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Effects of Substituting Added Water for Fat on the Quality Characteristics of Spreadable Liver Sausage

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Spreadable liver sausages were manufactured with four levels of fat content (15, 20, 25 and 30%) in order to study the effect of fat level on processing and quality characteristics. The pH value of liver sausage increased significantly ($P<0.05$) with increase added water. Fat level had a significant effect ($P<0.05$) on cooking yield. The lower the fat level the lower the cooking yield. Fat reduction increased jelly exudation, redness and purge loss, and decreased fat exudation and WHC, respectively. However, no effects in total released fluid among all treatments were observed ($P>0.05$), respectively. No differences were found in lipid oxidation ($P>0.05$). The lower the fat level the lower the hardness and brittleness. However, fat level resulted in no significant difference in cohesiveness and elasticity ($P>0.05$). The number of total aerobic count and lactic acid bacteria increased with fat reduction due to increase water activity. The results indicate that fat reduction with water addition improved spreadability without alternation in quality characteristics of liver sausage.