Montréal Division de l'expertise technique	MUNICIPAL DRINKING WATER PRODUCED BY LACHINE DRINKING WATER TREATMENT PLANTS	2013

PARAMETERS	HEALTH CANADA RECOMMENDATIONS (2008)	QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40)	MONTREAL'S DRINKING WATER CONCENTRATION		
			MIN.	AVE.	MAX
PHYSICAL PROPERTIES					
pH	6,5-8,5	6,5-8,5	6,9	7,3	7,6
Turbidity (N.T.U.)	≤ 1 [5]	≤ 5 / ≤ 1 [2]	0,10	0,17	0,39
BIOLOGICAL CHARACTERISTICS					
			ANNUAL AVERAGE		
Total coliforms (C.F.U../100mL)	> 90 % ABS [4]	> 90 % ABS [4]	100 % ABS [4]		
E.coli (C.F.U./100mL)	ABS [4]	< 1 or ABS [4]	100 % ABS [4]		

INORGANIC AND ORGANIC CHEMICAL CHARACTERISTICS (mg/L)

			MIN	AVE.	MAX
Antimony	≤ 0,006	≤ 0,006	0,00013	0,00013	0,00013
Alkalinity (eq.$CaCO_3$) **	-	-	5	38	76
Aluminum (Al)	≤ 0,1	-	0,01363	0,14853	0,42130
Silver (Ag)	-	-	<0.00003	0,00003	0,00008
Arsenic (As)	≤ 0,01	≤ 0,010	0,00038	0,00038	0,00038
Barium (Ba)	≤ 1	≤ 1,0	0,02003	0,02003	0,02003
Bore (B)	≤ 5	≤ 5,0	0,05	0,05	0,05
Bromated (BrO_3)*	≤ 0,01	≤ 0,010	<0,1	<0,1	<0,1
Cadmium (Cd)	≤ 0,005	≤ 0,005	<0.00003	<0.00003	<0.00003
Calcium (Ca)	-	-	9,28	14,48	27,80
Chromium (Cr)	≤ 0,05	≤ 0,050	0,0001	0,0001	0,0001
Cobalt (Co)	-	-	<0.00002	0,00003	0,00005
Copper (Cu)	≤ 1,0 [1]	≤ 1,0	0,0083	0,0083	0,0083
Cyanides (CN)	≤ 0,2	≤ 0,20	<0.004	<0,004	<0,004
Total Hardness (eq.$CaCO_3$) **	-	-	6	49	90
Iron (Fe)	≤ 0,3 [1]	-	0,004	0,01	0,02
Fluorides (F)	≤ 1,5	≤ 1,50	0,06	0,06	0,06
Magnesium (Mg)	-	-	1,88	3,49	6,65
Manganese (Mn)	≤ 0,05 [1]	-	0,00284	0,00582	0,01106
Mercury (Hg)	≤ 0,001	≤ 0,001	<0.00003	<0.00003	<0.00003
Nickel (Ni)	-	-	0,00035	0,00045	0,00058
Nitrites + nitrates (N)	≤ 45	≤ 10,0	0,201	0,250	0,360
Lead (Pb)	≤ 0,01	≤ 0,010	0,00014	0,00014	0,00014
Potassium (K)	-	-	0,68	0,93	1,29
Selenium (Se)	≤ 0,01	≤ 0,010	<0,0002	<0,0002	<0,0002
Sodium (Na)	≤ 200 [1]	-	4,09	10,02	12,98
Uranium (U)	≤ 0,02	≤ 0,020	0,00001	0,00001	0,00001
Zinc (Zn)	≤ 5,0 [1]	-	0,00064	0,00234	0,00995

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PARAMETERS	HEALTH CANADA RECOMMENDATIONS	QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40)	MONTREAL'S DRINKING WATER MAXIMUM DETECTED
ORGANIC COMPOUNDS			
CARBAMATES (µg/L)			
Bendiocarb*	≤ 40	≤ 40	N.D.
Carbaryl*	≤ 90	≤ 90	N.D.
Carbofuran*	≤ 90	≤ 90	N.D.
VOLATILE ORGANIC COMPOUNDS (VOC) (µg/L)			
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	≤ 14	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	≤ 200	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	≤ 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	≤ 5	N.D.
Bromobenzene	-	-	N.D.
Bromochloromethane	-	-	N.D.
Bromoform	-	See note 3	0,6
Bromodichloromethane	-	See note 3	10,8
Bromomethane	-	-	N.D.
Chloroacetonitrile	-	-	N.D.
Chlorobenzene	≤ 80	≤ 80	N.D.
Chlorodibromomethane	-	See note 3	2,3
Chloroethane	-	-	N.D.
Chloroform	-	See note 3	82,5
Chloromethane	-	-	N.D.
Vinyl chloride	≤ 2	≤ 2	N.D.

