

## Dual Parallel Liquid Chromatography/Dual Mass Spectrometry (LC2/MS2) of Bovine Brain Total Lipid Extract

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### ABSTRACT

A commercially available bovine brain total lipid extract containing polar and non-polar lipid fractions has been separated in one analytical run using two high performance liquid chromatography (HPLC) systems in parallel, coupled to dual mass spectrometers, in parallel. The whole extract of bovine brain was separated on normal phase (LC1) and reversed-phase (LC2) columns simultaneously, with detection using an ion trap mass spectrometer (MS1) and a tandem mass spectrometer (MS2) coupled to the two HPLC systems, respectively. A single injection was loaded onto an amine column to perform separation of phospholipid components. Non-polar components, such as triacylglycerols, were unretained on this polar column. Using the diverter valve on the front of the ion trap mass spectrometer (MS1), the bolus of neutral lipids was

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