

and alkaline salts, (e. g. chlorides) without previously reporting the alkaloid, giving at least an approximate determination of the vegetable base. If free acid is present, this may also be determined in the same operation.

A PLAN FOR DETERMINING BY TITRATION BOTH ACID AND BASE IN BENZOATES OR SALICYLATES OF THE ALKALIES.

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Dissolve 0.25 gm. of the salt (e. g. Sodium Benzoate) in 10 cc. of distilled water in a separator. Add 25 cc. of decinormal sulphuric acid. Shake out the benzoic acid with four successive portions of chloroform, which must be proved to be free from alkalinity or acidity. The chloroform must be drawn off each time into a second separator in which it is to be shaken with 20 cc. of distilled water, to wash out any sulphuric acid which may have accompanied the chloroform. After washing thus, transfer the chloroform to a suitable flask, in which the free acid is to be titrated with N/25 volumetric alkali (lime water answers well), using as indicator methyl red. The end point of the titration is indicated by the appearance of a yellow color in the aqueous stratum after shaking with the chloroform.

The water in separator No. 2 is to be transferred to separator No. 1 and the residual acid is to be determined by titration with N/25 volumetric alkali. This excess deducted from the volumetric sulphuric acid originally taken, gives a measure of the benzoic acid which has been extracted, and consequently of the base with which that acid was combined.

Evidently this second titration is all that is usually required, but the first serves as a check on the result obtained.

The method should be tried in comparison with that of the U. S. P. VIII to test the question which of the two is the more exact on the one hand, and the more rapidly executed in practice on the other.

NOTES ON CHEMICAL TESTS OF THE UNITED STATES PHARMACOPŒIA.*

CARL E. SMITH.

(Continued from page 301.)

ACONITINA.—Requires 26 to 28 parts of alcohol for solution ("22 parts." U. S. P.). The melting point is not a good criterion of purity, as the alkaloid decomposes and melts at temperatures varying with the rate of heating. About 0.2 gm. should leave no weighable residue on incineration. Not all solutions of aconitine are laevogyrate, as B. L. Murray has pointed out; alcohol-solutions are dextrogyrate, water-solutions inactive, and benzene-solutions laevogyrate. Market products are variable in composition, frequently not responding to the perman-

*Analytical Laboratory of Powers-Weightman-Rosengarten Company.