

REFERENCES.

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DISCUSSION.

W. L. SCOVILLE: This is the first constructive criticism I have heard on the National Formulary, and it is helpful. The arguments are logical, but unfortunately human nature is not logical, and that is where the difficulty lies. I would like to state a few facts about the National Formulary as a matter of interest. Not in criticism of the paper, because I have none, but there are always two sides to a question. Doctor Diner has criticized the therapeutic action and justly so. In the early stages of the last revision the Formulary Committee made a special effort to obviate just that sort of criticism, and get the therapeutic questions settled. To do so they invited coöperation on the part of the medical societies. The American Medical Association appointed a committee to coöperate with the National Formulary Committee. We had a meeting, and the American Medical men simply said, "You must drop this and that; you must not do this and that." "What can we do?" we asked, and they replied, "Of course it is up to you; you must do so and so." We tried to reason with them, but did not come to an agreement. They were using those preparations and calling for them, and we asked if they did not want them standardized, and the answer was "No, we can not stand for that." Anyway, it came to a stage where we said we did not see how we could coöperate. We parted good friends, but simply had to take the situation as the pharmacists saw it, and did not further attempt to settle the question. The National Formulary Committee can not settle it unless the medical profession can come to a closer agreement.

LIQUOR CRESOLIS COMPOSITUS, U. S. P. IX.*

SUBSTITUTION OF OTHER OILS INSTEAD OF LINSEED OIL IN THIS FORMULA.

BY WILLIAM W. DAVIES.¹

Our Allies across the seas, and our enemies as well, have found it expedient and necessary in many instances to revise their pharmaceutical formulae to meet the conditions brought about by these war-times. Many of our large medicinal manufacturers have likewise gone over their private and special formulae and made changes which as perfectly well result in the desired therapeutic action of their products. Again it has been suggested from time to time that the Pharmacopoeial Committee should likewise heed the trend of affairs and permit certain variations in their set formulae in accordance with the apparent demand of the times. It may be here stated that the Pharmacopoeial Committee really has already done this very thing as we may note for instance in the formulae of *Liquor Cresolis Compositus* and *Pilulae Ferri Carbonatis* (Blaud's Pills) where the potassium salt used may be replaced by the equivalent amount of the cheaper sodium salt.

For the same reason of economy and conservation of supplies, it is the object of this paper to call attention to the desirability of permitting the substitution of Linseed Oil by the proper proportion of other cheaper oils, such as Soya Bean Oil or the like. This substitution will not change the germicidal value of the product since the percent of Cresol would remain the same.

The demand for Linseed Oil in the trades has caused the Government only recently to issue a request for the conservation of its supply. In this particular

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formula, therefore, which now consists of 30 percent Linseed Oil, a large saving of both oil and money could be introduced by the Pharmacopoeial Committee announcing permission for a substitution as is suggested above.

This possibility of conservation of Linseed Oil and the attending monetary saving occurred to the writer, particularly in its application to Government contracts for Liquor Cresolis Compositus.

It might be well then to call the attention of the reader to a few figures. The Army Medical Department in the last six months has let contracts for about 250,000 gallons, or at this rate there appears to be at least an annual consumption of 500,000 gallons of Liquor Cresolis Compositus. Thirty percent of this or 150,000 gallons represents the quantity of Linseed Oil necessary to produce these annual requirements. When this subject was under investigation in September, 1918, the *New York Commercial* was quoting Linseed Oil at \$1.88 per gallon, making the cost of 150,000 gallons equal \$282,000. At the same time other oils were much lower, such as Soya Bean Oil at about \$1.20 per gallon, 150,000 gallons of which had a value of about \$180,000. Because of the closeness in the saponification value of the two oils mentioned they can be interchanged without altering the proportion of the oil used, hence the replacing of Linseed Oil with Soya Bean Oil at these figures would mean an annual saving of \$100,000 and conservation of 150,000 gallons of Linseed Oil, and the product obtained with either oil would be comparable in every respect, physically and germicidally.

It has been found that Corn Oil or mixtures of Corn Oil and Soya Bean Oil may be substituted for either the Linseed Oil or Soya Bean Oil in this preparation.

It appears that the U. S. P. specifications should be appended by a statement giving the names and quantities of other oils than Linseed, which might be used in the manufacture of Liquor Cresolis Compositus.

THE ASSAY OF HYPOPHOSPHITES.*

BY J. L. DICKERSON AND J. P. SNYDER.

For the assay of official hypophosphites, the U. S. P. and N. F. direct that weighed samples of the salts which have been previously dried to constant weight in a desiccator over sulphuric acid be treated with two portions of nitric acid, evaporating to dryness after each addition. The residue is dissolved in water, neutralized with alkali, made to a definite volume and an aliquot portion titrated with potassium sulphocyanate, ferric ammonium sulphate used as indicator. Our experience with the above method has been uniformly unsatisfactory. The results we obtain are low, caused no doubt by the failure of the nitric acid to completely oxidize the hypophosphite to phosphate, and through possibilities of danger of mechanical loss in handling the process. Fairly good results may be obtained by oxidizing the solution of hypophosphite with nitric acid and potassium permanganate and using the double precipitation method with ammonium molybdate and magnesia mixture, finally weighing as magnesium pyro-phosphate. This method is long and tedious, requiring considerable manipulation, and unless great care is used in washing the precipitate of ammonium magnesium phosphate high results will be obtained.

By taking advantage of the fact that a solution of a hypophosphite, when

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