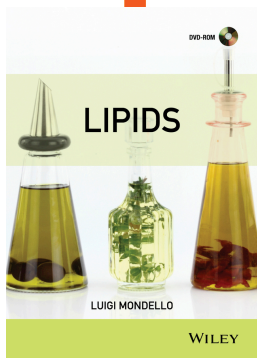


# Lipids Mass Spectral Database

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## Introduction

Lipids are one of the major constituents of food and they have an essential role in human diet, metabolism, physiological and pathological processes. Mass spectrometry is the most important technology for lipid analysis. The *Lipids Mass Spectral Database* gives a significant support for peak assignment in complex mixtures and can be a valid support in many research fields, such as food analysis, clinical and medical applications. This library contains 430 lipid-like molecules classified in 11 different classes and almost one LRI for each molecule.

## Lipid Classes

- Alkanes: 34
- Fatty alcohols: 24
- Fatty aldehydes: 48
- Fatty acid ethyl esters: 27
- Fatty acid methyl esters: 199
- Fatty acid trimethyl esters: 14
- Wax monoesters: 64
- Isoprenoids: 2
- Quinones and hydroquinones: 3
- Sterol trimethylsilyl esters: 12
- Sterols: 3

## Linear Retention Index Numbers

- EQUITY-1 (Alkanes): 135
- SUPELCOWAX-10 (FAMES): 249
- SUPERCOWAX (FAEEs): 249
- SLB-5ms (Alkanes): 430
- SLB-5ms (FAMES): 356

## Instrumentation Specifications

GC-qMS analyses of pure standard components, samples, n-alkanes (C7-C40; Supelco #49452-U), FAMES (Supelco, #49453-U) and FAEEs (Supelco, #49454-U) (C4-C24 even carbon) were carried out on a Shimadzu GCMS-QP2010 gas chromatograph mass spectrometer in EI mode. The columns used for GC-qMS analysis were SLB-5MS (5% diphenyl + 95% dimethyl polysiloxane) 30 m x 0.25 mm ID x 0.25  $\mu$ m film thickness (Supelco, #28471-U), Slupelcowax-10 30 m x 0.25 mm ID x 0.25  $\mu$ m film thickness (Supelco, #24079) and Equity-1 30 m x 0.25 mm ID x 0.25  $\mu$ m film thickness (Supelco, #28046-U) columns.

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