

## Section on Pharmacopoeias and Formularies

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### A VOLUMETRIC METHOD FOR THE ESTIMATION OF MERCURY IN SOME OF ITS COMPOUNDS AND PREPARATIONS.

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The estimation of mercury in its salts and compounds is accurately accomplished by several methods of accepted value, such as the sulphide precipitation method and the electrolytic method. Both of these methods, however, are open to certain serious objections, such as regards special apparatus and familiarity with the technique in the electrolytic method or of tediousness and the necessity of working with hydrogen sulphide in the other method. Some time ago a volumetric method was tried based upon the fact that mercury in certain of its compounds, combines with potassium sulphocyanate in molecular proportions, and the results have been so uniformly satisfactory that the method has been adopted as a means of estimating such of the compounds of mercury to which it is applicable in the U. S. P. IX.

Those to which it is applicable are all compounds except the halogen salts. The procedure is very simple, as is illustrated by the following as applied to metallic mercury.

"Weigh accurately about 0.4 gm. of mercury, dissolve it in a mixture of 10 cc. of nitric acid, warm the solution gently until red fumes cease to be evolved and the solution is colorless, and add 150 cc. of distilled water. Then add 2 cc. of ferric ammonium sulphate T. S. and titrate with tenth normal potassium sulphocyanate V. S. to the production of a permanent red color. Each cubic centimeter of tenth normal potassium sulphocyanate V. S. used corresponds to 0.01003 gm. of mercury."

The end point is very satisfactory and the entire operation consumes but a small fraction of the time required by either of the other methods and shows satisfactory results when employed in comparison with them.

The application of the method to such compounds as the oxides of mercury, both red and yellow, is very simple, as they only require to be dissolved in nitric acid as in the foregoing detailed method, using 0.5 gm. of the sample instead of 0.4 gm. as there directed.

Such preparations as the Mass of Mercury and Mercury with Chalk may also be assayed by simple solution of a weighed amount of the preparation in nitric acid and the dilution with water and titration as stated above.

It is believed that this method will fill a long felt want among analysts who frequently have occasion to determine percentages of such mercury compounds as can be determined by this method.