	2 / 1.0 [1]	≤1.0	0,01440	0,01440	0,01440
Cyanides (CN^-)	0.2	≤0.20	<0,005	<0,005	<0,005
Iron (Fe) **	≤0.3 [1]	--	0,00432	0,00432	0,00432
Fluorides (F^-)	1.5	≤1.50	0,08	0,08	0,08
Magnesium (Mg) **	--	--	2,15	3,32	6,13
Manganese (Mn) **	0.12 / ≤0.02 [1]	--	0,00174	0,00411	0,00517
Mercury (Hg)	0.001	≤0.001	<0,00003	<0,00003	<0,00003
Nickel (Ni) **	--	--	0,00042	0,00046	0,00051
Nitrites (NO_2-N) + nitrates (NO_3-N)	1 +10	≤10.0	0,17	0,21	0,24
Lead (Pb) [7]	0.005	≤0.010	0,00016	0,00016	0,00016
Potassium (K) **	--	--	0,71	0,90	1,26
Selenium (Se)	0.05	≤0.010	<0,00021	<0,00021	<0,00021
Sodium (Na) **	≤200 [1]	--	8,98	12,76	18,90
Uranium (U)	0.02	≤0.020	0,00002	0,00002	0,00002
Zinc (Zn) **	≤5.0 [1]	--	0,00087	0,00120	0,00179

PARAMETERS	HEALTH CANADA RECOMMENDATIONS (2020) Maximum concentration µg/L		QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40) Maximum concentration µg/L	RDL (µg/L)	DRINKING WATER MAXIMUM DETECTED (µg/L)
Carbamates					
Bendiocarb *	-		27	0,10	N.D.
Carbaryl *	90		70	0,20	N.D.
Carbofuran *	90		70	0,10	N.D.
Volatile Organic Compounds (VOC)					
1,1,1,2-Tétrachloroethane	-		-	0,06	N.D.
1,1,1-Trichloroethane	-		-	0,06	N.D.
1,1,2,2-Tétrachloroethane	-		-	0,06	N.D.
1,1,2-Trichloroethane	-		-	0,06	N.D.
1,1-Dichloroethane	-		-	0,06	N.D.
1,1-Dichloroethylene	14		10	0,06	N.D.
1,1-Dichloropropene	-		-	0,06	N.D.
1,2,3-Trichlorobenzene	-		-	0,06	N.D.
1,2,3-Trichloropropane	-		-	0,06	N.D.
1,2,4-Trichlorobenzene	-		-	0,06	N.D.
1,2,4-Triméthylbenzene	-		-	0,06	N.D.
1,2-Dibromo-3-chloropropane	-		-	0,06	N.D.
1,2-Dibromoethane	-		-	0,06	N.D.
1,2-Dichlorobenzene	200	3 [1]	150	0,06	N.D.
1,2-Dichloroethane	5		5	0,06	N.D.
1,2-Dichloropropane	-		-	0,06	N.D.
1,3,5-Triméthylbenzene	-		-	0,06	N.D.
1,3-Dichlorobenzene	-		-	0,06	N.D.
1,3-Dichloropropane	-		-	0,06	N.D.
1,4-Dichlorobenzene	5	1 [1]	5	0,06	N.D.
2,2-Dichloropropane	-		-	0,06	N.D.
2-Chlorotoluene	-		-	0,06	N.D.
4-Chlorotoluene	-		-	0,06	N.D.
4-Isopropyltoluene	-		-	0,06	N.D.
Benzene	5		0,5	0,06	N.D.
Bromobenzene	-		-	0,06	N.D.
Bromochloromethane	-		-	0,06	N.D.
Bromoform	-		See Note 3	0,06	0,20
Bromodichloromethane	-		See Note 3	0,06	15,20
Bromomethane	-		-	0,06	N.D.
Chlorobenzene	80	30 [1]	60	0,06	N.D.

