

hand, it is found that the type II non-recording instrument is accurate within 5 per cent. on the majority of papers, with the exception of those writings and printings that are of lighter weight than 50 lb. to the standard size ream,  $25 \times 40 - 500$ . This instrument does also check itself in a performance test on the same grade of paper within the variation of the strength of the fibres themselves.

Conclusions are drawn up to show that the type I recording instrument is not an accurate and reliable piece of apparatus, and that the type II non-recording instrument is the more reliable of the two, and is sufficiently accurate and reliable for a mill test on the majority of papers, but not sufficiently accurate for a laboratory test.

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**Sour Salt.**—CHARLES H. LA WALL (*Am. J. Pharmacy*, 1921, xciii, 496-497) states that "sour salt" is a synonym for tartaric and citric acids. These acids are sold under the name of sour salt as a condiment, and are used to reinforce vinegar in imparting acidity to certain foods. The "salt" always occurs in commerce in the crystalline form. It has been adulterated by substitution of alum crystals for a part or all of the organic acids. J. S. H.

**Reaction between Sodium Carbonate and Chrome Alum.**—According to LOUIS MEUNIER (*J. Amer. Leather Chemists' Asso.*, 1921, xvi, 321-327), chromic hydroxide is precipitated when sodium carbonate acts upon a cold, freshly prepared solution of chrome alum. The precipitate is a basic chromic sulphate when sodium carbonate acts upon a very old solution of chrome alum, or when precipitation occurs at a temperature of  $100^{\circ}$  C. The sodium carbonate neutralizes the sulphuric acid, which has been formed by hydrolysis of the alum in aqueous solution, and also coagulates the colloidal chromic hydroxide or basic sulphate which have been formed in the aqueous solution. J. S. H.

**Potable Water and Its Hydrogen Ion Concentration.**—For the determination of the hydrogen ion concentration of drinking water, J. M. KOLTHOFF, of the University of Utrecht (*Zeit. Unters. Nahrungs- und Genussm.*, 1921, xli, 112-122), prefers the indicator method to the hydrogen electrode. Neutral red is used as the indicator. The hydrogen ion concentration is a minor factor in judging a drinking water. However, if it and the bicarbonate content be known, the total carbonate content may readily be calculated.

J. S. H.