Use of Circulating Stirrers in Preparing Fatty Acids

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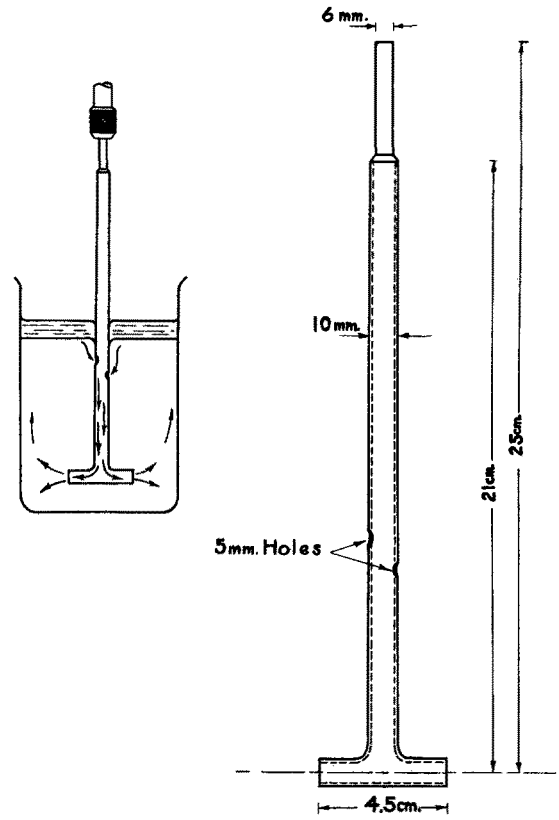
In preparing the total fatty matter (fatty and rosin acids plus unsaponified matter) for rosin and titer tests, acid and iodine numbers (1), it has been our experience in this laboratory that chemists not familiar with the necessity of having the soap completely dissolved before adding the 30% sulfuric acid frequently contaminate the fatty acids with soap. The necessity for complete mixing of the fatty acids with the sulfuric acid is often only too evident when the fatty acid constants do not agree within themselves.

In order to avoid this error it is our practice to use a circulating stirrer in preparing fatty acids.

Figure 1 shows the constructional details and dimensions of the type of stirrer used in this laboratory. No originality is claimed for the design. Any other type of circulating stirrer will probably work as well. The small inset shows the mode of use.

The stirrer should be put into operation during the splitting operation and subsequent washing of the fatty acids. By its use complete contact of the melted fatty acids with the sulfuric acid and wash water is assured.



REFERENCE

(1) Official and Tentative Methods of the American Oil Chemists' Society, p. A-6a (1941).

Abstracts

Oils and Fats

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CHEMICALS FROM FATS. A. W. Ralston. *Chem. & Eng. News 21*, 3-6 (1943).

OIL SEED ANALYSIS. II. THE MOISTURE DETERMINATION. H. P. Kaufmann and M. C. Keller. *Fette u. Seifen 49*, 93-102 (1942). A review of methods is presented. For the oven method the effect of time and temp. on the results on rape seeds is tabulated. For the distn. procedure the solvents xylol, toluol, benzol, cyclohexane, benzine (b. 90-95°) and *n*-heptane (b. 98°) were compared. Results by the titrimetric method on rape seed samples were also presented.

APPLICATION OF MICROMETHODS IN THE FAT FIELD. II. MICROMETHOD FOR THE FAT AND WATER DETERMINATION IN OIL SEEDS. G. Gorbach. *Fette u. Seifen 49*, 553-6 (1942). A review.

SOCIETY WORK OF THE DFG. 15. OIL SEEDS, OIL CAKE AND MEALS. G. Greitemann. *Fette u. Seifen 49*, 401-9 (1942). Methods for sampling, grinding and detg. fat and moisture content of domestic and imported products are given. Results of collaboration on detn. of fat and moisture on rape seed, linseed cake and coco cake and meal are tabulated.

ANALYSIS OF OIL SEEDS. III. SIMULTANEOUS DETERMINATION OF FAT AND WATER. H. P. Kaufmann and M. C. Keller. *Fette u. Seifen 49*, 272-5 (1942). A special app. is described in which the moisture is distd. with heptane vapors and condensed in a measuring tube. Simultaneously the returning heptane is used as the solvent for the fat detn. The method is not limited to the analysis of oil seeds.

DETERMINING THE FAT CONTENT OF OIL SEEDS. A. Paleni. *Fette u. Seifen 49*, 275-8 (1942). In 12 tests the highest value for fat (39.63%) was obtained on dried seeds in a Besson extractor and with Et_2O as the solvent; the lowest value (37.11%) was obtained with a Soxhlet extractor using petr. ether. The results with the Soxhlet extractor were lower than those of the Besson app. The use of the Besson app. and petr. ether as the solvent was preferred.