

Sulla complessità della frazione sterolica nell'olio di oliva*

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On the complexity of sterol fraction in olive oil

The sterol fraction of olive oil is much more complex than shown in the composition tables of the various legislations.

In particular, lampant oils and those from Pomace show the presence of significant amounts of Ergosterol, typical sterols of fungi and yeasts.

The presence of Ergosterol appears as a large asymmetric peak eluted before Campesterol, the asymmetry is probably due to its high unsaturation that can cause degradation phenomena and adsorption favored by temperature.

Along with Ergosterol there are a number of sterols that, if not carefully monitored, can create problems on the allocation of authenticity.

In particular, there are sterols that elute with retention times of Brassicasterol that can simulate the presence of oil of Rapeseed especially in the light of decision trees that predict the increase in Campesterol up to 4.8%

Another problem are the sterols coeluting with, or shortly after, stigmasterol that can lower the value of Sitosterol apparent.

Another problem is that with coeluting Stigmasterol may exceed the value of Campesterol, which is not permitted by legislation.

Lastly, these sterols can erroneously simulate the presence of Δ^7 Campesterol above the legal limit simulating the presence of sunflower oil.

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