Lipolysis, lipid peroxidation and texture of Serrano ham processed under different ripening temperature conditions

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Abstract

Lipolysis, lipid peroxidation, texture and rancid taste were investigated in Serrano hams processed under low, medium and high ripening temperature conditions (RTC) for 15 months. Medium RTC hams showed the highest contents of saturated and monounsaturated free fatty acids (FFAs) from month 5 to 15 and of polyunsaturated FFAs from month 7 to 12. The primary peroxidation index decreased during ripening in all hams, with higher levels for low RTC hams from month 5 onwards. Contrarily, the secondary peroxidation index increased during ripening in all hams, with higher levels for medium RTC hams from month 7 onwards. Texture parameters varied significantly among ham muscles. Shear force increased during ripening in all hams, with higher values for medium RTC hams, whereas cutting force was not influenced by RTC or ripening time. Rancid taste scarcely developed during ripening and was not affected by RTC.