A NOTE ON TINCTURE OF NUX VOMICA.

BY JOHN K. THUM.*

At the February meeting of the Philadelphia Branch of the American Pharmaceutical Association the writer read a paper[1] which recorded his experience in making several pharmacopoeial preparations with weaker alcoholic menstruums than the Pharmacopoeia requires. It was shown that several of the important tinctures could be made with weaker alcohol without impairing their efficiency or detracting from their appearance. The same can be said of tincture of nux vomica.

The present formula for making tincture of nux vomica is, to say the least, unsatisfactory from the standpoint of elegance. The ground drug contains considerable oil; one investigator stating that it may contain as much as 4.2 percent. The drug that the writer worked with contained 2.5 percent. Notwithstanding that, the Pharmacopoeia requires that the drug be extracted with a menstruum of three volumes of alcohol and one volume of water, evidently assuming that this will yield a clear preparation; this, however, is not the case, due to the presence of the oil.

There is no valid reason why the United States Pharmacopoeia should not permit the removal of the oil before percolating the ground drug for the preparation of this tincture. Permission is given in the present Pharmacopoeia for the removal of the oil in the preparation of tincture of strophanthus. The use of purified petroleum benzin is directed for the purpose. Of course, ether can be used, but for economical reasons benzin is preferable. It is of interest to note here that two tinctures in which ether was employed assayed slightly less than two in which benzin had been used for extraction of the oil. All the tinctures under consideration were made from the same lot of drug.

One tincture was made by macerating the ground drug for 48 hours in a warm place after first depriving it of the oil with purified petroleum benzin. The oil-free drug was thoroughly dried to rid it of all benzin odor, then moistened with official diluted alcohol, which also was used as the menstruum. The drug was then packed in a glass percolator and menstruum poured on until it began to drop through, when percolation was stopped. Sufficient menstruum was then poured on the drug to leave a stratum above it. After another 48 hours, percolation was allowed to proceed to the required volume. This tincture assayed 0.20 percent. It will be remembered that the Pharmacopoeia demands that the tincture should contain 0.25 gramme of the combined alkaloids of nux vomica in each 100 mils. This preparation besides being deficient in strength, was also somewhat inelegant in appearance, not possessing the clearness that a tincture should have. This inelegance in appearance was subsequently proven to be due to the low alcohol content in the menstruum, and the deficiency of the alkaloidal content was attributed to the same cause.

The procedure here outlined was carried out with various strengths of alcohol up to 750 parts of alcohol and 250 parts of water; the latter is the present official

*Pharmacist at the Lankenau Hospital, Philadelphia, Pa.

[1] J. A. PH. A., March, 1920, p. 249.

menstruum of the tincture. As one of the objects of this research was to conserve alcohol it was particularly gratifying to note that a tincture made with a menstruum of 650 parts of alcohol and 350 parts of water produced a preparation that was all that could be desired both from a pharmaceutical and a therapeutic standpoint. The alkaloidal content was as required by the Pharmacopoeia. That this menstruum was sufficient to extract all the alkaloids of this drug was shown by the failure of the marc to give any reaction with Mayer's reagent after further extraction.

Depriving the drug of its oil in no way depreciates its activity, as the oil therefrom gave no evidence of containing any alkaloid.

THE ANALYSIS OF MERCURIAL OINTMENT.*

BY JOSEPH L. MAYER.

The official method for the assay of Mercurial Ointment being too inaccurate and time consuming, I devised the following simpler and more accurate procedure.

Accurately weigh about 0.500 gramme of the ointment into a tared 100-Cc. beaker, warm gently; add about 50 Cc. of gasoline, stir with a glass rod to dissolve the fat, allow the mercury to subside, then carefully decant the liquid through a small filter paper and reject filtrate. Now place funnel and filter paper over the beaker containing the mercury; add 10 Cc. nitric acid through the paper, employing a pipette; wash with a small amount of water, and then place the beaker containing the mercury and nitric acid on a hot plate and heat gently until red fumes cease to be evolved; wash the contents into a large Erlenmeyer flask, dilute to about 150 Cc. with water, add 2 Cc. ferric ammonium sulphate test solution and titrate with tenth-normal KCNS V. S. until the appearance of a permanent, yellowish-red color.

Each Cc. of tenth-normal KCNS V. S. consumed corresponds to 0.01003 gramme of mercury.

Three assays made of a sample of blue ointment by this process yielded the following results: 30.034, 30.234 and 30.157 percent of mercury.

The accuracy, simplicity, and rapidity of this method commend it for inclusion in the Pharmacopoeia.

RESEARCH AND ANALYTICAL LABORATORIES,
OF THE
LOUIS K. LIGGETT CO.

TINCTURE OF VANILLA.[1]

BY K. A. BARTLETT.

While tincture of vanilla is a preparation that has been in use for a great many years, there has never been a satisfactory official formula for it. At the time of the last revision of the U. S. P. the formula therein was not satisfactory. A new formula was devised and included in the N. F. IV.

* Read before Scientific Section A. Ph. A., city of Washington meeting, 1920.

[1] Presented before Section on Practical Pharmacy and Dispensing, A. Ph. A., City of Washington meeting, 1920.