

AVAILABLE METHODS OF ANALYSIS FOR TOTAL FAT

Available method of analysis	Limitation	Application
Mixed solvent extraction*	Complete extraction from most foods. Extract often needs clean-up	Applicable to most foods and extract can be used for further fatty acid analysis
Continuous extraction (single solvent, also called Soxhlet)	Time consuming. Extracts cannot be used for fatty acid studies. Incomplete extraction from many foods (performed on dry analytical sample)	Applicable to low-moisture foods
Acid hydrolysis	Some hydrolysis of lipids. Extracts cannot be used for fatty acid studies	Applicable to all foods except dairy and high-sugar products
Acid hydrolysis and capillary GLC	High cost. This method is NLEA-compliant (NLEA = triglyceride equivalents of fatty acids; used for labelling in the U.S.)	Applicable to most foods
Alkaline hydrolysis		Validated for dairy foods only
NIR	High cost. Requires extensive calibration against other methods	Established only for cereals

NIR = near infrared reflectance, * = recommended method