


INVENTORY OF MAJOR IONS AND NUTRIENTS IN WATER
MATRIX REFERENCE MATERIALS

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	*denotes a measurand which was removed from the previous lot#		*denotes a new lot #, new RM or newly added measurand.									
	AES-15 Rain Water lot 0523		ASSIN-02 River Water lot 0523		BATTLE-19 River Water lot 1123		BIGMOOSE-14 Lake Water lot 1123		CRANBERRY-20 Lake Water lot 1123			
	Value in mg/L		Value in mg/L		Value in mg/L		Value in mg/L		Value in mg/L		Value in mg/L	
Acidity to pH 8.3												
Alkalinity, Gran (as CaCO₃)												
Alkalinity, Total (as CaCO₃)												
Aluminum	0.00927	± 0.00582	253	± 11	191	± 8			42.6	± 3.4		
Ammonia (as N)	0.157	± 0.013	0.119	± 0.02			0.157	± 0.016				
Boron			76.4	± 5.9	30.7	± 1.8	0.0503	± 0.0084				
Calcium	0.113	± 0.02	21.0	± 1.2	16.8	± 0.8	1.42	± 0.12	11.0	± 0.684		
Chloride	0.299	± 0.04	11.3	± 4.1			22.3	± 5.5	34.2	± 1.282		
Colour (Hazen Units)			5.24	± 0.76	925	± 25	575	± 18			209	± 8.34
Conductivity (µS/cm, 25°C)	0.394	± 0.174	58.4	± 6.1	45.1	± 4.5						
Dissolved Inorganic Carbon (DIC)			7.76	± 0.63	5.47	± 0.71	4.17	± 0.53				
Dissolved Organic Carbon (DOC)			0.165	± 0.041	0.0987	± 0.0163	0.0445	± 0.0083				
Fluoride			46.0	± 3.8	17.1	± 1.5	0.224	± 0.016	5.16	± 0.44		
Magnesium	0.034	± 0.006	0.919	± 0.11			0.267	± 0.019				
Nitrate + Nitrite (as N)	0.122	± 0.011	8.44	± 0.12	8.34	± 0.20	6.15	± 0.25	7.65	± 0.38		
pH (units, 25°C)	5.590	± 0.240	11.2	± 0.7	4.24	± 0.43	0.303	± 0.030	0.643	± 0.103		
Potassium			14.7	± 1.0	4.15	± 0.29	1.57	± 0.13			2.69	± 0.20
Silica (as Si)			58.0	± 4.2	70.3	± 4.9	0.674	± 0.064				
Silicates (as SiO₂)	0.238	± 0.024	224	± 14	84.7	± 4.4	2.48	± 0.14	4.64	± 0.34		
Sodium	0.556	± 0.057	0.556	± 0.153			0.444	± 0.048				
Sulfate (as SO₄)			1.45	± 0.14	0.357	± 0.084						
Total Kjeldahl Nitrogen (TKN)	0.302	± 0.040	379	± 22	147	± 9			49.1	± 3.5		
Hardness, Total (as CaCO₃)												

