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# Comparison of two gas–liquid chromatograph columns for the analysis of fatty acids in ruminant meat

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ABSTRACT

Two gas–liquid chromatograph capillary columns for the analysis of fatty acids (FA) in ruminant fat are compared. Those columns are the CP-Sil 88 of 100 m long with a highly polar stationary phase and the Omegawax 250 of 30 m long with a stationary phase of intermediate polarity. Fatty acid methyl ester (FAME) patterns of branched-chain, *cis* and *trans* octadecenoate isomers, as well as conjugated and non-conjugated 18:2 and 18:3 isomers are fairly different between columns, even though most of the FAME could be separated on either column. However, the CP-Sil 88 showed better resolution of 18:1 isomers than Omegawax 250. The analysis of 96 samples of ruminant meat fat in both chromatographic systems showed that averages obtained for total FA content and for most of the individual FA did not differ between columns. Moreover, regression analysis of Omegawax and CP-Sil 88 data is highly correlated. Quantitative differences between chromatographic systems were detected for samples containing more than 66 mg fatty acids per gram of muscle dry matter.



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