

# LETTERS TO THE EDITOR

## The Assay of Mersalyl

SIR,—Methods of assay of mersalyl [sodium salt of salicyl-( $\gamma$ -hydroxymercuri- $\beta$ -methoxypropyl)amide-O-acetic acid], phenylmercuric nitrate, and unguentum hydrargyri nitratis dilutum as proposed by Waterhouse<sup>1</sup> and modified by Pierce<sup>2</sup> have become official in the British Pharmacopœia, 1948. All involve reduction to metallic mercury under reflux, solution of the precipitated mercury in nitric acid, and titration with ammonium thiocyanate. It was found that erratic results were sometimes obtained in the assay of mersalyl, and also when this assay process was applied to injection of mersalyl. An investigation was therefore undertaken into the cause. Under the conditions of assay, mercury being to some extent volatile, it was found that vigorous boiling caused condensation of the metal on the cold part of the reflux condenser, mercury in such a form often being difficult to wash off. It is suggested, therefore, that glass jointed apparatus be used, and that after the reduction, the condenser should be washed with water and the precipitate transferred to the filter paper as directed. Nitric acid (20 ml.) and water (10 ml.) are then placed in the flask and refluxed in the apparatus for 10 minutes. The condenser is finally washed with 10 ml. of water, and the acid, after cooling, used to dissolve the zinc amalgam in the usual way, the assay then being completed in accordance with the directions given.

P. S. STROSS.  
R. E. STUCKEY

The British Drug Houses, Ltd.,  
City Road, London, N.1.  
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### REFERENCES

1. Waterhouse, *Quart. J. Pharm. Pharmacol.*, 1938, **11**, 458.
2. Pierce, *ibid.*, 1942, **15**, 367.

### ABSTRACTS (continued from page 419)

slope of the dose-mortality curve was that described by Finney, allowances being made for the mortality rate of the control groups. The weighted mean slope was found to be 3.53 with a standard error of  $\pm 0.76$ . The other method is a graded response method based on the acute weight loss of rats following thyroxine injections. For this, adult male albino rats, weighing 220 to 280 g., were given drinking water containing 0.1 per cent. of thiouracil for 10 days prior to injection. They were then placed in individual cages and assigned at random to the various treatments; food and water were not restricted. Two subcutaneous injections of 0.25 to 2.0 mg. of thyroxine were given on successive days. The body weights were measured for several days before and after the injections. The data obtained from two experiments are presented and were subjected to an analysis of variance according to the method of Bliss and Marks (*Quart. J. Pharm. Pharmacol.*, 1939, **12**, 82, 182). The mean deviation of this method was 4.4 and the slope of the log dose response curve was 9.1; the value for  $\lambda$  was therefore 0.478. Though this method is easily performed in a very short time, a very large number of animals is necessary (400). The asphyxiation test is approximately as accurate and its precision is of the same order as that of other assays based on the all-or-none response.

S. L. W.