ABSTRACT OF A PAPER ON THE CONSTITUENTS OF THE IVY.—
“ HEDERIC ACID.”

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AT last year's Conference in Glasgow, I had the honour, in conjunction with Mr. C. H. Hutchinson, of reading a paper in which some of the leading characters of so-called hederic acid were mentioned. Some little additional work having been done upon this substance during the past year, I proceed to report upon it. As already stated, so-called hederic acid consists solely of carbon, hydrogen, and oxygen. Three analyses have already been published of this body—two in 1849 by Professor Posselt, to whom we owe its discovery, and one in April, 1875, in Dr. Hartsen's paper on “ A New Substance in Ivy Leaves.” This new substance I last year showed to be identical with Posselt's hederic acid.

I have found it exceedingly difficult to burn “ hederic acid ” completely by the combustion process. When oxide of copper is employed I have never succeeded in

converting the whole of the carbon into CO_2 . With chromate of lead better results have been obtained, but the method finally adapted was to mix the substance with a mixture of chromate of lead and bichromate of potassium in a tube, the fore part of which for 6 or 7 inches was filled with dry copper oxide. By this means I have obtained results which compare favorably with those obtained by burning the weighed substance mixed with granular oxide of copper in a stream of oxygen.

The following table indicates the percentages obtained in five experiments. The first three being combinations with granular oxide of copper, in a stream of oxygen, and the two last with a mixture of chromates.

	I.	II.	III.	IV.	V.	Average.	Theory for $\text{C}_{16}\text{H}_{26}\text{O}_4$
Carbon	67.88	67.37	68.03	67.41	67.63	67.66	68.08
Hydrogen ...	9.33	9.24	9.16	9.19	9.43	9.27	9.22
Oxygen	22.79	23.39	22.81	23.40	22.94	23.07	22.70
(by difference)							
	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>	<u>100.00</u>

The percentage of carbon is greater in every case than was obtained by either of the experimenters before alluded to,* an error on their part which I think due to the difficulty of completely burning the substance.

Attempts to produce salts of barium, calcium, potassium, sodium, aluminum, copper, and silver, have been attended with uniformly negative results; and I have no reason to doubt that my former statement that this substance is not an acid is correct. An ammonium compound has been produced, but the amount of ammonia is so small as to preclude the probability of its being an ordinary salt. It is now under investigation.