dissolving, fractionating, heating or otherwise destroying the very structure of interest. In the case of fats, for example, the thermal history is not destroyed by the NMR experiment.

Conclusion

The techniques of pulsed NMR are well-known and widely used, but they do not provide detailed chemical information. High-resolution NMR is being applied to analysis of neat and dissolved liquid oils, and its potential is just being realized in industrial analysis and research. FT NMR relaxation has seen a few applications to molecular motion. With the exception of a few pioneering studies on solid triglycerides (12–14), the potential of high resolution solids NMR and wide-line NMR for chemical analysis and for the study of structure and dynamics in solid and semisolid fats largely is untapped.

REFERENCES

1. Shoolery, J.N., in *Dietary Fats and Health*, edited by E.G. Perkins and W.F. Visek, American Oil Chemists' Society, Champaign, IL, 1983, pp.220-240.
2. Horman, I., in *Analysis of Foods and Beverages: Modern Techniques*, edited by G. Charalambous, Academic Press, Orlando, FL, 1984, pp. 230-239.
3. Haw, J.F., and G.E. Maciel, *Anal. Chem. 55*:1262 (1983).
4. Bengsch, E., B. Perly, C. Deleuze and A. Valero, *J. Magn. Reson. 68*:1 (1986).
5. Ng, S., *Lipids 20*:778 (1985).
6. Ng, S., *Ibid. 19*:56 (1984).
7. Kvalheim, O.M., D.W. Aksnes, T. Brekke, M.O. Eide and E. Sletter, *Anal. Chem. 57*:2858 (1985).
8. Pfeffer, P.E., F.E. Luddy, J. Unruh and J.N. Shoolery, *J. Am. Oil Chem. Soc. 54*:380 (1977).
9. Korn, M., *Deutsche Lebensmittel-Rundschau 79*:1 (1983).
10. Weisser, H., and H.-P. Harz, *Internationale Zeitschrift für Lebensmittel-Technologie und Verfahrenstechnik 34*:20 (1983).
11. Yannoni, C.S., *Acc. Chem. Res. 15*:201 (1982).
12. Norton, I.T., C.D. Lee-Tuffnell, S. Ablett and S.M. Bociek, *J. Am. Oil Chem. Soc. 62*:1237 (1985).
13. Bociek, S.M., S. Ablett and I.T. Norton, *Ibid. 62*:1261 (1985).
14. Gibon, V., F. Durant and C. Deroanne, *Ibid. 63*:1047 (1986).
15. Callaghan, P.T., K.W. Jolley and R.S. Humphrey, *J. Colloid Emulsion Sci. 93*:521 (1983).
16. Davis, J.H., *Biochim. Biophys. Acta 737*:117 (1983).
17. Griffin, R.G., *Methods in Enzymology 72*:108 (1981).
18. Callaghan, P.T., *Chemistry and Physics of Lipids 19*:56 (1977).

Methodology

Method development update

Collaborative studies

Four collaborative studies have been proposed. They are the following:

- Wax in sunflowerseed oil (nephelometry)
- Improving method Ca 3-46 (insoluble impurities) for the analysis of feedstocks
- Tecator block digestion/rapid steam distillation method for TKN (protein) analysis
- Validation of a sodium ion electrode method for sodium in fat- and oil-containing food products.

Project coordinators and collaborators have been identified for the wax in sunflowerseed oil and insoluble impurities methods; however, there is room for additional collaborators. The extent of interest still must be identified for the Tecator TKN and sodium ion electrode methods before any steps are taken to select project coordinators and collaborators.

Anyone interested in participating in any of these collaborative studies is asked to contact the AOCS technical director as soon as possible.

Technical interest groups

Under the new AOCS Governing Board structure, there is a new committee called the Technical Activities Coordinating Committee. This committee is chaired by John Heilman of Continental Grain. The chairmen of the various AOCS technical programs—Smalley, Uniform Methods Committee (UMC), Examination Board and Technical Interests—are a vital part of this committee.

Ted Matson of Vista Chemical is the chairman of the Technical Interests Committee. The purpose of this committee is to define technical interest areas/topics, for which people can meet on an informal basis (at AOCS national meetings) and hold discussions about various elements of technical importance (new methods, problems, concerns). These discussion groups are not

intended to replace current technical committees or technical sessions at national meetings but rather to provide an informal forum for an exchange of ideas.

