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FURTHER STUDIES IN THE EXTRACTION OF NUX VOMICA.*

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In a previous paper¹ the writer gave the results of an investigation of the value of acetic acid in the extraction of Nux Vomica. In that article it was concluded that the admixture of 1% U. S. P. acetic acid with U. S. P. IX menstruum (3 vols. alcohol: 1 vol. water, or about 72.9% alcohol by volume) was of no value in retarding the extraction of fat, but that it reduced the amount of menstruum necessary to achieve complete exhaustion. To be more explicit, it was found that to extract 500 Gm. of ground Nux Vomica with U. S. P. IX menstruum, 7054 cc. was required, while with the U. S. P. IX menstruum containing 1% acetic acid U. S. P., only 3857 cc. was needed. Extraction of fat was reduced only from 2.93% to 2.22%.

In the present work methods and conditions employed in the previous work were duplicated. Two parallel percolations were made, using 500 Gm. of ground Nux Vomica for each. The menstruums were made the same as before except that one contained 2% and the other 3% acetic acid U. S. P.

The fat extracted was as follows:

U. S. P. IX menstruum plus 2% acetic acid, 2.80%. U. S. P. IX menstruum plus 3% acetic acid, 2.98%.

There was required for complete exhaustion:

U. S. P. IX menstruum plus 2% acetic acid, 3650 cc. U. S. P. IX menstruum plus 3% acetic acid, 3290 cc.

The percolates were assayed for total alkaloids with results as follows:

U. S. P. IX menstruum plus 2% acetic acid, 0.311 Gm. per 100 cc. U. S. P. IX menstruum plus 3% acetic acid, 0.332 Gm. per 100 cc.

Conclusions: There is no significant advantage to be gained in using more than 1% U. S. P. acetic acid with the U. S. P. IX menstruum. The 1% acetic acid menstruum has advantages over the U. S. P. menstruum now official, consisting in the reduction of the amount of alcohol needed and the time required for percolation.

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^{*} Section on Practical Pharmacy and Dispensing, A. PH. A., Des Moines meeting, 1925. ¹ JOUR. A. PH. A., 13, 1128 (1924).