

IDENTIFICATION OF ARSENIC AND ANTIMONY.

BY JAMES T. ANDERSON.

The method of separating arsenic and antimony by passing H_2S and then dry HCl gas through the tubes in which the metals have been deposited as in Marsh's test, has been modified by the writer so as to be conveniently applied in cases where it is desired to identify as arsenic or antimony metallic deposits on porcelain.

Add a drop of ammonium sulphide to the deposit, which converts the metal into the sulphide. Allow the excess of ammonium sulphide to evaporate, and with an ordinary mouth blow-pipe blow across the open mouth of a bottle containing concentrated HCl , directing the stream of gas into the porcelain dish upon the sulphide. If it be antimony sulphide, it will disappear entirely, while arsenic sulphide will remain unaffected in appearance.

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ON METATITANIC ACID AND THE ESTIMATION OF TITANIUM BY HYDROGEN PEROXIDE.

BY PROF. F. P. DUNNINGTON.

The detection and estimation of small amounts of titanitic acid which has long been very tedious and unsatisfactory, has been rendered exceedingly simple through the publication of A. Weller in the *Ber. d. Chem. Ges.*, 1882, of a method depending upon the production of a compound of intense yellow color by the addition of hydrogen peroxide to the solution of titanium.

Since its publication I have made considerable use of this method, but have recently noted a feature in the test which must be kept in view to avoid error. The solution of the melt obtained by fusion with acid sodium sulphate when made with dilute sulphuric acid of five or more per cent., gives constant results, which tally with those made gravimetrically; but when water only or very dilute acid is employed, one may obtain lower results. Upon one occasion a coloration was obtained which corresponded to only about one-third of the titanium, which was afterwards found to