by: temperature, hydrogen pressure, type and concentration of catalyst, and degree of agitation. Except for the degree of agitation, all the other parameters are intensive. The proper use of the present model will allow one to have a handle on the degree of agitation, therefore making the hydrogenation process manageable. Following are the typical examples where some practical applications of the model, as shown in Equation 2, are illustrated.

Characterization of hydrogenator. In production as well as in research and development, it is essential to be able to characterize the hydrogenator used and to determine the agitation for each hydrogenator. The degree of agitation can be calculated from Equation 2 directly. Once the degree of agitation for the hydrogenator has been assessed, agitation among different hydrogenators can be easily compared. Of course a similar assessment can be done by the actual experimentation such as illustrated in the present paper; however, the use of Equation 2 should allow one to omit the performance of the experiment.

Scale-up. It is a nightmare of all R & D personnel not to be able to scale-up from the bench or pilot plant to the production. The proposed model should be helpful in this respect. If scale-up from the bench unit to the production hydrogenator is the concern, Equation 2 should be used to estimate the k_La or the degree of agitation for both hydrogenators. If the production unit for some reason has more agitation than the bench unit, the operating condition of the bench unit should be changed so that the k_La for both of the hydrogenators are matched. This can be achieved by either increasing the rpm of the bench agitator or reducing the amount of oil used for the bench unit. In any case, the proposed model should be used as a guideline for making these changes.

Simulation. In production environment, the what-if questions are often brought up. What if we speed up the rpm of the agitator? What if we hydrogenate oil with higher viscosity? What if we increase the batch size to improve productivity? These questions can be answered if one uses the proposed model. For example, if bigger batch size in production is desired, a corresponding k_La for this situation can be estimated by using Equation 2. Then, the bench unit should be employed to simulate the new k_La. The selectivity and other quality attributes of hydrogenated oil from the bench experiment should be assessed prior to making changes in the production.

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ERRATA

In the article "Instrumentation in Vegetable Oil Processing" appearing in the March issue of *JAOCS* (Farr 60:571 [1983]), an error exists on page 573. In the formula

$$V = \frac{GPM \times 0.048}{d^2},$$

"d = diameter of tube (ft)" is incorrect. It should read "d = diameter of tube (in.)".

In the April 1983 issue of *JAOCS*, pages 836 and 838 were inadvertently misnumbered and consequently switched. Page 836 should be numbered 838, and vice versa.