

antiseptics were present in too large quantities, as they do not all go into solution and an appreciable amount of them filter out. However, these quantities seem to be essential to get the desired flavor in the finished preparation. Cutting down the oil quantities lessens the excess amount of oil but it very materially changes the flavor, so that such a procedure is not advisable.

This excess oil is in all probability the cause of trouble with the formula. If after the preparation is put on the filter, it is allowed to drain thoroughly, a portion of this oil will pass through the filter and will sooner or later cause a clouding of the preparation. There are only two ways of overcoming this difficulty; one is by carefully watching the filters and removing them before the excess oil has a chance to pass into the finished preparation, and the other, to use sufficient additional filtering medium (talc or kieselguhr) to completely absorb this excess oil and prevent its passing through the filter.

If the above precautions are borne in mind no difficulty should be experienced in making a satisfactory preparation by the formula of the N. F. IV.

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#### FURTHER NOTES ON TINCTURE OF CANTHARIDES.\*

BY F. W. NITARDY.

At the 1919 meeting of the American Pharmaceutical Association in New York City I presented before this section a paper on Tincture Cantharides<sup>1</sup> in which I recommended for consideration in the U. S. P. X, a preparation made by exhausting the drug with a hydro-alcoholic menstruum and the aid of sufficient potassium hydroxide to saponify the oil in the drug and combine with the cantharidin present. By referring to this paper<sup>1</sup> you will note that the inability to produce an active tincture by the U. S. P. IX method or find an active tincture on the market, led to the investigation of the alkali method which had been recommended by Dr. E. R. Squibb many years ago.

Satisfactory results were obtained from the method referred to, not only in experimental lots but also in large scale production. In all seven large lots were made between September 1918 and February 1921, all of which showed blistering power. In some instances the tincture itself when applied to the skin would blister, in some instances it had to be concentrated somewhat in order to give good results.

Since early in this year, however, several lots have been obtained which show no blistering power when concentrated, even though the drug showed satisfactory cantharidin content on assay. Strange to say, some of the lots of drug which failed to give an active tincture with the alkaline menstruum did yield a good tincture by the U. S. P. IX method; a situation just the reverse of that previously experienced.

I feel obliged, therefore to withdraw my suggestion of two years ago as it now appears that neither the method proposed in my previous paper nor the U. S. P. IX method will give satisfactory results at all times or under all conditions. The whole situation evidently requires further investigation.

I am sorry that I can offer no explanation at this time for the unsatisfactory results obtained, but hope to make a further report on this subject at a later date.

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<sup>1</sup> Read before Section on Practical Pharmacy and Dispensing, New Orleans meeting, 1921.

<sup>2</sup> Journal A. Ph. A., December 1919, p. 1030.