

Effects of Conjugated Linoleic Acid (CLA) on Lipid Oxidation and Residual Nitrite of Emulsion-type Sausages

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Conjugated linoleic acid (CLA) was used to manufacture value-added emulsion-type sausage. Emulsion-type sausage (ETS) was manufactured with pork back-fats (20% total weight) as a control. ETS containing CLA was manufactured with one of following CLA amounts: 0, 2.5, 5, 7.5 and 10% CLA replaced the total pork back-fat content in control ETS. Several factors influencing the shelf-life of the ETS were determined when stored at 4°C for 28 days. Significant difference in thiobarbituric acid reactive substances (TBARS) was shown between control and CLA treatment groups during storage ($p < 0.05$). CLA in CLA treatment groups was not degraded during storage. CLA treatment significantly reduced nitrite content in ETS when storage and such an effect was proportional to CLA amount treated. Nitrite content in control group was significantly higher than in CLA-treated groups ($p < 0.05$). These results suggest that CLA added to ETS revealed no adverse effects on quality, lipid oxidation, nitrite content and elevation of unsaturated fatty acid content. Given these positive effects of CLA, CLA could be used as a fat substituter to manufacture value-added ETS.