

carrying out research in science or medicine. The second is to provide the means to bring distinguished visiting scientists, particularly graduates of the college, to Amherst to lecture or give seminars on selected topics in the field of

chemical research.

Dr. Pryde received his B.A. in chemistry in 1939 from Amherst College. At the time of his death last August 16, he was research leader for exploratory organic reactions research in the oilseeds crops

laboratory at USDA's Northern Regional Research Center, Peoria, Illinois. Dr. Pryde, an active AOCS member, was respected as an expert on nonfood uses of vegetable oils, principally soybean and linseed oils.

Methodology



Analytical Q&A

(The following column is based on questions sent to AOCS technical director Dave Berner. If you have a question concerning analytical methodology of fats and oils or related products, please send your question to AOCS Technical Director, 508 S. Sixth St., Champaign, IL 61820.)

Q. Is there a Chemical Abstracts Service (CAS) number for soybean oil and, if there is, what is it?

Certain oils have been assigned a provisional number. While a search may be made under the provisional number, it is also advisable to search by the specific name of the oil. In the case of soybean oil, the provisional number is 8001-22-7.

Q. Where can I find values for the critical temperature of olive oil and vegetable oils?

One source listing the critical temperature of dissolution (Crismer Value) of fats and oils is Mehlenbacher's *The Analysis of Fats and Oils*, Garrard Press, Champaign, IL, 1960, Table 3, p. 240.

Q. For the testing of unsaponifiable matter, methods Ca 6a-40 and Ca 6b-53 are not applicable to feed grade fats. Why? Do you have a method for unsaponifiable matter in feed grade fats?

Methods Ca 6a-40 and Ca 6b-53 should not be used for fats and oils having a high level of unsaponifiable matter and fatty acids, like feed grade fats. AOCS method Cf 1-68 (73), Recommended Practices for Testing Feed Grade Products, cites the use of AOCS method Ca 5b-71 for unsaponifiable matter.

Q. When sunflower seeds are ground for oil analysis, a paste forms, preventing uniform blending and sampling. How can this be corrected?

The seeds should be ground with an equal weight of diatomaceous earth. This procedure is noted in method Ai 3-75, determination of oil content in sunflower seed.

Q. Are there any restrictions on the sale of vegetable oils deodorized by the use of Dow-therm as the heat exchange agent? Does AOCS have any methods for the detection of Dow-therm in vegetable oils?

Japan does not allow the use of Dow-therm in the deodorization

process and will not import oils processed by the use of Dow-therm. Similar restrictions apply to certain EEC countries. AOCS has no official method for the detection of Dow-therm in oils. A steam distillation/GC method (detection limit 0.2 ppm) appears in *JAACS* 51:495, and a trap/GC method (detection limit 5.0 ppm) appears in *JAACS* 59:278.

Q. Could you help me find the "original" article that described the work that was done to relate the iodine value of fats to the refractive index (n_D)?

The formula for converting refractive index to iodine value noted in the conversion table you sent with your letter was published in *JAACS* 28:5-8 (1951). This is for refractive indices determined at 25 C. The formula for converting refractive indices determined at 40 C was published in *JAACS* 36:304-307 (1959). The refractive indices for milk fat noted in the conversion table accompanying your inquiry were most likely calculated using the formula for 25 C.