

LETTER TO THE EDITOR

Dear Editor:

The article on laboratory deodorization appearing in the March issue of *JAOCs* (1) should prove to be a valuable guide to researchers and processors in the field of edible oil processing. The single and multiple flask deodorizers described are well designed and make it possible for the operation of deodorization to be carried out in the laboratory. However, I wish to point out two minor drawbacks of the system, both of which were previously addressed by Heide-Jensen (2).

To begin with, the choice of oil as the heating medium is not ideal. Working with hot oil in the laboratory is always a safety concern, and an elaborate heating bath equipped with a stirrer and cooling coils and housed in a special cabinet is not within the reach of all laboratories. I have found it convenient to heat the single flask deodorizer with a power-controlled hemispherical heating mantle. Another mantle, not heated, can be placed on top of the flask to provide insulation and shield the oil from light. The temperature of the oil is monitored by a thermometer fitted to the deodorization flask through a ground glass joint (S.T. 10/30). The entire apparatus will fit into a chemical hood where the deodorization can be run safely. This eliminates the need for a contained oil bath and reduces the lengthy time required to bring a large oil bath to temperature. Cooling is accomplished rapidly by removing the top mantle and directing air from a small fan over the top of the deodorizer flask.

Secondly, there is no way to vary the flow of sparge steam with the apparatus described. This can

easily be done by placing an incandescent bulb, or heat lamp, at varying distances from the steam generator as suggested by Heide-Jensen (2). Although this is by no means a precise method, it does offer some measure of control over the steam flow and improves the reproducibility of the method.

For those researchers who do not have the resources of a glassblower nearby to fabricate a laboratory deodorizer for them, one can be purchased from Lurex Scientific (Vineyard, NJ). Although based on the design of Schwab and Dutton (3) as well, it is more cumbersome and harder to operate than is the Northern Regional Research Center laboratory deodorizer.

Finally, and perhaps most important, those using the laboratory deodorizer should beware of attempting to extrapolate their results to actual commercial deodorizer equipment. Deodorizers vary in type and design and, as pointed out by Bitner *et al.* (4), a laboratory deodorizer of the batch type cannot accurately simulate deodorization in a large-scale commercial deodorizer.

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REFERENCES

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4. Bitner, E.D., J.P. Friedrich and T.L. Mounts, *Ibid.* 63:338 (1986).

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