

of alumina has been denied by some chemists, we find Fresenius stating that \* "carbonates of the alkalies throw down from solutions of alumina basic carbonate of alumina." Watts in his Dictionary of Chemistry writes carbonate of alumina with a query after it, and Valentin, of the Royal College of Chemistry, says that carbonate of soda, or carbonate of ammonia, precipitates from solutions of alumina "basic carbonate of uncertain composition."† Langlois, Wallace, and Muspratt have all regarded the precipitate formed by alkaline carbonates as consisting of hydrated carbonate of alumina, but each of them has assigned to it a different formula. H. Rose, on the other hand, states that the precipitate formed by carbonate of ammonia is a compound of trihydrate of alumina with carbonate of ammonia.‡ We cannot then, I think, confidently assert that a carbonate into which alumina enters is unknown to chemistry, but simply that it is one of those points upon which "doctors differ." I refer to it here, because it has a certain bearing upon the mineral which is the subject of this paper.

This mineral is a carbonate, the principal bases in which are alumina, lime, and soda; the carbonic acid being considerably in excess of the amount required to form neutral carbonates with the bases other than alumina. It occurs in the joints of a trachytic dyke near the western end of McGill College, and having been first collected by Principal Dawson, has, in honour of him, been called Dawsonite.

The rock constituting the dyke was examined by Dr. Hunt some years ago; but no special analysis of the Dawsonite was made, as sufficient material could not then be obtained. As the composition of the dyke is of interest in connection with that of the material filling its joints, I give Dr. Hunt's description and analyses. He says §: "The rock is divided by joints into irregular fragments, whose surfaces are often coated with thin bladed crystals of an aluminous mineral, apparently zeolitic. Small brilliant crystals of cubic iron pyrites, often highly modified, are disseminated through the mass. The rock has the hardness of feldspar, and a specific gravity of from 2.617 to

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\* Man. Qual. Chem. Anal. ed. by S. W. Johnson, M.A., p. 111. New York, 1869.

† Text Book of Practical Chemistry. London, 1871. p. 175.

‡ Watt's Dict. of Chem. vol. I, p. 779.

§ Geology of Canada, 1863, pp. 659, 660.