

resin content varied from 0.0660 Gm. to 0.0821 Gm. per pill, equivalent to from 1.05 to 1.26 grain per pill. The method should prove useful to control chemists.

ACKNOWLEDGMENTS.

My thanks are due to a number of pharmaceutical manufacturers for contributing material for this study. I am particularly indebted to Sharp & Dohme for their courtesy in freely opening their manufacturing laboratories for observation and for the generous coöperative spirit of their staff. Thanks are also due to William R. Carter for carrying out a number of the routine determinations.

ASSAY OF OINTMENT OF YELLOW MERCURIC OXIDE.*

BY L. W. GREEN AND R. E. SCHOETZOW.

Notwithstanding the simple nature of this and similar preparations, their assay has offered difficulties. The following general methods were tried but yielded poor checks and low results.

- (a) Removal of fats by various solvents and weighing the residual mercury oxide.
- (b) Reduction to metallic mercury, separation and weighing of the same.
- (c) Digestion with dilute nitric acid, filtration and titration with potassium sulphocyanate solution.

In the first case the difficulties were due to the fine state of subdivision of the mercury oxide which made quantitative filtration impossible. This verifies an observation made by Noel L. Allport (*Quarterly Journal of Pharmacy*, Vol. 1, No. 1, under date of Feb. 4, 1928).

Allport has devised a method in which the ointment is dissolved in a mixed solvent containing 13 parts of benzene, 2 parts of glacial acetic acid and 5 parts of 90% alcohol, and the mercury precipitated and weighed as mercuric sulphide. Sjöstrom (*Pharmazeutische Zeitung* (1915), 554) has given a method in which the ointment is dissolved in ether, the solution mixed with potassium iodide solution and a measured excess of tenth-normal hydrochloric acid added. This method depends upon the reaction $3KI + HgO + H_2O = KHgI_3 + 2KOH$. The excess hydrochloric acid is titrated with tenth-normal potassium hydroxide using phenolphthalein.

We have tried these methods on known ointments with the following results:

| Ointment. | Method. | Per cent HgO. |
|-----------|----------|---------------|
| No. 1 | Sjöstrom | (a) 2.04% |
| | | (b) 1.97% |
| No. 2 | Allport | (a) 1.99% |
| | | (b) 2.00% |
| | Sjöstrom | 2.01% |
| No. 3 | Allport | 2.13% |
| | Sjöstrom | 2.10% |

Both methods have been found satisfactory. The Sjöstrom method is the easier and more rapid to perform.

ANALYTICAL DEPARTMENT OF THE
BROOKLYN LABORATORIES,
E. R. SQUIBB & SONS.

* Scientific Section, A. P. H. A., Rapid City meeting, 1929.