

Lipidomics Platform

The extracts were concentrated under nitrogen and reconstituted in 0.25mL of 10mM ammonium acetate dichloromethane:methanol (50:50). The extracts were transferred to inserts and placed in vials for infusion-MS analysis, performed on a Shimadzu LC with nano PEEK tubing and the Sciex Selexion-5500 QTRAP. The samples were analyzed via both positive and negative mode electrospray. The 5500 QTRAP scan was performed in MRM mode with the total of more than 1,100 MRMs. Individual lipid species were quantified by taking the peak area ratios of target compounds and their assigned internal standards, then multiplying by the concentration of internal standard added to the sample. Lipid species concentrations were background-subtracted using the concentrations detected in process blanks (water extracts) and run day normalized (when applicable). The resulting background-subtracted, run-day normalized lipid species concentrations were then used to calculate the lipid class and fatty acid total concentrations, as well as the mol% composition values for lipid species, lipid classes, and fatty acids.

Sample Preparation

Plasma and serum: Lipids were extracted from the biofluid in the presence of deuterated internal standards using an automated BUME extraction according to the method of Lofgren et al. (J Lipid Res 2012;53(8):1690-700).

Quality Control Sample Matrix	Median RSD
Complex Lipid Panel	5%

Metabolon[®]

TrueMass[®] Complex Lipid Panel

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Project Code: TULA-0101-21MLCLPTA+

Client: Tulane University School of Medicine

Organization:

Quantitative Units: uM

Worksheet	Sheet Name	Data Type
2	Lipid Class Concentrations	Quantitative
3	Lipid Class Compositions	Mole%
4	Species Concentrations	Quantitative
5	Species Compositions	Mole%
6	Fatty Acid Concentrations	Quantitative
7	Fatty Acid Compositions	Mole%
8	Methods	: Explanation of Metabolon's Complex Lipid Platform Sample Preparation and Data Acquisition Details and Dataset RSD

Abbreviation	Name	Group
CE	Cholesteryl ester	Neutral Lipids
MAG	Monoacylglycerol	
DAG	Diacylglycerol	
TAG	Triacylglycerol	
PC	Phosphatidylcholine	Phospholipids
PE	Phosphatidylethanolamine	
PI	Phosphatidylinositol	
LPC	Lysophosphatidylcholine	
LPE	Lysophosphatidylethanolamine	Sphingolipids
SM	Sphingomyelin	
CER	Ceramide	
HCER	Hexosylceramide	
LCER	Lactosylceramide	
DCER	Dihydroceramide	
Total	Total lipid in sample	