CLAIMS

~~1. A method for analysis of triacylglycerols from animal fats comprising~~
~~providing a preparation of a sample comprising triacylglycerols;~~
~~applying the preparation of sample as determined by chromatography having a separation material;~~
~~separating and detecting the triacylglycerols content of said preparation of the sample;~~
~~collating the detection data into a data analysable form; and~~
~~analysing the data using chemometrics for identifying and determining animal fats belonged to different animal species.~~

~~2.~~ 1. ~~The method as claimed in Claim 1~~ A method for analysis of triacylglycerols from animal fats comprising
providing a preparation of a sample comprising triacylglycerols;
applying the preparation of sample as determined by chromatography having a separation material;
separating and detecting the triacylglycerols content of said preparation of the sample;
collating the detection data into a data analysable form; and
analysing the data using chemometrics for identifying and determining animal fats belonged to different animal species;
wherein the sample is prepared using an accelerated solvent extraction.

~~3. The method as claimed in Claim 1 wherein the chromatography is a reverse phase high performance liquid chromatography with atmospheric pressure chemical ionization mass spectrometry (RPHPLC/MS-APCI).~~

~~4~~2. The method as claimed in Claim ~~3~~ 1 wherein a mobile phase gradient for separation of triacylglycerols used in ~~the~~ a reverse phase high performance liquid chromatography with atmospheric pressure chemical ionization mass spectrometry (RPHPLC/MS-APCI) is a combination of acetonitrile, dichloromethane and ammonium acetate in methanol.

~~5. The method as claimed in Claim 1 wherein the chemometrics is a principal component analysis (PCA) based on percentage composition of separated TAGs in the animal fats.~~

~~6~~ 3. The method as claimed in Claim 1 wherein the animal species are cow, pig, chicken and lamb in raw condition and cooked condition.

~~7~~ 4. A method for identifying animal species in raw and cooked conditions comprising
providing a preparation of a sample comprising triacylglycerols;
applying the preparation of sample as determined by chromatography having a separation material;
separating and detecting the triacylglycerols content of said preparation of the sample;
collating the detection data into a data analysable form; and
analysing the data using chemometrics for identifying and determining animal fats belonged to different animal species.

~~8~~ 5. The method as claimed in Claim ~~7~~4 wherein the sample is prepared using an accelerated solvent extraction.

~~9~~ 6. The method as claimed in Claim ~~7~~4 wherein the chromatography is a reverse phase high performance liquid chromatography with atmospheric pressure chemical ionization mass spectrometry (RPHPLC/MS-APCI).

~~10~~ 7. The method as claimed in Claim ~~9~~ 6 wherein a mobile phase gradient for separation of triacylglycerols used in the reverse phase high performance liquid chromatography with atmospheric pressure chemical ionization mass spectrometry (RPHPLC/MS-APCI) is a combination of acetonitrile, dichloromethane and ammonium acetate in methanol.

~~11~~8. ~~The method as claimed in Claim 7 wherein the chemometrics is a principal component analysis (PCA) based on percentage composition of separated TAGs in the animal fats.~~ The method as claimed in Claim 6 wherein the atmospheric pressure chemical ionization is operated in a positive ion mode.

~~12~~9. ~~The method as claimed in Claim 7 wherein the animal species are cow, pig, chicken and lamb.~~ The method as claimed in Claim 4 wherein the chemometrics is a principal component analysis (PCA).

10. The method as claimed in Claim ~~7~~ 4 wherein the animal species are cow, pig, chicken and lamb.

~~13~~11. The method as claimed in Claim ~~7~~ 4 wherein the raw and cooked conditions are raw meat and cooked meat.