

and after heating to 160° no precipitation occurred. Figure 2 presents this data graphically.

Thus, while the pyridine-aniline method will precipitate gossypol from hot pressed oils which give negative results with former procedures, there is still a possibility that many crudes contain a "heat-modified" or strongly bound gossypol which is non-precipitable. In support of this opinion, it has been found that some crudes which have the refining properties of high gossypol oils do not give a precipitate with pyridine and aniline; and this same type of oil can be simulated by heating an oil containing precipitable gossypol to 100-120° C. Consequently the pyridine-aniline method has proved useful in checking cooker and press condition with regard to overheating, moisture, and length of cook in the crude mill. Also the method has been tested tentatively for the estimation of free gossypol in meal with excellent success, comparing favorably with the Halvorsen-Smith<sup>6</sup> procedure for this purpose.

#### Summary

1. Pyridine promotes the precipitation of gossypol by aniline from oil solutions. A quantitative method for the

estimation of gossypol in crude hot pressed cottonseed oil is outlined, which involves the use of a pyridine-aniline (4:1) reagent.

2. Samples of crude oils from six different mills analyzed from 0.049 to 0.105 per cent gossypol.

3. Gossypol in crude oils is rendered non-precipitable by heating the oil to 150° C. for 30 minutes. Heating at lower temperatures decreases the yield.

4. Photomicrographs are presented which show the crystal form of dianiline gossypol precipitated in the presence of pyridine.

This work was carried out under the direction of L. C. Haskell, to whom grateful acknowledgment is made. The writer is indebted to M. C. Kibler for assistance in conducting the analyses.

#### Literature Cited

- <sup>1</sup>Carruth, *J. Am. Chem. Soc.* **40**, 4, p. 647 (1918).
- <sup>2</sup>Carruth, *J. Biol. Chem.* **32**, p. 87 (1917).
- <sup>3</sup>Clark, *Oil and Fat Ind.* **5**, 8, p. 237 (1928).
- <sup>4</sup>Clark, *Ibid.*, **6**, 7, p. 15 (1929).
- <sup>5</sup>Jamieson, *Vegetable Fats and Oils*, A. C. S. Monograph 58, p. 175.
- <sup>6</sup>Halvorsen and Smith, *Ind. Eng. Chem., Anal. Ed.*, **5**, 1, p. 29 (1933).
- <sup>7</sup>Schwartz and Alsberg, *J. Agr. Research* **25**, p. 285 (1923).

## Welcome to New Members

The Membership Committee of the American Oil Chemists' Society is endeavoring to contact every chemist who is a prospective member of our Society, and it is hoped that the response will be even greater than anticipated.

Your Committee would like to encourage every member of the Society to do his utmost to interest someone in the work of their organization. We believe that the Society can be helpful to the chemists of our industry and we know the Society needs the co-operation of every man of his profession interested in the welfare of the oil and soap industry:

The following new members have recently been added to the roll:

P. J. Monks, % Swift & Co., E. St. Louis, Ill.

W. B. Byers, The Southern Cotton Oil Co., Goldsboro, N. C.

Stuart R. Evans, 460 E. Ohio St., Chicago, Ill.

J. W. Schrank, Lever Bros. Co., Cambridge, Mass.

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H. B. Richie, % Swift & Co., Chicago, Ill.

R. H. Acock, Oil Mill Laboratory, Austin, Texas.

We welcome them into our Society and hope that they will co-operate with the Society for their own welfare and the advancement of the American Oil Chemists' Society.

W. D. HUTCHINS, Chairman,  
Membership Committee.

## Announcements

1. THE SEVENTH FALL MEETING of the American Oil Chemists' Society will be held in the Florentine Room of the Congress Hotel on October 12 and 13, 1933. On account of the crowded conditions of the Chicago hotels, we suggest you make your reservations at once, preferably at our headquarters, the Congress Hotel.

2. REGISTRATION will start at 9 o'clock Thursday, October 12. There will be the usual nominal registration fee of \$1.00 to take care of the incidental expense of the Convention.

3. INFORMAL LUNCHEONS. We expect to continue our practice of having our informal lunch-