

his work on "Clinical Diagnosis," finds that by using a few drops of a 1 per cent. aqueous solution of alizarin as an indicator in a measured quantity of gastric contents, and then titrating with our Na OH solution till a pure violet coloration occurs, the difference between the total acidity as determined by the use of phenolphthalein and of alizarin as indicators equals the HCl present in a combined state. In our laboratory we have not made any series of tests to test the efficacy of this method, but it seems to work well after some practice in determining the point of the 'end reaction.'

6. If free acid is present we must always test for lactic acid. The presence of lactic acid one hour after a test meal always means fermentative processes. True, there is a minute amount of lactic acid in bread, and lactic acid is formed in small quantities at times by fermentation in the mouth. But, practically, these may be disregarded in the great majority of cases. As the presence of considerable amounts of lactic acid (with deficiency or absence of HCl) is looked upon as a diagnostic sign of Carcinoma of stomach, it is often of importance, however, to exclude these sources in such cases. Boas advises a special test meal, which consists in the administration of 8 to 10 ounces oatmeal gruel made with water, after washing out the stomach and mouth. This is best given at night, and 8 or 10 hours after the contents are expressed. The tests here are, however, only applicable to the lactic acid, not to the other constituents of the gastric juice. In our ordinary examination Uffelmann's reagent is used to indicate lactic acid. This reagent is made by taking 3 drops of saturated aqueous solution of perchloride of iron, 20 cc. of 5 per cent. carbolic acid, and diluting with water till the solution is of an amethyst blue tint. Into a long glass (test tube or graduate) of this solution add the filtered stomach contents drop by drop. A lemon-yellow precipitate falls in the presence of lactic acid. This test is, however, not always satisfactory, as excess of HCl or presence of glucose or of acetic or butyric acids may interfere with the test. Yet for ordinary clinical purposes this test usually suffices. If the test be unsatisfactory it is best to shake 10 cc. of the gastric contents up with 30 cc. of ether, repeating twice, removing the ether by pipette. Then evaporate the ether, carefully dissolve the