

SHORT AND SIMPLE ALCOHOLIC ASSAY METHODS.

JAMES SEYMOUR AND GEORGE MCDERMAND, M. S.

As Professor Havenhill reported so favorably his adoption and success with the "salting out" assay for alcohol, in examining Spirit of Camphor, we extended the same method to estimate alcohol in other alcoholic liquids, including vinous and spirituous liquors. We checked the results by other known alcoholic assay methods and the results seem fairly accurate. The method is quite simple and rapid, only a few minutes usually being required, and no complicated apparatus, a small cylinder graduate (or better, a slender graduated tube), being sufficient. This renders the method useful and practicable for the pharmacist.

The method consists of adding dry potassium carbonate to the sample, (5 cc. or 10 cc.) in a graduate until a little of the solid salt remains undissolved after a minute with shaking. After settling, the oily layer of alcohol is measured and read in percentages. If we have a 10 cc. sample, each cc. of alcohol reads as 10 per cent. etc.

When beer, wine or other solutions containing sugar or viscous substances is tested, it should stand a few hours, as some of the water is suspended with the alcohol and must settle out. The presence of water is shown by the layer of alcohol becoming milky when first separated.

As we have but begun the work we have but few samples to report. Two samples of beer when thus tested:—

No. 1 beer showed.....	8%
2 beer showed.....	10%
1 good whiskey showed.....	50%
1 bar whiskey showed.....	42%
1 gin showed.....	43%
1 wine showed.....	32%

These checked with known accurate assays by other methods except No. 1 beer. Ten cc. samples were taken in the above tests.

For the estimation in Spirit of Camphor, we would refer to the proceedings of the A. Ph. A. of 1907, pp. 443 and 444.

ASSAY OF TINCTURE OF IODINE.

Test to see if the solvent is official alcohol by adding a little potassium carbonate to a small portion (5 cc.) and shaking. If a lower stratum of water solution is formed it shows a deficiency of alcoholic strength. U. S. P. alcohol gives no lower liquid.

DETERMINATION OF IODINE AND ALCOHOL.

A 5 cc. sample titrated with a little less than 28 cc. of decinormal sodium thio-sulphate should be decolorized, (by following U. S. P. directions). This colorless solution can now be saturated with potassium carbonate to liberate the alcohol, which rises as an oily layer to the top. The percentage should show between 92 and 94% alcohol. Even with this small sample the error may be too small to vitiate the results, even with the dilution from the decinormal thio-sulphate. A more concentrated solution, however, may be used if preferred.

We do not claim anything novel in this method of assay, but wish to call attention to its simplicity, accuracy and rapidity.