	Grains.
Carbonate of lime	17.50
Carbonate of iron	0.40
Carbonate of magnesia	0.31
Sulphate of lime	106.12
Sulphate of soda	0.68
Sulphate of potassa	0.38
Sulphate of magnesia	11.02
Chloride of sodium	0.90
Silica	0.60
	137.91
Free carbonic acid	0.64

The *quantity* of these constituents justly entitles the water to the name of a mineral water, and comes very near that in some of the most celebrated waters—as, for instance, in the thermal spring of Bath, in England, which yields 144 grains in a gallon; but from their *quality* or *nature* the spring is clearly not chalybeate, but calcareous, the two chief ingredients being sulphate and carbonate of lime, while iron is present in but minute amount. The third most abundant ingredient is the sulphate of magnesia or Epsom salts, and the water is known to possess purgative properties when taken in considerable quantities, but the salt is not so plentiful as to cause this effect in small draughts of the water.

The inky taste and the red deposits are due to the action of the water on the soil and to its admixture with the soakage water, and are only observed where precautions are not taken to keep the water as nearly as possible in the state in which it issues from the earth. For a long time no such precautions were taken, and consequently those effects being constantly observed were held as directly resulting from the spring water; but by recent arrangements Mr. Bowman has caused the water to run into a trough in the Forks road through a wooden pipe, and in these there is but a minute yellowish, not red, deposit, though they have been years in use, while in another wooden pipe into which the water, as mixed with soakage from the soil, runs, there is abundance of the red ochrey deposit, consisting, in great part, of peroxide of iron. The iron is dissolved from the soil by acids resulting from decomposition of vegetable matter, and by the free carbonic acid of the water, and gradually deposited by reason of chemical changes among the ingredients of the two waters. The very large amount of sulphate of lime shews that the water must be long in contact with plaster rock, the great characteristic of the district.