

Cyclopropenes in Malvaceae Oils

Sir,

The two recent papers on triglycerides and phospholipids of six oils of Malvaceae (1,2) were very interesting.

The author apparently is considering the extended cultivation of some of these oils, presumably for edible purposes. It was somewhat surprising, therefore, to find no mention of the presence of cyclopropene fatty acids in the text. These acids have rather unpleasant physiological effects (3,4) and are present in many of the Malvaceae oils. Indeed, they have been reported at a level of 4.5% (5) in one of the oils (*Althaea rosea*) investigated in this paper.

Many samples containing cyclopropene fatty acids have been analyzed, and there are several problems involved with their analysis. One of these is the necessity of not exposing the sample to acid, as occurred in this case where methylation was carried out using HCl/methanol. It is probable that methylation under these conditions would have destroyed any malvalic and sterculic acids present. In addition, the samples would have to be analyzed either by high performance liquid chromatography or on a capillary column under the right conditions (by gas chromatography).

These acids are known to occur in unrefined cottonseed oil (5), but are destroyed in normal refining at the low

levels present (1%). This might not occur if the levels were higher, or if the oils were not fully refined. It is therefore important that reports on analysis of oils of the Malvaceae or Sterculiaceae should investigate the possibility of the presence of these acids, particularly where edible use is being considered.

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