	HAMIL-20.3 Lake Water lot 0523		ION-96.5 Rain Water lot 0523		LETH-13 Drinking Water 1122		LON-18 Lake Water lot 1122		MAURI-17 River Water lot 0523			
	Value in mg/L		Value in mg/L		Value in mg/L		Value in mg/L		Value in mg/L		Value in mg/L	
Acidity to pH 8.3									6.14	± 0.71		
Alkalinity, Gran (as CaCO₃)												
Alkalinity, Total (as CaCO₃)	146	± 9	215	± 11	127	± 6	94.0	± 4.7				
Aluminum					0.311	± 0.046						
Ammonia (as N)					0.0313	± 0.0044						
Boron	58.6	± 3.5	93.2	± 7.0	41.7	± 3.1	33.7	± 2.7	2.24	± 0.19		
Calcium	119	± 6	77.1	± 3.3	20.0	± 1.0	23.4	± 0.9	1.02	± 0.08		
Chloride			817	± 26	388	± 14	309	± 12	24.2	± 1.7		
Colour (Hazen Units)	781	± 24	50.1	± 5.2	30.1	± 3.8	1.89	± 0.37	1.56	± 0.35		
Conductivity (µS/cm, 25°C)			22.4	± 1.9	15.6	± 1.2	8.90	± 0.81	0.574	± 0.038		
Dissolved Inorganic Carbon (DIC)			3.11	± 0.28			0.326	± 0.036				
Dissolved Organic Carbon (DOC)			0.128	± 0.029	0.767	± 0.074	1.88	± 0.33	5.36	± 0.63		
Fluoride	0.273	± 0.050										
Magnesium	16.6	± 1.8	22.4	± 1.9	15.6	± 1.2	8.11	± 0.20	6.88	± 0.28		
Nitrate + Nitrite (as N)			3.11	± 0.28			1.60	± 0.15	0.366	± 0.034		
pH (units, 25°C)	8.19	± 0.18							1.91	± 0.15		
Potassium	4.92	± 0.42	3.05	± 0.27	1.63	± 0.15						
Silica (as Si)			0.349	± 0.039	2.64	± 0.18	0.758	± 0.063				
Silicates (as SiO₂)			44.8	± 3.0	13.2	± 0.9	14.0	± 0.8	1.55	± 0.11		
Sodium	71.6	± 5.3	88.7	± 4.7	41.2	± 2.1	23.9	± 1.0	2.02	± 0.15		
Sulfate (as SO₄)	51.0	± 2.4			0.431	± 0.09						
Total Kjeldahl Nitrogen (TKN)	3.15	± 0.30	3.46	± 0.34	0.491	± 0.062	0.463	± 0.064				
Total Nitrogen			325	± 19	168	± 14	121	± 9				
Hardness, Total (as CaCO₃)	215	± 15										

	SANGAMON-19 River Water lot 0923		MISSISSIPI-14 River Water lot 0523		ONTARIO-12 Lake Water lot 0523		PERADE-17 River Water lot 0523		RAIN-12 Rain Water lot 1123			
	Value in mg/L		Value in mg/L		Value in mg/L		Value in mg/L		Value in mg/L		Value in mg/L	
Acidity to pH 8.3							9.61	± 0.89				
Alkalinity, Gran (as CaCO₃)												
Alkalinity, Total (as CaCO₃)	248	± 11	115	± 7	93.1	± 5.2						
Aluminum					0.0254	± 0.0064						
Ammonia (as N)												
Boron	60.9	± 4.2	39.1	± 3.1	34.2	± 2.5	3.78	± 0.29	0.690	± 0.052		
Calcium	62.9	± 2.7	15.9	± 0.8	22.8	± 1.2	1.44	± 0.10	0.189	± 0.024		
Chloride			38.0	± 8.4			36.1	± 8.1				
Colour (Hazen Units)	768	± 24	331	± 12	308	± 11	33.5	± 2.4	17.2	± 1.9		
Conductivity (µS/cm, 25°C)			26.8	± 3.7	21.9	± 3.1	2.38	± 0.38				
Dissolved Inorganic Carbon (DIC)					1.88	± 0.35						
Dissolved Organic Carbon (DOC)			0.118	± 0.027	0.114	± 0.024						
Fluoride	0.232	± 0.045			8.76	± 0.64	0.632	± 0.048	0.261	± 0.018		
Magnesium	38.4	± 3.3	12.6	± 1.1			0.169	± 0.015	0.315	± 0.019		
Nitrate + Nitrite (as N)			2.94	± 0.24			7.09	± 0.28	4.73	± 0.12		
pH (units, 25°C)			8.08	± 0.27	8.08	± 0.24						
Potassium	3.62	± 0.29	2.49	± 0.20	1.59	± 0.11	0.417	± 0.042	0.04	± 0.01		
Silica (as Si)			6.21	± 0.46	0.662	± 0.069	2.55	± 0.19	0.0233	± 0.0137		
Silicates (as SiO₂)	7.30	± 0.44										
Sodium	44.4	± 2.6	7.82	± 0.62	13.4	± 1.0	1.79	± 0.12	0.0764	± 0.0132		
Sulfate (as SO₄)	69.8	± 4.1	19.4	± 1.0	25.0	± 1.3	2.43	± 0.17	2.90	± 0.18		
Total Kjeldahl Nitrogen (TKN)	0.586	± 0.084	3.37	± 0.37	0.507	± 0.067	0.317	± 0.053	0.424	± 0.044		
Total Nitrogen			150	± 11	121	± 8						
Hardness, Total (as CaCO₃)	312	± 18										

All values are in mg/L, unless otherwise specified.

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Values and pricing subject to changes

