

# BIBLIOGRAPHY OF PHARMACEUTICAL RESEARCH

Compiled by A. G. DuMez, Reporter on the Progress of Pharmacy.

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## AROMATIC SULPHURIC ACID.

BY C. M. SMITH AND E. H. HAMILTON.\*

The U. S. Pharmacopœia has for many years listed among its preparations "Aromatic sulphuric acid." For making it the tenth edition directs the gradual and cautious addition of 109 cc. of ordinary concentrated sulphuric acid to 700 cc. of alcohol, with subsequent cooling and addition of 50 cc. of tincture of ginger, 1 cc. of oil of cinnamon, and enough alcohol to bring the total volume to one liter. It is stated that the finished product contains free sulphuric acid and ethyl sulphuric acid together equivalent to not less than 19% and not more than 21% of sulphuric acid, H<sub>2</sub>SO<sub>4</sub>. No statement of the relative proportion of free and ethyl sulphuric acid to be expected is given in the Pharmacopœia and the method of assay described leads only to an estimation of the "total sulphuric acid."

The presence of free sulphuric acid to the extent of 10% or more would bring this product within the scope of the Federal Caustic Poison Act. Therefore, in the enforcement of this act, it was necessary to determine whether the preparation may contain as much as 10% of the free acid. A search of the literature revealed that considerable work had been done on this problem but the results of various investigators were not in agreement and none of them covered exactly the points in which we were interested.

Attfield<sup>1</sup> in 1869 examined certain samples of aromatic sulphuric acid at intervals during a period of two weeks; and says he found no ethyl sulphuric acid at any time, all the acid being free and amounting to about 19%. As will be shown later, this statement is contrary to the findings of other investigators, including the

\* Food, Drug and Insecticide Administration, U. S. Department of Agriculture.

<sup>1</sup> Prof. Attfield, "Note on Aromatic Sulphuric Acid," *Pharm. J.*, 10 (1869), 471.