

PRELIMINARY REPORT ON THE EXAMINATION OF THE ALCOHOL-SOLUBLE PRINCIPLES OF A COMMERCIAL ROOT BARK LABELED SHONNY HAW, AND IDENTIFIED BY DR. YOUNGKEN AS VIBURNUM CASSINOIDES, L.*

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The "shonny haw" root bark was first ground to a number 80 powder. Then 2 100-Gm. portions were extracted with 95 per cent alcohol using a continuous extraction process. One of the 100-Gm. portions yielded 12.3320 Gm. of extract and the other 100-Gm. portion yielded 12.3386 Gm. of extract.

Description of the Extract.—A brownish to yellowish brown resinous mass, with a characteristic odor resembling valerianic acid, and an astringent, bitter after-taste. In thin layers, a peculiar yellowish green oily to resinous substance may be seen which is separated with difficulty from the resinous mass in a very impure condition.

The brown extract is slightly soluble in water producing an opalescent mixture, it is readily soluble in alcohol, but is insoluble in ether.

With ferric chloride the aqueous mixture produces an olive-green coloration, and the alcoholic solution produces the characteristic greenish black precipitate indicating tannin.

Both the aqueous mixture and alcoholic solution when treated with dilute acids like hydrochloric and sulphuric, boiled for 3 or 5 minutes, and the mixtures filtered, yield the characteristic precipitate of cuprous oxide with both Fehling's and Benedict's solutions, indicating the presence of a reducing sugar.

The alcoholic solution when hydrolyzed with dilute acid and the mixture carefully distilled yields a distillate possessing the characteristic odor of valerianic acid. The residual liquid in the retort when tested for reducing sugar gives a positive result.

Herman Van Allen in his examination of the principal constituents of *Viburnum Prunifolium* describes a brownish resinous substance of a very bitter taste from which he was unable to separate the sugar. Krimer describes *Viburnin*, an active principle of *Viburnum Prunifolium*, as a greenish yellow resin or neutral principle slightly soluble in water and readily soluble in alcohol. However, from the results obtained in the tests applied to the material extracted from this species of *Viburnum*, I am at the present time led to believe that this resinous substance may be a "resinous glucoside." I arrive at this possible conclusion because of the fact that both reducing sugar and valeric acid are obtained upon hydrolysis of this resinous substance.

This is only a preliminary report and is rendered in connection with Dr. Youngken's paper and it is the hope of the author to present at a later date another paper on the subject containing more definite and conclusive information concerning the general properties of *Viburnin*.

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* See p. 330, April Jour. A. Ph. A.

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