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Season Effect on Fatty Acids Composition of Desert Camel Meat (*Camelus dromedarius*)

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Abstract

The present work was designed to study the effect of slaughter season on fatty acids composition of the desert camel (*Longissimus thoracis* muscle. Desert camel calves (n=30) were fattened by local camel herders in Sudan and slaughtered in different seasons of the year: winter, summer and autumn, ten camels each. The results showed that the average of total lipids was 11.7 g/ 100 g fresh muscle. No differences among seasons were observed in fatty acids composition. Slaughter season did not influence Myristic acid (14:0) which was 5.2 % (average of three seasons). Camel LT muscle contained 52.2 % SFA, 35.8 % MUFA, 11.6 PUFA and 0.5 % CLA, respectively. The total MUFA was higher in summer season as compared to other seasons. Similar results were obtained, the ratio of 18:2 n-6/ 18:3 n^{-3}, n-6/ n^{-3} as well as UFA/ SFA were significantly influenced by slaughter season ($p < 0.05$). The concentration of conjugated linoleic acid trans11, cis9 18:2 (CLA) was 0.5 %, however no differences among seasons were observed. CLA content and the percentages of trans11, cis 9 18:2 isomer are relatively high. Slaughter season significantly affected the n-6/ n-3 ratio of camel LT muscle ($p < 0.05$). This ratio was within the recommended values for the human diet which indicated that camel LT muscle has a high nutritional value throughout the year. The predominant fatty acids in camel LT muscle were Palmitic acid (16:0) and stearic acid (18:0) as saturated fatty acids (SFA), 18:1Δ9+10 cis and 18:1Δ11 cis as monounsaturated fatty acids (MUFA) and LA; 18:2n-6 as polyunsaturated fatty acids (PUFA) indicating the high quality of fatty acids.

Keywords: Desert camel, fatty acids, lipids, slaughter season

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