

Changes in Triglycerides Composition of Seasoned Cracked Olives

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The changes in the triglyceride composition of seasoned cracked olives “Aceituna Aloreña de Málaga” (Protected Denomination of Origin) during the diverse phases of processing were studied. LLL, OLLn, OLL, PLL, OLO, and SLL+POL percentages significantly decreased during the storage phase; OOO and POO+SOL proportions significantly increased. The rest (PLLn, OLnO, POLn, PPL, PPO, SOO, and POS+SLS) showed not clearly defined changes. Cluster analysis showed three main groups among the samples: fresh olives and their packages, olives stored at room or cold (under refrigeration) temperature and their respective packages olives. Then, apparently, the most remarkable effect on the triglyceride composition of olives (there was the largest distance in the cluster) was caused by storage. On the other hand, packing caused a limited effect in case of fresh olives; however, this effect was higher in storage olives because the packed olives were grouped into a separate cluster. Application of PCA showed that there were only two eigenvalues higher than 1. The first one was linked to LLL (negatively), OLLn (negatively), PLLn (negatively), OLL (negatively), PLL (negatively), OLO (negatively), SLL+POL (negatively), PPL (negatively), OOO (positively), and POO+SOL (positively). The second was related to OLnO (negatively), POLn (negatively), PPO (negatively), SOO (negatively) and POS+SLS (negatively). Then the first component can be named as “triglycerides that changed” due to storage while the second could be related to “triglycerides that did not change”. When the samples were projected onto the two PCs, there was a clear separation into three groups which agree with those found by cluster analysis.