

FIG. 2. Percentage of the fast decaying component in terms of hydrogen content,  $X_f$ , as obtained by NMR, vs the oil and stearic acid percentage by weight,  $W_f$ . The dotted line represents the  $X_f = W_f$  function.

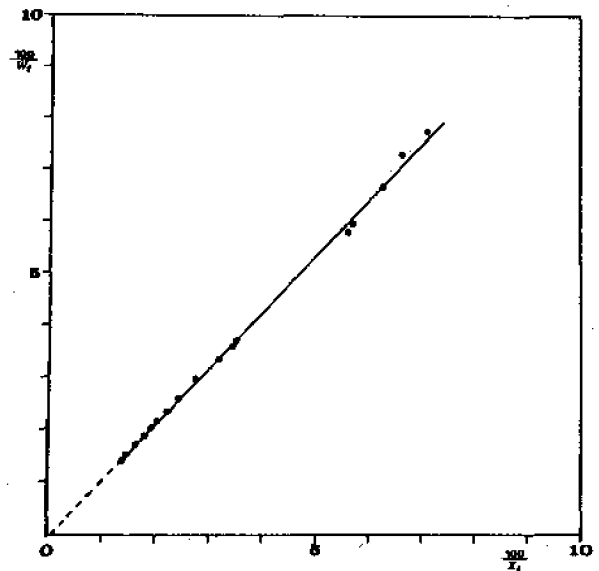


FIG. 3.  $100/W_f$  vs  $100/X_f$  plot.

content,  $X_f$ , is measured by the analysis of the longitudinal magnetization decay curve. On the contrary, if the  $h_f/h_s$  ratio is unknown, a correlation curve, as shown in Figure 3, must be derived and the  $h_f/h_s$  ratio must be evaluated.

In the present case, the  $h_f/h_s$  ratio of 1.085 was found by regression analysis. Assuming this  $h_f/h_s$  ratio, the fat content by weight,  $W_f$ , was calculated with Equation III and the standard deviation between these values and those given by the sample composition reported in Table I was calculated, obtaining an SD of  $\pm 0.5$ .

From these results, it can be concluded that pulsed low-resolution NMR is a suitable technique for oil and water determination in emulsions. Finally, it can be noted that the time required for the analysis is about 20-30 min if 6 points, each of them obtained by the average of 10 measurements, are taken to detect the longitudinal magnetization decay.

#### REFERENCES

1. Shanbhag, S., M.P. Steinberg and A.I. Nelson, *JAOCS* 48:11 (1971).
2. Mansfield, P.B., and C.A. Horn, *J. Food Technol.* 7:53 (1972).
3. Hansen, J.R., *J. Phys. Chem.* 78:256 (1974).
4. Ben-El, G., and D. Tatarsky, *JAOCS* 49:499 (1972).
5. Van Putte, K., and J. Van den Enden, *Ibid.* 51:316 (1974).
6. Van Putte, K., L. Vermaas, J. Van den Enden and C. den Hollander, *Ibid.* 52:179 (1975).
7. Madison, B.L., and R.C. Hill, *Ibid.* 55:328 (1978).
8. Trumbetas, J., J.A. Fioriti and R.J. Sims, *Ibid.* 53:722 (1976).
9. Trumbetas, J., J.A. Fioriti and R.J. Sims, *Ibid.* 54:433 (1977).
10. Trumbetas, J., J.A. Fioriti and R.J. Sims, *Ibid.* 55:248 (1978).
11. Tiwari, P.N., and W. Burk, *Ibid.* 57:119 (1980).
12. Balestricri, F., E. Brosio, F. Conti, A. Di Nola and O. Scorano, *J. Food Technol.* (in press).

[Received May 4, 1981]

#### ERRATUM

In "Effect of Degumming Conditions on Removal and Quality of Soybean Lecithin," by G.R. List, J.M. Avelaneda and T.L. Mounts (*JAOCS* 58:892, 1981), the captions to Figures 3 and 4 should be transposed to read: FIG. 3. Recovery of acetone insolubles from crude soybean oil. ● Theory, acetone-insoluble content crude oil. □ Calculated from phosphorus content of degummed oil. △ Experimental acetone-insoluble content of hexane solubles. FIG. 4. Effects of degumming parameters on phosphorus removal and acetone-insoluble content of gums.