ABSTRACT OF A NOTE ON HEDERIC ACID FROM IVY LEAVES.

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HEDERIC ACID, when pure, is a snow-white powder, insoluble in ether, but soluble in hot alcohol. That specimen which formed the subject of the present paper, was kindly given to the author by Mr. R. H. Davies, and amounted to several grams only. When Mr. Davies read his paper, I suggested that hederic acid was a body constructed on the type of a saccharide, inasmuch as I had found many bodies of this constitution to give, with strong sulphuric acid, a purple colour, like to that given, as Posselt found, by hederic acid, and because this substance gives, on boiling with dilute sulphuric acid, a solution which reduces Fehling's copper test.

Since the time mentioned, I have, in conjunction with my friend Dr. H. W. Hake, published an account† of a number of new reactions in organic chemistry, similar to the one above-described, due to hederic acid, and in the continued prosecution of this study, I have subjected this last-named body to a closer examination.

When heated on platinum foil, hederic acid melts to a colourless oily-like substance, which emits a dense white aromatic and inflammable vapour, and on continuing the heat, the whole of the substance boils away in this manner, leaving no ash and no charcoal.

* In Hartsen's paper the numbers are C 63·44 per cent., H 10·4 per cent. Posselt gave 66·49 and 66·43 per cent. carbon, 9·5 and 9·41 per cent. hydrogen.

† "On some new Reactions in Organic Chemistry and their Ultimate Bearings." *Pharm. Journ.*, May 12th, 1876.

As already stated, it strikes with strong sulphuric acid a purple colour, which does not form immediately; but this colour is not nearly so intense or so beautiful as that which is immediately formed when a trace of sugar is present, or more faintly when a drop of water is added; further addition of water causes the destruction of this colour.

An attempt was made by the writer to isolate sugar from the molecule of hederic acid by boiling it for a long time (twenty hours) in contact with a two per cent. solution of sulphuric acid. No visible change occurred, but the solution contained a substance much resembling sugar in its properties. The sulphuric acid was removed by baryta water, and the excess of this by carbonic anhydride, and on evaporation of the filtrate to dryness it left a sticky transparent barley-sugar-like mass, possessed of the following characters:—

It contained barium.

It gave with camphor and sulphuric acid the purple colour which Hake and I have shown sugar to produce.

Its aqueous solution reduced Fehling's test readily, and also nitrate of silver.

Strong sulphuric acid charred it in a manner resembling the action of the acid upon sugar.

After drying at 100° it admitted of pulverization.

I have no doubt that the body represents an intermediate state occurring in the spontaneous change of glucosate into glucinate of barium. Of its sugar-like character, however, there can be no doubt.