

Conjugated Linoleic acids in cattle slaughtered for human consumption.

ABSTRACT

Conjugated Linoleic Acids (CLAs) are group of positional and geometric isomers of octadecadienoic acid with conjugated double bonds and believed to have many health promoting effects. The present study focused on the quantitative analysis of CLAs in liver, Superficial Pectoral (SP), Longissimus Dorsi (LD) and Semimembranosus (SM) muscles of local Malaysian_Kedah-Kelantan (KK) cattle slaughtered for human consumption. Fatty acids were extracted using Folch method and determined by gas chromatography. The average content of CLAs in the liver, SP, LD and SM muscles were 38.71, 18.24, 11.03 and 13.04 mg/100 g of sample, respectively. The quantity of CLAs in the liver was significantly ($p<0.05$) higher than other samples. The percentages of cis-9, trans-11 CLA isomer were 63.39, 76.04, 90.66 and 82.82% of total CLAs in the liver, SP, LD and SM muscles, respectively. Positive correlations between CLAs and trans-11-octadecenoic acid concentration were observed in all samples. This study confirmed that meat from KK cattle could be the potential source of CLA but still its content has to be improved to make their meat more beneficial for consumers.

Keyword: Conjugated Linoleic Acids; Liver; Superficial Pectoral Muscle; Longissimus dorsi muscle; Semimembranosus muscle; Kedah Kelantan cattle.