Some 25 lots of synthetic riboflavin have been tested. The solutions were made up in the same manner as the standard solution of riboflavin and compared with the standard riboflavin.

4.75%	of the samples assayed	950,000 μg./Gm.
4.75%	of the samples assayed	960,000 μg./Gm.
9.5%	of the samples assayed	970,000 μg./Gm.
28.6%	of the samples assayed	980,000 μg./Gm.
19.5%	of the samples assayed	990,000 μg./Gm.
33.0%	of the samples assayed	1,000,000–1,020,000 ug./Gm.

Of this series 81% showed 980,000 μg. or better per Gm. of material.

SUMMARY

1. The method of Hodson and Norris for the fluorophotometric determination of riboflavin and a modification of it have been applied to both simple preparations and complex mixtures, natural and artificial.

2. Fair agreement between biological and fluorophotometric determination of riboflavin exists.

The authors appreciate the help of Mr. Frank Howland, Development and Control Laboratory, in carrying out the determinations of riboflavin.

REFERENCE

(1) Hodson and Norris, *J. Biol. Chem.*, 131 (1939), 621.

Book Review

Traffic in Opium and Other Dangerous Drugs for the Year Ended December 31, 1940. Bureau of Narcotics, U. S. Treasury Department. 105 pages. 1941. Washington, D. C.: Government Printing Office. Price, paper, 25 cents.

This publication is the annual report of the Commissioner of Narcotics of the United States. It contains detailed information regarding raw materials, manufactured drugs, new legislation, administration of the Uniform Narcotic Drug Act, control of international trade and coöperative efforts of the nations of the world to control illicit traffic. The number of known medical drug addicts is estimated not to exceed 1 in 3000 population, which represents a reduction of at least 66 per cent in the past two decades. The report should make interesting reading for pharmacists and others interested in the problems of drug addiction.—A. G. D.

Photoelectric Determination of Nicotinic Acid*

*By Wm. S. Jones**

Nicotinic acid, nicotinamide or compounds containing the nicotinic acid nucleus play an important nutritional role as the black tongue and pellagra-preventing vitamin. Recognition of this makes it highly desirable that a rapid method be available for the assaying of materials and products containing this factor.

Many investigators have studied the cyanogen-bromide method of determining nicotinic acid. Harris and Raymond (1) and Kodicek (2) considered *p*-amino acetophenone a more satisfactory amine for this purpose. Kodicek studied further the various factors affecting the reactions and developed a satisfactory method for the extraction and determination of nicotinic acid. The sodium hydroxide hydrolysis to which the sample is subjected gives rise to highly colored substances that interfere badly with the subsequent measurement. Melnick and Field (3) overcame this difficulty by preferential adsorption of the colored substances on Darco G-60 also known as Darco, Coleman and Bell. In our hands this procedure for removal of color gave rise to a loss of nicotinic acid and we did not pursue it further. Other investigators, Arnold, Dehreffley and Lipsuirs (4), have followed the practice of extracting the colored cyanogen-amine compound of nicotinic acid with ethyl acetate and measuring the color photoelectrically. However, even under these conditions the blanks show more color than is desirable. Furthermore, the extra operations incident to the ethyl acetate extraction are time consuming. Moreover, we find that the intensity of the color in the ethyl acetate is subdued and is less, *i. e.*, $^1/_2$ to $^1/_3$, than that in aqueous alcoholic solutions and this is a disadvantage.

Giri and Naganna (5) describe a method in which the foodstuff is hydrolyzed with

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