PARAMETERS	HEALTH CANADA RECOMMENDATIONS (2020) Maximum concentration µg/L	QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40) Maximum concentration µg/L	RDL (µg/L)	DRINKING WATER MAXIMUM DETECTED (µg/L)
Volatile Organic Compounds (VOC)				
Chlorodibromomethane	-	See Note 3	0,06	3,40
Chloroethane	-	-	0,06	N.D.
Chloroform	-	See Note 3	0,06	59,30
Chloromethane	-	-	0,06	N.D.
Vinyl chloride	2	2	0,06	N.D.
cis-1,2-Dichloroethylene	-	-	0,06	N.D.
cis-1,3-Dichloropropene	-	-	0,06	N.D.
Dibromomethane	-	-	0,06	N.D.
Dichlorodifluoromethane	-	-	0,06	8,35
Dichloromethane	50	50	0,06	N.D.
Diethylether	-	-	0,06	N.D.
Carbon disulfide	-	-	0,06	N.D.
Ethylbenzene	140 / 1,6 [1]	-	0,06	N.D.
Hexachlorobutadiene	-	-	0,06	N.D.
Isopropylbenzene	-	-	0,06	N.D.
MTBE(methyl tert-butyl ether)	- / 15 [1]	-	0,06	N.D.
m-Xylene + p-Xylene + o-Xylene	90 / 20 [1]	-	0,06	N.D.
Naphthalene	-	-	0,06	N.D.
n-Butylbenzene	-	-	0,06	N.D.
n-Propylbenzene	-	-	0,06	N.D.
sec-Butylbenzene	-	-	0,06	N.D.
Styrene	-	-	0,06	N.D.
tert-Butylbenzene	-	-	0,06	N.D.
Tetrachloroethylene	10	25	0,06	N.D.
Carbon tetrachloride	2	5	0,06	N.D.
Toluene	60 / 24 [1]	-	0,06	0,31
trans-1,2-Dichloroethylene	-	-	0,06	N.D.
trans-1,3-Dichloropropene	-	-	0,06	N.D.
Trichloroethylene	5	5	0,06	N.D.
Trichlorofluoromethane	-	-	0,06	5,71
Trihalomethanes (THM) (total) [6]	-	See Note 3	0,24	77,70
Trihalomethanes (THM) (total) – Annual mean concentration	100	80 [3]	0,24	47,93

MUNICIPAL DRINKING WATER PRODUCED BY LACHINE DRINKING WATER TREATMENT PLANT (X0008089)

2020

PARAMETERS	HEALTH CANADA RECOMMENDATIONS (2020) Maximum concentration µg/L		QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40) Maximum concentration µg/L	RDL (µg/L)	DRINKING WATER MAXIMUM DETECTED (µg/L)
Phenolic Compounds					
2,3,4,6-Tetrachlorophenol *	100	1 [1]	70	0,50	N.D.
2,4 -Dichlorophenol *	900	0,3 [1]	700	0,50	N.D.
2,4,6-Trichlorophenol *	5	2 [1]	5	0,50	N.D.
Pentachlorophenol *	60	30 [1]	42	0,50	N.D.
Glyphosate					
Glyphosate *	280		210	10,00	N.D.
Polycyclic Aromatic Hydrocarbons (PAH)					
Benzo(a)pyrene *	0,04		0,01	0,002	N.D.
Triazine Herbicides					
Atrazine and metabolites *	5		3,5	0,10	N.D.
Cyanazine *	-		9	0,10	N.D.
Metribuzine *	80		60	0,10	N.D.
Simazine *	10		9	0,10	N.D.
Chlorophenoxy Acid and Trichloroacetate Pesticides					
2,4-D *	100		70	0,10	N.D.
Dicamba *	120		85	0,10	N.D.
Dinoseb *	-		7	0,10	N.D.
Picloram *	190		140	0,10	N.D.
Organochlorine Pesticides					
Metolachlor *	50		35	0,10	N.D.
Methoxychlor *	-		700	0,05	N.D.
Trifluralin *	45		35	0,10	N.D.
Organophosphorus Pesticides					
Azinphos-methyl *	20		17	0,10	N.D.
Chlorpyrifos *	90		70	0,05	N.D.
Diazinon *	20		14	0,10	N.D.
Dimethoate *	20		14	0,10	N.D.
Diuron *	150		110	0,50	N.D.
Malathion *	190		140	0,10	N.D.
Parathion *	-		35	0,10	N.D.
Phorate *	2		1,4	0,10	N.D.
Terbufos *	1		0,5	0,10	N.D.
Others					
Bromoxynil *	5		3,5	0,10	N.D.
Methyl-Diclofop *	9		7	0,10	N.D.
Diquat *	70		50	1,00	N.D.
Paraquat *	10		7	1,00	N.D.
Haloacetic Acids *	80		60	3,00	17,80

* : Analyzed by an outside accredited laboratory.

** : At the exit of water treatment plant.

RDL: Reported Detection Limit.

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 (nephelometric turbidity units).

3 : The annual mean concentration of total THM (chloroform, bromodichloromethane, chlorodibromomethane and bromoform) calculated over four consecutive quarters 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.

8 : There is no requirement for annual average. It is used only as a reference. For all year long, monthly average have been respected

PARAMETERS	HEALTH CANADA RECOMMENDATIONS (2020)		QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40)	DRINKING WATER CONCENTRATION		
				MIN.	AVE.	MAX.
Copper and Lead (mg/l)						
Copper (Cu)	2,00000	1.0 [1]	≤1.0	0,02160	0,06520	0,11900
Lead (Pb)	0.005		≤0.010	0,00009	0,00083	0,00247