some cases as much as ten minutes were required,—after which color formation was entirely lacking upon addition of phloroglucine.

It thus appears that no valid results can be obtained in the Kreis test if the acid, because of the presence of nitrosyl chloride, gives a "blank" test with phloroglucine. Under these conditions, rancid fats will generally appear to be sweet, while sweet fats may occasionally appear to be rancid unless the positive reactions be spectroscopically controlled. An illustration of the confusion that may result from this source was kindly brought to the author's attention by Mr. A. W. Putland, of Portsmouth, Va., who, as evidenced by Kreis tests performed with the acid in question, was consistently obtaining an apparently rancid hydrogenated product from apparently sweet non-hydrogenated cottonseed oils. Actually, the hydrogenated products examined by the writer showed no trace of rancidity when the Kreis test was performed with pure acid.

While the Kreis test affords a reliable means for detecting rancidity, or incipient rancidity in fats and oils, it must of course be used with circumspection. In the absence of spectroscopic control, as has elsewhere* been pointed out, positive tests obtained from cottonseed oils are not sufficient evidence of rancidity. It now develops that the test may be completely invalidated, in case of all fats and oils, positive and negative tests alike, by the use of an unsatisfactory reagent.

* Powick: Compounds Developed in Rancid Fats—Jour. Agric. Research Vol. XXVI., No. 8, pp. 336-338, November 24, 1923.

A Useful Addition to Laboratory Extraction Technique

BY PAUL L. MENAUL

The laboratory technique in the determination of oil in cottonseed meal samples appears so simple that no "stunt" could be added to insure greater precision. Yet a brief survey of the reports of the A. O. C. S. Meal Samples discloses a too wide variation in the reports of the oil content; a variation of 0.35% to 0.85% between extremes.

To the undersigned the best technique seemed to be to enfold the sample in a 12.5 cm filter paper, which is then enrolled in another 12.5 cm filter paper, placed in the extraction tube and extracted the required time. However carefully this is done, an appreciable amount of meal dust appears in the extract, varying with the fineness of the meal and the quality of the filter paper. It is rarely that a water clear extract can be obtained.

The author is using a most simple stunt in connection with this method, which invariably yields water clear extracts, and complete extraction of the oil.

This stunt is to moisten the mere lower tip of the outside paper with distilled water. The papers are so rolled that the outer filter paper extends about one half inch below the inner one containing the sample. This empty tip is dipped quickly in distilled water so that only the lower one quarter or one half inch is moistened. *The meal sample must not be moistened!* This moistened tip retains all the meal dust yet does not interfere with the oil extraction. It is also noteworthy that the cheapest filter papers serve as well as the best.