

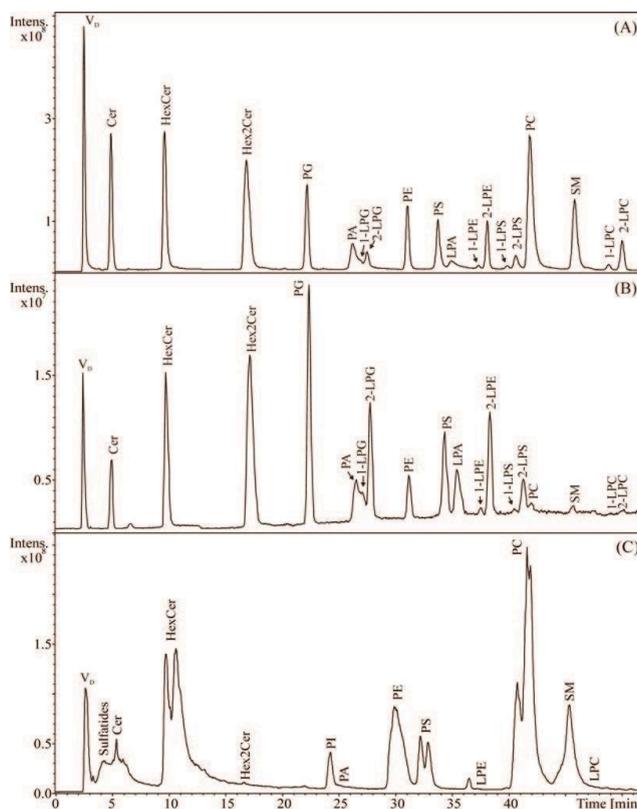
Phospholipids Analyzed with LCMS - AppNote

Separation of Different Classes in Porcine Brain Extract.

Phospholipids are an important group of biological compounds. Their separation and using LCMS can be difficult to achieve due to MS incompatibility of reagents typically required in the mobile phase.

In this work, phosphatidic acids, phosphatidylserines, and their lyso derivatives were separated and detected in an LCMS method.

Figures A and B demonstrate how the analytes can be detected in either positive or negative mode. Figure C shows the applicability of the technique to a real world sample, a porcine brain extract.



Peaks:

Various classes of phospholipids Shown Above

Figures:

A: Lipid standard mixture, positive mode

B: Lipid standard mixture, negative mode

C: Porcine brain extract, negative mode

Method Conditions

Column: Cogent Diamond Hydride™, 4 μm, 100 Å

Catalog No.: [70000-15P](#)

Dimensions: 4.6 x 15 mm

Mobile Phase:

- A: DI water / 40 mM ammonium formate, adjusted to pH 4 with formic acid
- B: Acetonitrile / Formic Acid

Gradient:

Time (minutes)	%B
0	99.7
60	75

Temperature: 40°C

Injection vol.: 3.0 µL

Flow rate: 1.0 mL / minute

Detection: Agilent 1290 ESI – POS/NEG – Esquire 3000 ion trap mass spectrometer.

Note: This application note was produced from data conducted by the following authors: E. Cífková, R. Hájek, M. Lísa, M. Holčápek, *Hydrophilic interaction liquid chromatography– mass spectrometry of (lyso)phosphatidic acids, (lyso)phosphatidylserines and other lipid classes*, *J. Chromatogr. A* (2016), in press.



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MicroSolv Technology Corporation

9158 Industrial Blvd. NE, Leland, NC 28451

Tel: (732) 380-8900

Fax: (910) 769-9435

Email: customers@mtc-usa.com

Website: www.mtc-usa.com