heated to redness in a platinum crucible, and the carbonate of lime, into which it was converted, was found to weigh 2.30 grs., yielding a proportion of 0.28 of carbonate of lime for every two ounces of the water.

3. After the precipitation of all the lime, carbonate of ammonia was added to the filtered liquor, afterwards phosphate of soda, and the whole submitted to gentle ebullition. The ammonio-phosphate of magnesia obtained weighed 11.53 grs., containing 1.695 magnesia, equivalent to 0.21 grs. for each two ounces of the water, giving us a proportion of 0.43 grs. of carbonate of magnesia.

4. To half a fluid ounce of the concentrated water, nitrate of silver was added. The precipitate weighed, after fusion, 19.65 grs., equivalent to 4.85 grs. of chlorine for two ounces of the water.

5. One ounce as above was precipitated by oxalate of ammonia. The oxalate of lime, collected on a weighed filter, weighed nearly 0.5 grs., equivalent to 0.17 lime for the concentrated water experimented on, or 0.08 grs. for every two ounces of the natural water, affording 0.05 grs. of calcium.

6. One half-ounce concentrated as above, after having been first treated by oxalate of ammonia to precipitate all the lime, was then gently evaporated to dryness. The cubic crystals which were thus obtained, weighed 8.04 grs., equivalent to 3.19 grs. sodium, for two ounces of water.

7. Two ounces of the water in its natural state were precipitated by barytic water. The precipitate consisted of carbonates of baryta, lime, and magnesia, and weighed in the aggregate 4.91 grs. Deducting from this the weight of the carbonates of lime and magnesia, which have been previously ascertained, will leave us 4.20 grs. as the weight of the carbonate of baryta, the earth being supposed to be in combination with the free carbonic acid of the water, the weight of which is thus ascertained to be 0.97 grs., equal to 0.22 cubic inches, at the accustomed atmospheric pressure and temperature.

A trace of iodine was noticed in the water, but being exceedingly minute, its quantitative analysis was not undertaken.

The quantities of the different constituents in two fluid ounces of the water, are thus ascertained to be as follows :—

Carbonate of Lime,	0 28	grains.
Carbonate Magnesia,	0.43	"
Chlorine,	4.85	"
Calcium,	0.05	"
Sodium,	3.19	"
	8.80	grains.

These were probably combined together in the following manner :—

Carbonate of Lime,	0.28	grains.
Carbonate of Magnesia,	0.43	"
Chloride Sodium,	8.04	"
Chloride Calcium,	0.13	"
	8.88	grains.
Carbonic Acid Gas free,	0.22	cubic inches.

The imperial gallon will accordingly contain these constituents in the following proportions :—

Carbonate of Lime,	17.92	grains.
Carbonate of Magnesia,	21.76	"
Chloride Calcium,	8.32	"
Chloride Sodium,	514.56	"
Iodide Sodium, a trace,		
	562.56	grains.
Carbonic Acid,	14.08	cubic inches,

which is the means of conferring solubility on the carbonates which exist in the water, the presence of which renders this mineral spring antacid to a high degree, and adapts it to cases in which such an indication, combined with a gentle purgative effect, may be demanded.

CAPE DE LA MAGDELAINE CHALYBEATES.

At Cape de la Magdelaine, near Three Rivers, and not far removed from the St. Maurice Iron Works, are to be met with a couple of the most valuable chalybeate springs in this Province. They were recognised, and their therapeutic virtues acknowledged, very shortly after the settlement of this country during the time of the French, and have been honoured with more than a mere passing notice by Charlevoix in his History of Canada. Thus long known, and highly prized, I believe that at least two analyses of them have been undertaken, neither of which I have had the good fortune to obtain. In 1841 I received a quantity of these waters for examination from the late Dr. Kimber, who was proprietor of the property in which they were situated. Being ignorant of the existence of more than one spring, my experiments were conducted on the waters promiscuously, although the bottles were marked distinctly, but, (being unadvised on the subject) unintelligibly; for they were all packed together in one case, nor did I discover the error, until in the quantitative examination, finding it impossible to reconcile results which were continually varying, I mentioned the circumstance to Dr. Kimber, who informed me of the cause, but too late, as the stock of water was exhausted ; nor have I since had it in my power to resume them. The following rough notes of their qualitative analysis, will serve, however, to indicate their constitution, and may serve as a guide for future experiments :—

Specific gravity, 1,0054S.

1. Blue litmus paper unaffected.

2. Turmeric and red litmus altered in their colours.

3. Tincture of galls changes to a purple, gradually deepening in tint.

4. Ferrocyanide of potassium strikes a fine pale blue precipitate.