A MICRO pH ELECTRODE.

By

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The description of an electrode, A Type, by which a determination of hydrogen ion concentration in a minute quantity of sample viz. 0.02 c.c. or less can be carried out satisfactorily.

The electrode is made of a simple capillary tube, less than 1 mm. in its diameter, of which both ends are enlarged so that a platinum wire electrode and a sharply pointed agar bridge are inserted, one in each opening, and connected up in a chain as usual.

This type is used only with quinhydrone while B Type which is in course of construction at present can be used with the hydrogen gas electrode under special precautions such as CO_2 tension, oxidation etc.

INVESTIGATION ON A SATURATED CALOMEL ELECTRODE.

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This paper deals with a comparative study of two types of the calomel electrode of the following description, and also with an equation by which pH value is obtained from the reading on the millivoltmeter with the saturated calomel electrode, using Table for pH for N/10 calomel electrode.

Two types of electrode used were as follows :

- I. N/10 KCl calomel electrode which was prepared very carefully according to the standard method.
- II. Saturated KCl calomel electrode which was prepared as follows :

Six grams of pure calomel, 15 c.c. purified mercury and 50 c.c. saturated KCl solution were mixed together and shaken vigorously in absence of air, for 5 minutes, and in a vessel.