

Effect of oxygen level on the oxidative stability of two different retail pork products stored using modified atmosphere packaging (MAP) - DTU Orbit (08/11/2017)

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The characteristics and the oxidative stability of pork steaks and of pork mince were investigated during 2, 5 and 7 days of refrigerated storage using oxygen (O₂) levels of 0%, 20%, 50% and 80% in modified atmosphere packaging (MAP). Steaks stored during 7 days were not affected by an increase in O₂ concentration, as revealed by lipid and protein oxidation markers. In contrast, the mince was characterised by an altered protein profile, loss of free thiol groups and increased protein oxidation, early during storage. The oxidative stability of pork mince was improved by using intermediate (50%) O₂ MAP. The results show that fresh pork products are affected differently by the MAP O₂ concentration and strongly indicate that optimisation of MAP based on the retail product type would be of considerable benefit to their oxidative stability.

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