

Let B equal the number of mils of potassium hydroxide consumed in the blank.

Let C equal the weight of mercuric oxide.

$$\text{Then } x = \frac{0.5181C}{(B-A) 0.0011222} \quad y = \frac{B x}{125}$$

Of course, if preferred the liberated potassium hydroxide may be directly titrated by the sulphuric acid and calculations made accordingly.

We have tested numerous alkaloidal salts with solutions standardized by the above methods, and in all cases we have found the results to be correct. We recommend the yellow mercuric oxide as an accurate substance for the standardization of the solutions used in the determination of alkaloids, particularly, as it is adapted for use with methyl red as indicator.

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OLEORESIN OF PINUS PONDEROSA.*

BY E. R. MILLER AND E. V. LYNN.

Inasmuch as Schorger had found the oil of western yellow pine to be an excellent source for beta-pinene or nopinene, a barrel of oleoresin was obtained through the coöperation of the Forest Products Laboratory from the U. S. District Forester of California. The steam fractionation resulted in a larger amount of volatile oil of this species than had heretofore been prepared. Hence, use was made of the opportunity to re-examine the oil for its constituents as well as to isolate the nopinene for the special work for which the material had been obtained. The results of the special work on nopinene will be reported elsewhere.

As pointed out by Schorger, the bulk of the oil consists of beta-pinene, however, the presence of alpha-pinene was definitely established by its crystalline derivatives. Attempts to identify other well known constituents of coniferous oils failed, though their presence seemed indicated. In spite of the care exercised in the fractionation, the large amount of beta-pinene present in the oil appears to render their purification by fractional distillation difficult, hence the negative results may be accounted for at least in part.

OZONIDES AND PEROXIDES OF THE TERPENES AS THERAPEUTIC AGENTS.*

BY A. V. LYNN.

For a long time the oxygenated constituents of the volatile oils have been looked upon as the bearers of the therapeutic properties of these products, whereas the terpenes were regarded as mere diluents, hence of little or no value. Thus, *e. g.*, the therapeutic, hence the commercial value of eucalyptus oil was determined, according to the U. S. Pharmacopoeia, by a cineol assay. The faith in this doctrine has, of late, been thoroughly shattered by the clearer recognition of the

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