

METHOD SPECIFICATION
Faculty of Biosciences, NMBU

Method name: Fatty acid composition (FAME)

BIOVIT no .: Msp1046

1. Analysis method / Principle / Main instrument

Fatty acids are synthesized into fatty acid methyl esters (FAME) and extracted directly from various fresh, organic materials (tissues, oils, feeds, etc.), without the need for an organic solvent extraction first. The method is simple and time efficient as water is included instead of eliminated in the sample preparation, and it is possible to carry out the FAME synthesis with up to 33% water in the sample material. The fatty acids are analyzed as fatty acid methyl esters (FAME). It is also possible to analyze dry samples.

Main instrument: Trace GC Ultra with auto injector (Thermo Scientific)

2. Reference and any modifications

O'fallon, J.V., 2007. A direct method for fatty acid methyl ester synthesis: Application to wet meat tissues, oils and feedstuff. *Journal of Animal Science*, 85: 1511-1521

Modification: The volumes have been scaled down

3. Requirements for grinding and storage

If the samples are not analyzed immediately, they must be stored in a freezer at -20 °C. If more analyzes are to be performed, the muscle sample must be divided to avoid that the sample must be thawed and refrozen for each analysis. No grinding requirements.

4. Contact persons

Lab manager: Hanne Kolsrud Hustoft

Responsible for analysis: Elin Follaug Johnsen

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