

this admixture, the deposit is not so dense as in the other waters, and adheres but slightly to the interior of the glass vessel in which it is boiled. This vegetable matter which colors the water of the Ottawa, is, without doubt, derived from the peat bogs, which are abundant in the regions drained by this river. It is only in part precipitated by boiling, and the water when evaporated to a small bulk, has the color of brown sherry wine. When the water of the St. Lawrence is boiled, it gives a white crystalline deposit, which is more abundant than that from the Ottawa, and adheres firmly to the surface of the vessel. There is but little color in the evaporated water, showing that vegetable matter is present only in very small quantity. The other specimens are mixtures of the two waters in which the St. Lawrence predominates, and yield by boiling crystalline deposits, colored by vegetable matter.

The most important results of my analysis are given in the following Table ; they are the means of two or more closely accordant determinations, and are calculated for 100,000 parts :—

	Ste. Anne.	Lachine.	City W. Works.	Cascades.
Carbonate of Lime,	2.480	6.440	7.400	8.033
Carbonate of Magnesium,	.696	1.970	2.160	2.537
Silica	2.060	3.250	3.450	2.380
Chlorine,	.076	.152	.296	.242
Sulphuric Acid,	.161	.487	.498	.687
Alkalies (as Chlorids)	.900	1.310	not deter.	1.500

No attempt is here made to show the distribution of the sulphuric acid and chlorine among the bases, and further enquiries are necessary to decide some questions of theoretical interest ; but the above table shews all that is necessary in order to judge of the fitness of these waters, for the ordinary purposes of life. The results of my further examinations when completed, will be given in the Report of the Geological Survey. It may be mentioned that in all these waters minute portions of phosphoric acid, alumina, and of the oxydes of iron and maganese have been detected ; the quantity of maganese is greater in the St. Lawrence, but the Ottawa contains more iron. A portion of the vegetable matter in the latter water exists in the form of crenic acid, which has been found in many other natural waters. When evaporated to a small volume, these waters still retain a portion of silica in solution and a little lime, which in the Ste. Anne water amounts to .13 and in the Cascades to .28 in 100,000 parts.