Effect of slaughter season on fatty acid composition, conjugated linoleic acid isomers and nutritional value of intramuscular fat in Barrosã-PDO veal

Cristina M.M. Alfaia a, Matilde L.F. Castro b, Susana I.V. Martins a, Ana P.V. Portugal c, Susana P.A. Alves c, Carlos M.G.A. Fontes a, Rui J.B. Bessa c, José A.M. Prates a,*,

a Faculdade de Medicina Veterinária – CHISA, Avenida da Universidade Técnica, Pólo Universitário do Alto da Ajuda, 1200-477 Lisboa, Portugal
b Faculdade de Farmácia - Centro de Estudos Farmacêuticos, Av. Professor Gama Pinto, 1649-003 Lisboa, Portugal
c Estação Zootécnica Nacional, Instituto Nacional de Investigação Agrária e das Pecuárias, Fante Boa, 2005-086 Vale de Santaém, Portugal

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Abstract

This paper describes the influence of slaughter season on lipid content, fatty acid composition, conjugated linoleic acid (CLA) isomeric profile and nutritional value of fat in Barrosã veal from calves reared according to the specifications of the Protected Designation of Origin (PDO). Barrosã purebred calves (n=27) were raised in a traditional production system and slaughtered in early autumn (October) and late spring (June). Barrosã-PDO veal only presented seasonal differences in the levels of some minor fatty acids and CLA isomers, as well as in the PUFA/SFA ratio. Based on the analysed grass intake indicators, it was shown that veal-PDO has similar values to pasture-fed cattle for both slaughter seasons. From a human nutrition perspective, intramuscular fat in Barrosã-PDO veal has a high nutritional value throughout the year, since CLA contents and the percentages of the c9,t11 isomer are relatively high, and the n-6/n-3 ratios are within the recommended values for the human diet.

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Abbreviations: CLA, conjugated linoleic acid; DAD, diode array detector; FAME, fatty acid methyl esters; ID, lusitaniae dorsi; MUFA, monounsaturated fatty acids; PDO, Protected Designation of Origin; PUFA, polyunsaturated fatty acids; SFA, saturated fatty acids; ST, semitendinosus; TFA, trans fatty acids.

* Corresponding author. Tel.: +351 213652890; fax: +351 213652895.
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