

tained in most of the countries of Europe. Let it not be inferred that I am decrying the *droguerie*. I am not. Each should have its distinct and legitimate sphere, separate from the other, each useful to the practitioner of medicine in any of its branches, and each a dignified undertaking when under the right sort of management.

---

## DIAGNOSTICAL REAGENTS AND CLINICAL TESTS.\*

BY JACOB DINER.

In the Preface to the Ninth Revision of the U. S. P. (p. 39) we find the following:

*Diagnostical Reagents.*—"In recent years diagnosis through the use of Chemical Reagents and Clinical Tests with or without the use of the microscope has become an important factor in determining the presence or nature of disease and in this Pharmacopoeia a chapter on Diagnostical Reagents and Tests has been appended."

Having in mind the thorough manner with which the revision of the Ninth Edition was carried out and the relative absence of error and the careful selection of all other tests applicable to U. S. P. matter, one is struck by the apparent indifference with which this particular chapter of Diagnostical Reagents has been treated.

I am basing my criticisms chiefly on the fact that some antiquated reagents and tests have been incorporated while others, more up-to-date and more satisfactory from the point of view of the laboratory worker, have been omitted.

*For Blood Reaction.*—The formula prescribes a 2 percent solution of guaiac in dehydrated alcohol to make 100 units. Anyone who has worked with this reagent knows that it deteriorates very rapidly and becomes useless. Nor is there any particular reason why dehydrated alcohol should be used. If one were directed to shake a piece of guaiac in U. S. P. Alcohol until a pinkish solution is obtained and to use it while fresh, positive results will be obtained in every case where blood is present.

*For Diazo Reaction.*—No attention is called to the fact that the Sodium Nitrite Solution will be converted into a Nitrate Solution on standing and will then give negative results in positive cases. This solution should be freshly prepared when needed, or when kept in well-stoppered bottles, removed from light, may be of service for about a month. I believe that instruction on methods of preservation in this and many other reagents would not be out of place and would materially add to the value of this chapter.

*For Sugar Reactions.*—The failure to mention Benedict's Solutions, both the qualitative and the quantitative, seems to me a serious omission. The former (qualitative) has all the advantages of Fehling's solution in addition to having better keeping qualities and doing away with the necessity of having two solutions, which may be incorrectly mixed (failure to add enough alkali). The quantitative solution of Benedict is equally efficient and affords a better end-point reaction.

*Gastric Contents.*—In view of the scarcity of potassium salts it seems to me

---

\* Read before New York Branch, A. Ph. A., May 14, 1917.

that  $\frac{N}{10}$  NaOH should at least have been included if not primarily recommended for the purpose of titration for acidity.

Alizarin Solution is used as indicator for determining all but the combined HCl, and should be included in the list.

*Stains.*—Gram's stain, as described in the list, is very unstable and has to be made fresh at least every week, if not oftener. The adoption of the Nicolle's modification of this stain would materially aid the laboratory man, inasmuch as it is easily made and almost indestructible as far as time and exposure are concerned.

As decolorizing agents may be included:

Three percent in Alcohol for the Acid-fast stains and Acetone (1), Alcohol (3) for the Gram stain.

Why dehydrated alcohol is used in the preparation of Gram's stain as outlined on page 624 is a mystery to me. Inasmuch as this stain is supposed to be made by shaking the aniline with water, filtering the saturated aqueous aniline solution and then pouring this into a solution of dehydrated alcohol and water it appears that a corresponding amount of Alcohol U. S. P. could be used in place of the dehydrated alcohol.

*Counter Stain.*—Dilution of 1 : 4 of carbol fuchsin is recommended for that purpose. From practical experience I have found a dilution of 1 : 15 or 1 : 20 much more satisfactory.

In conclusion I wish to compliment the Revision Committee upon having done this pioneer work in an attempt to standardize Diagnostic Reagents and hope that subsequent revisions will eradicate the relatively unimportant errors which have crept into the present chapter on this subject, and that more of the important reagents with detailed information as to mode of preparation and preservation will be incorporated therein.

---

## THE QUALITY OF SOME DRUGS AVAILABLE ON THE MARKET AND PURCHASED ON PRESCRIPTION, WITH METHODS OF ANALYSIS.\*

BY L. F. KEBLER with the collaboration of W. O. EMERY, E. C. MERRILL, A. G. MURRAY, E. K. NELSON, S. PALKIN, B. H. ST. JOHN, G. C. SPENCER AND C. D. WRIGHT.

During the year 1912, a goodly number of samples of tincture of iodine were purchased in the open market and examined. The results<sup>1</sup> showed great variation from the standard. A review of the published records shows that the findings of the state officials were equally unfavorable not only for this drug but many others. Tincture of iodine is a comparatively simple drug to prepare and the element of complexity is therefore eliminated. It is held by some that tincture of iodine is a relatively unimportant drug and should therefore not form the basis of an investigation. It should be remembered that tincture of iodine has a fairly good demand, is quite frequently manufactured and is therefore relatively fresh, and on the whole is believed to serve as a good indicator of the care exercised by

---

\* Presented in abstract before the Washington City Branch, A. Ph. A.

<sup>1</sup> J. A. Ph. A., 2, 514, 1913; J. Ind. Eng. Chem., 5, 484, 1913.