THE ASSAY OF SODIUM SALICYLATE.

BY H. W. JONES.

The method for the assay of alkali salts of organic acids given in the 9th revision of the Pharmacopoeia, while giving satisfactory results in general, is open to several objections, not the least of which is the fact that it is time-consuming and requires the most careful manipulation to secure accurate results. Again, owing to the fact that these salts are usually made by neutralizing the respective acids with alkali carbonates or bicarbonates, it is easy to conceive of a case where the method would show a salt to be of standard quality when in fact it was substandard because of an excess of carbonate. Hence, any method giving accurate results in the assay of any one of these salts would be welcome, if not open to the above objections.

Use has been made in the Pharmacopoeia of Koppeschaar's solution for the assay of certain phenols and phenolic salts. The same method is available for the assay of sodium salicylate, since salicylic acid will react with bromine and eventually form a tribromophenol; one molecule of salicylic acid absorbing in this way six atoms of bromine.

The method as applied to sodium salicylate is as follows: Dissolve 1 Gm. of sodium salicylate, previously dried at 100° C. to constant weight, in a sufficient quantity of distilled water to make the solution measure 100 mils. By means of a pipette measure 10 mils of this solution into a glass-stoppered flask of about 250 mils capacity. Add 75 mils of distilled water and 50 mils of tenth-normal bromine V. S., followed by 5 mils of hydrochloric acid. Stopper the flask and allow it to stand for fifteen minutes, shaking occasionally. Then add 10 mils of potassium iodide T. S. and titrate the liberated iodine with tenth-normal sodium thiosulphate V. S., using starch T. S. as indicator. The difference between the amounts of bromine V. S. and sodium thiosulphate V. S. multiplied by 2.667 gives the percentage purity of the sodium salicylate.

Each mil of a tenth-normal bromine V. S. used corresponds to 0.002667 Gm. of sodium salicylate.

The method is often useful for the estimation of salicylic acid or sodium salicylate in certain mixtures. It is especially of use in the presence of benzoic acid, which does not react with bromine in aqueous solution.

It is suggested that the method be included in the next revision of the Pharmacopoeia.

ON THE SOLUBILITY OF VOLATILE OILS IN MIXTURES OF ALCOHOL AND WATER.*

BY HORATIO C. WOOD, JR.

In connection with some researches concerning the antiseptic properties of the volatile oils, it became desirable to prepare solutions of these oils in the lowest possible concentration of alcohol. In the effort to accomplish this desideratum, I made some experiments on the solubility of the essential oils in different propor-

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