

evolved, add plenty of water and re-evaporate. Repeat this evaporation with water till the nitrous vapors are no longer evolved on dilution. Finally dilute sufficiently to filter and add water until the color of a platinum chloride solution of known content is matched.

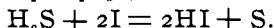
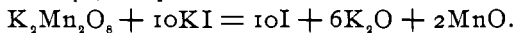
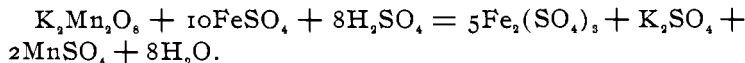
### STANDARD IODINE SOLUTION FOR SULPHUR DETERMINATIONS.

BY EDWARD K. LANDIS.

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THE following calculation shows an easy method of preparing Payne's iodine solution, with the least amount of calculation.

#### REACTIONS.



$$2 \text{ atoms I} = 2 \text{ atoms Fe} = 1 \text{ atom S}.$$

$$32 \text{ grams S} = 112 \text{ grams Fe}.$$

$$1 \text{ gram S} = 3.5 \text{ grams Fe}.$$

When five grams are taken for analysis, 0.01 per cent. = 0.0005 gram, and this multiplied by 1000 = 0.5 gram in a liter.

Let  $x$  = value of 1 cc.  $\text{K}_2\text{Mn}_2\text{O}_8$  in Fe in grams.

$$\text{Then } \frac{0.5}{x} = 0.5 \times \frac{3.5}{x} = \frac{1.75}{x}.$$

$$3.5$$

Therefore 1.75 divided by the value of one cc. potassium permanganate in iron in grams, gives the number of cc. of potassium permanganate to be added to the potassium iodide and sulphuric acid and diluted to one liter, to form iodine solution of such strength that one cc. will be equal to 0.01 per cent. sulphur when using five grams of sample.

#### NOTE.

*Notes on "An Analytical Investigation of the Hydrolysis of Starch by Acids."*<sup>1</sup>—A number of errors and misprints were overlooked by the authors in their compilation of this paper. The following are the most important:

<sup>1</sup> This Journal, 18, 869.