Replacement of Pork Fat on Liver Pâté by Olive Oil

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The effect of replacing pork fat in liver pâtés by olive oil (OO-pâté) on the fatty acid profile, lipid oxidative stability, consistency and stability of the batter was studied and compared with a traditional liver pâté (C-pâté). The total percentage of added fat sources to both batches was 30%. In the case of C-pâté all the fat source was pork back-fat, while for OO-pâté the composition of the fat was 15% as pork backfat and 15% as OO. The products were studied at days 0, 5, 20 and 70 of refrigerated storage (4ºC). The fatty acid profile obtained for OO-pâté was characterized by significant lower content of saturated fatty acids (SFA) and higher monounsaturated fatty acids (MUFA). The oleic acid was the main fatty acid in both products, but it was much higher in the case of OO-pâté than the traditional one (42.33% and 56.95%, respectively). The level of polyunsaturated fatty acids was the same in OO-pâté and C-pâté. No changes in the fatty acid profile and in lipid oxidation (mg malondialdehyde per kg of sample) were found throughout the storage of the products. Much lower consistency (Instron compressive method) was obtained when using OO (0.596 N/cm^2 for C-pâté and 0.163 N/cm^2 for OO-pâté). A worse stability (% of fat separated by centrifugation) of the batter was also observed in the case of OO-pâté (0.10% for C-pâté and 2.40% for OO-pâté). Consistency tended to increase in C-pâté and OO-pâté with the time of storage. The stability of OO-pâté decreased during refrigerated storage, while the stability of C-pâté kept constant. Thus, the use of OO as pork back-fat replacer in pâtés appears a way for obtaining a healthier fatty acid profile with no drawbacks on the oxidative susceptibility. However, the worse texture and stability caused by the addition of OO to pâtés should be considered.