

NOTES ON THE STABILITY OF GLYCERITE OF BISMUTH AND ITS EFFECT ON ELIXIR PEPSIN AND BISMUTH N. F. IV.*

BY K. A. BARTLETT.

In the preparation of **Glycerite of Bismuth N. F. IV** some difficulty is experienced in obtaining a stable preparation and one that will contain the required amount of Bismuth Oxide. Similarly it is found that **Elixir Pepsin and Bismuth N. F. IV** prepared from this glycerite is not stable and deposits a granular precipitate on standing.

In preparing **Glycerite of Bismuth** in accordance with the N. F. IV formula it is found that upon adding the tartaric acid powder to the solution of bismuth subnitrate in nitric acid and distilled water, it is impossible to get the material all in solution, an insoluble precipitate remaining which causes the resulting glycerite to assay low in bismuth oxide. A change in procedure here whereby the tartaric acid is first dissolved in the distilled water and this solution then added slowly and with constant stirring to the solution of bismuth subnitrate in nitric acid, eliminates this difficulty and a glycerite results that will assay up to the required standard.

This, however, does not eliminate all the trouble. A glycerite so made will assay up to the standard when freshly prepared but will soon begin to precipitate with a gradual loss in bismuth content. It was found that this was due to the washing of the magma not being carried far enough. The N. F. IV directs the washing to be continued until the wash water has but a slight saline taste. If only carried this far, the precipitation mentioned above will take place. If, however, the washing is carried on until the wash water no longer responds to the test for nitrates, the difficulty is overcome and a preparation is obtained that is apparently stable.

A sample of glycerite and an elixir made from it have been under observation for eighteen months and both are clear and show no sign of precipitation. The glycerite assayed 12.9 Gm. of Bismuth Oxide per 100 cc. when made and a recent check assay showed 12.808 Gm. Since the glycerite shows no sign of precipitation this slight difference is attributed to experimental error.

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A NOTE ON THE ASSAY OF TINCTURE OF HYOSCYAMUS.*

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The United States Pharmacopœia recognizes thirty-two galenicals which are subject to alkaloidal assay. These preparations vary in strength from the **Extract of Opium** which heads the list with a 20% alkaloidal content down to the **Tincture of Hyoscyamus** containing the modest quantity of 0.0065 Gm. alkaloids per 100 cc. or approximately 0.0065%. This variation is due to several factors, such as, the amount of alkaloid occurring in the plant, the potency of

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