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			MAXIMUM DETECTED
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	≤ 2,4 [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)	-	-	N.D.
m-Xylene + p-Xylene + o-Xylene	≤ 300 [1]	-	0,07
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	≤ 30	N.D.
Carbon tetrachloride	5	≤ 5	N.D.
Tetrahydrofurane	-	-	N.D.
Toluene	≤ 24 [1]	-	0,2
trans-1,2-Dichloroethylene	-	-	N.D.
trans-1,3-Dichloropropene	-	-	N.D.
Trans-1,4-dichloro-2-butene	-	-	N.D.
Trichloroethylene	≤ 5	≤ 50	N.D.
Trichlorofluoromethane	-	-	N.D.
Trihalomethanes (THM) (total)	-	See note 3	90.7 [6]
Trihalomethanes (THM) (total) – Annual mean concentration	≤ 100	≤ 80 [3]	35.2
PHENOLIC COMPOUNDS (µg/L)			
2,3,4,6-Tetrachlorophenol *	≤ 100	≤ 100	N.D.
2,4 -Dichlorophenol *	≤ 900	≤ 900	N.D.
2,4,6-Trichlorophenol *	≤ 5	≤ 5	N.D.
Pentachlorophenol *	≤ 60	≤ 60	N.D.
GLYPHOSATE (µg/L)			
Glyphosate*	≤ 280	≤ 280	N.D.
PAH (µg/L)			
Benzo(a)pyrene *	≤ 0,01	≤ 0,01	N.D.
TRIAZINES HERBICIDES (µg/L)			
Atrazine and metabolites*	≤ 5	≤ 5	N.D.
Cyanazine*	≤ 10	≤ 10	N.D.
Metribuzine*	≤ 80	≤ 80	N.D.
Simazine*	≤ 10	≤ 10	N.D.

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PARAMETERS	HEALTH CANADA RECOMMENDATIONS	QUEBEC REGULATION DRINKING WATER QUALITY (Q-2,r.40)	MONTREAL'S DRINKING WATER
			MAXIMUM DETECTED
CHLOROPHENOXY ACID AND TRICHLOROACETATE PESTICIDES (µg/L)			
2,4-D*	**≤ 100**	**≤ 100**	**N.D.**
Dicamba*	**≤ 120**	**≤ 120**	**N.D.**
Dinoseb*	**≤ 10**	**≤ 10**	**N.D.**
Picloram*	**≤ 190**	**≤ 190**	**N.D.**
ORGANOCHLORINE PESTICIDES (µg/L)			
Metolachlor*	**≤ 50**	**≤ 50**	**N.D.**
Methoxychlor *	**≤ 900**	**≤ 900**	**N.D.**
Trifluralin*	**≤ 45**	**≤ 45**	**N.D.**
ORGANOPHOSPHORUS PESTICIDES (µg/L)			
Azinphos-methyl*	**≤ 20**	**≤ 20**	**N.D.**
Chlorpyrifos*	**≤ 90**	**≤ 90**	**N.D.**
Diazinon *	**≤ 20**	**≤ 20**	**N.D.**
Dimethoate*	**≤ 20**	**≤ 20**	**N.D.**
Diuron*	**≤ 150**	**≤ 150**	**N.D.**
Malathion*	**≤ 190**	**≤ 190**	**N.D.**
Parathion *	**≤ 50**	**≤ 50**	**N.D.**
Phorate*	**≤ 2**	**≤ 2**	**N.D.**
Terbufos*	**≤ 1**	**≤ 1**	**N.D.**
OTHERS (µg/L)			
Bromoxynil*	**≤ 5**	**≤ 5**	**N.D.**
Methyl-Diclofop*	**≤ 9**	**≤ 9**	**N.D.**
Diquat *	**≤ 70**	**≤ 70**	**N.D.**
Paraquat *	**≤ 10**	**≤ 10**	**0,9**

* :	Analyzed by an outside accreditated 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