Three technical interest committees met for the first time at the 1987 annual meeting in New Orleans. The topics were hydrogenation, flavor and chromatography. Other potential topics mentioned by the Technical Activities Coordinating Committee for future meetings are safety, environment, protein, biochemistry, nutrition and biotechnology. The meetings would be held during the lunch hour, with box lunches available for participants.

It is time to begin organizing these discussion groups for the national meeting in Phoenix. Anyone wishing to organize a group or having an idea for a timely topic is asked to contact either the AOCS technical director or Ted Matson.

Items of technical interest

A considerable number of ideas and suggestions regarding methodology and items of technical interest are provided by members, technical committee members, associations and laboratories. The following items are offered for general interest and comment:

- James Daun, a member of the Seed and Meal Analysis Committee, plans to recommend that AOCS adopt the revised BSI/ISO method for the analysis of oil in rapeseed.
- Leatherhead Food RA suggests that revisions be made to the current oil in sunflowerseed method as noted in the June 1987 issue of *JAOCS*, p. 865.
- For phosphorus in oils, it has been suggested that oils should be filtered prior to analysis. Total phosphorus would require that phosphorus be determined separately in oil and sediment, and by adding the two results. Method C 1-47 (sampling) should require the filtration of all samples prior to analysis.
- John Heilman, chairman of the Technical Activities Coordinating Committee, has requested that AOCS adopt the NSPA Green Color Method as an official AOCS method.
- In a case in which identical methods exist within two standard methods-writing organizations, it has been suggested that each organization include the method number of the other organization on the standard methods (i.e., to have a dual-numbering system).

Acknowledgments

The Uniform Methods Committee and the AOCS technical director would like to acknowledge the support of Supelco Inc., with special thanks to Lloyd Witting, Gary Walker and his coworkers—Mark Robillard, Jack Crisman and Floyd Dorrity—for the time spent in reviewing AOCS methods. Witting identified approximately 30 official methods using hazardous materials. The hazardous items were replaced with safe, equivalent substitutes in the **1987 Additions and Revisions**. Gary Walker and his coworkers reviewed all AOCS gas chromatography methods and recommended updates for these methods. These recommendations are under review for incorporation into the **1988 Additions and Revisions**.

Dave Berner
AOCS Technical Director

Publications

Book reviews

Fat Production and Consumption Technologies and Nutritional Implications (NATO ASI Series A: Life Sciences, Vol. 131), edited by C. Galli and E. Fedeli (Plenum Press, 233 Spring St., New York, NY 10013, hardcover, 336 pp., 1987, $62.50, Proceedings of a NATO Advanced Research Workshop on Advanced Technologies and their Nutritional Implications in the Production of Edible Fats, held March 17-21, 1986, in Selvino, Italy).

With a very objective preface by the editors and an equally fine summation of recommendations from the Advanced NATO Workshop by Hugh Sinclair, this volume covers the general nutritional effects of fatty acids in the cardiovascular system and thrombosis with selected fatty acids. In the review of the different classes of fatty acids and the oils containing these acids, each contributing author spells out what is known and not known. It is very encouraging that there appears to be a consensus among the contributing scientists that more definitive terminology should be used rather than the general saturated, monounsaturate and polyunsaturate classifications.

Subgroups of omega-6 and omega-3 are well-described and the rationale for such subgroup discussed. In a similar manner, the saturates subgroups of short, medium and long chain were classified and the differences in their metabolic patterns noted.

The balance of the volume concentrates on fats and oils technology and the processing details involved. Although the processes are known to oil chemists, the presentation demonstrates that modifications of fats and oils are feasible and desired not only for functionality but also for satisfying nutritional acceptability, especially the required essential fatty acid requirements. The approaches suggested are both chemical and genetic modifications. The presentations are realistic and objective based on global needs and requirements.

This volume is a valuable addition to the oil chemists' library. The title is a bit misleading because fat production and consumption are presented in terms of their nutritional implications. The data, including the bibliographies and range of the technologies covered,