

"For the purpose of this present paper, then, the writer considers the question of therapeutics as unimportant, since any ointment will be satisfactory if it has the desired keeping qualities and physical characteristics." As a result of his experimentation, Clark proposed the present official formula. We believe that it is far from a pharmaceutically ideal ointment and we have already stated our objections to it. At the time this formula was proposed Beringer (10) criticized it and stated that it was hard to get a smooth ointment with the amount of paraffin present.

We do not claim that our proposed formula for ointment of zinc oxide is ideal but we do believe it is an improvement over the past and present official formulas. We shall be glad to receive suggestions for further study and improvement.

#### REFERENCES.

- (1) *Am. J. Pharm.*, 58 (1886), 538.
- (2) *Merck's Report*, 9 (1900), 101.
- (3) *Drug. Circ.*, 49 (1905), 346.
- (4) *Pharm. Ztg.*, 51 (1906), 906. (*Proc. A. Ph. A.*, 55, 701.)
- (5) *Jour. A. P. H. A.*, 4 (1915), 284.
- (6) *Ibid.*, 19 (1930), 1008.
- (7) *Jour. A. M. A.*, 75 (1920), 1420.
- (8) *Jour. A. Ph. A.*, 9 (1920), 491.
- (9) *Ibid.*, 9 (1920), 1171.
- (10) *U. S. P. Cir. Gen. Com.*, 5 (1920), 2039.

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### A NEW IODINE OINTMENT FOR ANTISEPTIC PURPOSES.\*

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The U. S. P. ointment of iodine is an excellent counter-irritant but illogical as an antiseptic dressing.

A one per cent ointment was devised which has shown excellent results from the standpoints of both effectiveness and stability.

The ointment base selected was white petrolatum, this variety being almost entirely free from unsaturated hydrocarbons which of course would readily absorb iodine and consequently diminish its germicidal activity.

To use a fatty base for the purpose of furthering iodine absorption by the skin is striving for an end which according to most authorities is impossible and, even if it were possible, absorption of iodine would be undesirable in an antiseptic dressing; to get a systemic iodine effect following the use of an antiseptic preparation would be objectionable.

In preparing this antiseptic ointment, Dioxan was used. This is recently developed at the Mellon Institute, and is chemically a double ether, diethylene dioxide. This combination produces a stable mixture of iodine and petrolatum, an achievement which heretofore has been impossible as petrolatum alone will maintain the full iodine strength but a short time, as the element escapes by volatilization.

Dioxan is a remarkable solvent in that it is completely miscible with petrolatum and also completely miscible with water. Thus an ointment made by incorporating

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\* Section on Practical Pharmacy and Dispensing, A. Ph. A., Miami meeting, 1931.

an iodine solution in Dioxan with petrolatum readily gives up its iodine to the aqueous secretion of a wound.

A one per cent ointment of iodine in petrolatum was tested bactericidally by the method of making a smear of the ointment on a plate inoculated with a culture of *Staphylococcus aureus* incubating for 48 hours and examining the area surrounding the ointment for evidence of the presence of bacterial colonies. The results were very striking in that the only location on the culture showing growth was in the outer edge of the dish.

The formula for preparing the ointment is as follows:

ANTISEPTIC IODINE OINTMENT.	
Sol'n iodine in Dioxan 7%	14 cc.
Paraffin	10 Gm.
White petrolatum	76 Gm.
	100 Gm.
To make about	100 Gm.

The 7% solution of iodine in Dioxan is prepared by adding to 100 cc. of Dioxan in a flask 7.6 Gm. of powdered iodine, stoppering the flask and effecting solution by means of gentle heat using a water bath. Then ointment is prepared by fusing the paraffin and white petrolatum together in a casserole, cooling until the congealing point is almost reached and adding the Dioxan iodine solution at once and stirring until thoroughly incorporated.

Several different metals were studied concerning their adaptability for tubing for the satisfactory dispensing of the ointment but none were found which were not attacked by iodine in time. There remains but one way of dispensing the ointment which is in jars of the paraffin-lined lid type.

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### FURTHER STUDIES IN FILTRATION.\*

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#### INTRODUCTION.

In a previous communication (1) to THIS JOURNAL the authors studied the influence of various filter media on the hydrogen-ion concentration of aromatic elixir. Basic hydrated magnesium carbonate imparted an alkalinity to the elixir as shown by a  $p_H$  9.2. Normal magnesium carbonate or magnesite was employed and found to be quite satisfactory as a filtering agent in the preparation of aromatic elixir, and it did not impart an alkalinity to the preparation.

With the establishing of definite turbidimetric measurements for pharmacopœial purposes and the application of the Baylis (2) turbidimeter for this work, the authors decided to investigate some of the theoretical ramifications of the problem.

\* Section on Practical Pharmacy and Dispensing, A. PH. A., Miami meeting, 1931.