LETTER TO THE EDITOR

Systematic Evaluation of Heated Fats Based on Quantitative Analytical Methods

Sir

In reply to Professor Naudet's letter (1) on our paper (2), we consider it our obligation to make the following clarifications.

The systematic evaluation proposed in our paper, carefully selected for our first contribution to this Journal, was exclusively a logical consequence of our earlier studies on analytical methods applied to heated fats (3-5). The most direct basis of these works have always been recognized and they are the quantitative determinations of polar compounds (6) and dimers (7). This series of papers, as can be easily verified, were published in *Grasas y Aceites* before the appearance of the studies of Professor Naudet's team (8,9). Furthermore, the first idea on our systematic evaluation combining different analytical methods was communicated in the Poster Session of III European Conference on Food Chemistry and, fortunately, a summary including the analytical procedure can be found in the Proceedings (10), which were already available at the Conference itself, held in Antwerp from March 26-29, 1985. This date is previous to the publication of the French papers.

A scheme, identical to that quoted by Professor Naudet in his letter as described by Perrin *et al.* (9) can be found in the first paper of our series (p. 176) (3), published one year before the appearance of the cited French study. That procedure let us distinguish between nonpolar methyl esters coming from nonpolar and polar glycerides and, together with individual fatty acid determination in both fractions (5), some interesting general conclusions could be deduced about fat alteration.

However, it is important to emphasize that the main difference between the first procedure and the systematic evaluation published in the *JAOCS* is not the better analytical information obtained by the latter, but the introduction of a new, deeper objective in our studies: the differentiation of the three predominant alterations—thermal, oxidative and hydrolytic—undergone by the fat. This objective has continued to be present in our work and, in fact, a new idea based on polar glyceride quantitation has been suggested in a later paper (11).

Professor Naudet has undoubtedly contributed to our information on this subject, and we sincerely regret that he has not appreciated these facts.

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