

No matter how this prescription is compounded, there is formed a light gelatinous precipitate which grows progressively heavier. The examination of the precipitate did not explain matters much—the composition of zinc iodide is so variable that it would be difficult to hazard even a guess as to the nature of the precipitate. The excessive alkalinity of the zinc iodide may have been responsible for the dissociation of the calcium iodide which is also a very unstable compound. Then, there is the possibility that the zinc iodide, particularly if old, may have been changed to the insoluble oxy-iodide. The precipitate may be prevented by the addition of a trace of boric acid or ammonium chloride.

PREScription No. 8.

Theobromine.....	30 grains
Sodium Salicylate.....	2 drachms
Peppermint Water, to make.....	3 fluidounces

This prescription was probably written by a physician who, at least, endeavored to get away from proprietary ethical remedies, since it was, undoubtedly, an attempt to ethically prescribe diuretin. The writer, perhaps, did not know that theobromine-sodio-salicylate, or diuretin, is official in the U. S. P. Theobromine is not soluble in the presence of sodium salicylate, as many persons believe. It is sodium theobromine which is used with sodium salicylate in the production of the water-soluble diuretin. This prescription can be compounded by using a little gum to suspend the alkaloid, but it cannot be dispensed as a clear solution without some radical changes in the nature of the solvent. When the prescription was first filled the prescriber objected to it because it was not clear, but was satisfied after the explanation, here presented, was made.

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THE ACCURACY OF DISPENSING TABLETS.\*

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Question has been raised as to the accuracy of the so-called Dispensing Tablets and this is the primary reason for our investigation. At a recent meeting of pharmacists in Philadelphia it was debated whether it was perfectly safe to use these in prescription compounding. The consensus of opinion among those present was that they were reasonably accurate.

The tablets which we examined were obtained from some of the larger pharmaceutical manufacturing firms of this country. It may be readily seen that greater accuracy and uniformity is probable with the use of correctly made dispensing tablets of potent chemicals. The weighing of small quantities of potent chemicals involves great care and the use of accurate weights and balances. Some say that triturations are just as accurate and as safe as the dispensing tablets. This is quite true if the trituration has been properly done, but if the work is entrusted to those who have not the proper conception of the importance of this seemingly simple manipulation the product may be improperly prepared and, therefore dangerous.

Tablets of strychnine sulphate and mercuric chloride were selected as being representative of the line of Dispensing Tablets; they seemed to be the ones most extensively used in pharmaceutical dispensing. The following methods of analyses were adopted for their examination:

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\*Read before Section on Practical Pharmacy and Dispensing, A. Ph. A., New York meeting, 1919.

## METHODS OF ANALYSES.

*Strychnine Sulphate Tablets.*—Tablets equal to 2 grains of strychnine sulphate were dissolved in 30 mils of water in a separatory funnel. After perfect solution had been effected 5 mils of ammonium hydroxide, 10 percent solution was added, and the strychnine alkaloid shaken out with 10-mil portions of chloroform. The combined extractions were evaporated and to the residue 10 mils of *N*/10 sulphuric acid were added. The excess of acid was titrated with *N*/50 potassium hydroxide, cochineal was used as the indicator.

*Mercuric Chloride Tablets.*—Tablets equal to 5 grains were dissolved in 300 mils of distilled water and the method of U. S. P. IX was used, with a single modification—the sulphide was collected in weighed Gooch crucibles instead of using the official balanced filter papers.

Counter checks were run on the tablets, using Seamons Volumetric Method of titration with a standard solution of potassium iodide.

The results are tabulated as follows:

## ANALYSES OF DISPENSING TABLETS.

Kind of tablets (Strychnine sulphate: $\frac{1}{4}$ , $\frac{1}{3}$ and $\frac{1}{2}$ grain each. Mercuric chloride: $\frac{1}{4}$ , $\frac{1}{3}$ , $\frac{1}{2}$ and 1 grain each).	Letters in parenthesis preceding numerals have reference to manufacturers.	Letters in parenthesis preceding percentage numbers refer to manufacturers.
	Milligrammes of drug found in tablets, said to represent 1 grain of drug (64.5 + mg.)	Percent of drug found.
Strychnine Sulphate $\frac{1}{4}$ grain	{ (A) 70.8, (B) 64.94, (C) 65.2 (D) 54.8, (E) 54.9, (F) 63.38 }	{ (A) 109.2, (B) 101.1, (C) 100.6 (D) 84.5, (E) 84.6, (F) 97.6 }
Strychnine Sulphate $\frac{1}{3}$ grain	{ (A) 68.4, (B) 64.63, (C) 67.9 (D) 64.82, (E) 63.38, (F) 65.78 }	{ (A) 105.05, (B) 99.7, (C) 104.6 (D) 100.02, (E) 97.6, (F) 101.5 }
Strychnine Sulphate $\frac{1}{2}$ grain	{ (B) 65.26, (C) 64.83, (D) 58.8 (E) 65.9, (F) 65.8 }	{ (B) 100.5, (C) 100.02, (D) 90.7 (E) 101.7, (F) 101.5 }
Mercuric Chloride $\frac{1}{4}$ grain	Volumetric Estimation: (A) 68.3, (B) 55.1, (C) 55.4, (D) 60, (E) 58.1	{ (A) 103.7, (B) 84.2, (C) 90.0 (D) 92.4, (E) 94.3 }
	Gravimetric: (A) 67.2, (B) 54.6, (C) 58.3, (D) 59.9, (E) 61.15.	
Mercuric Chloride $\frac{2}{3}$ grain	Volumetric Estimation: (A) 64.07, (B) 62.3	{ (A) 99.6, (B) 101.9 }
	Gravimetric: (A) 64.6, (B) 66.0	
Mercuric Chloride $\frac{1}{2}$ grain	Volumetric Estimation: (A) 66.8, (C) 55.6, (D) 59.2, (E) 57.2	{ (A) 102.3, (C) 96.7, (D) 93.9, (E) 92.4 }
	Gravimetric: (A) 66.3, (C) 58.8, (D) 60.9, (E) 59.2	
Mercuric Chloride 1 grain	Volumetric Estimation: (B) 58.9	{ (B) 95.07 }
	Gravimetric: (B) 61.61	

The general run of all tablets examined was very near the stated weight, though one lot was deficient by fifteen and one-half percent; this was very likely due more to disintegration of the tablets in transportation than to faulty manufacture. A variation of ten percent could readily be allowed as this would be an infinitesimal quantity in the dosage of these potent chemicals.