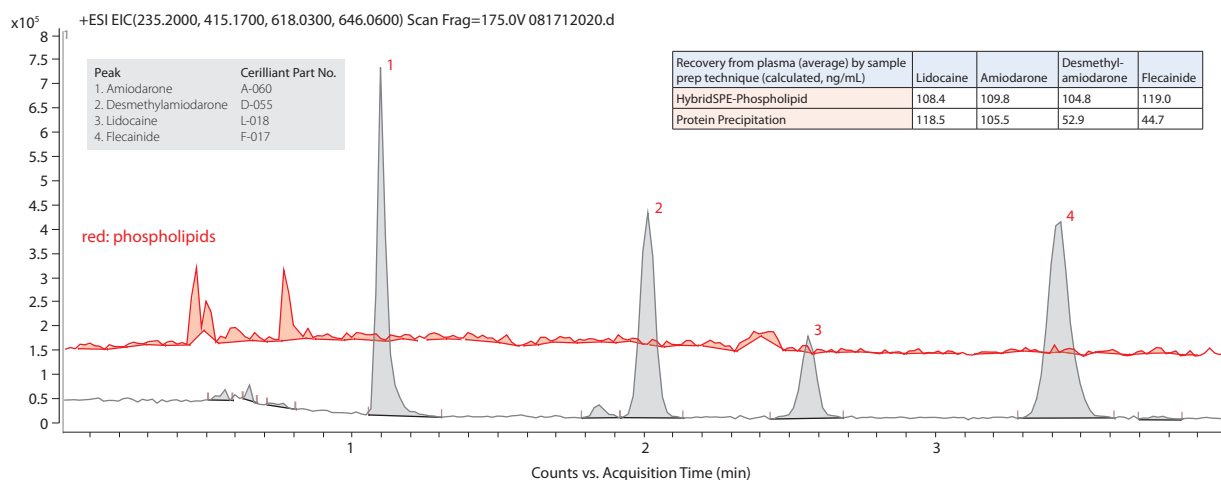


LC/MS (TOF) Analysis of Antiarrhythmic Drugs and Metabolites in Plasma on Ascentis® Express 2.7 µm HILIC after Sample Prep using HybridSPE®-Phospholipid

The basic characteristics of these compounds make them targets for HILIC chromatographic separation. HILIC mobile phases consist of a high composition of acetonitrile, which facilitates the direct analysis of precipitated plasma samples without the need for additional sample solvent exchange. In most cases, the high organic mobile phase also facilitates increased analyte response in ESI(+) MS detections. This application used HybridSPE-Phospholipid sample prep to remove phospholipids and precipitated proteins prior to LC/MS analysis on an Ascentis Express HILIC Fused-Core HPLC column. Fluka CHROMASOLV solvents provided clean, robust operation. Cerilliant CRMs provided reliable quantification. The resulting method was robust and sensitive.

market focus	.....	Clinical
sample preparation	.....	SPE (Solid Phase Extraction)
sample/matrix	.....	rat plasma stabilized with K ₂ EDTA was spiked directly from stock standard to a level of 400 ng/mL
SPE tube/cartridge	.....	HybridSPE-Phospholipid 96-Well Plate, 50 mg/2 mL (575656-U)
sample addition	.....	apply 100 µL of plasma to plate, followed by 300 µL of 1% formic acid acetonitrile. Agitate via vortex for 4 min
elution	.....	place on vacuum manifold and apply 10" Hg vacuum for 4 minutes. Collect filtrate and analyze directly.
column	.....	Ascentis Express HILIC, 10 cm x 2.1 mm I.D., 2.7 µm particles (53939-U)
mobile phase	.....	[A] 5 mM ammonium formate; [B] 5 mM ammonium formate in acetonitrile; (5:95, A:B, pH 7.0 with formic acid)
flow rate	.....	0.4 mL/min
pressure	.....	1305 psi (90 bar)
column temp.	.....	35 °C
detector	.....	ESI(+), full scan, m/z 100-1000
injection	.....	0.5 µL
sample	.....	plasma extract, analyte concentration of final sample work up is equivalent to 100 ng/mL
Application No.	.....	G005818



Related Products

accessory

IKA® VORTEX 3 (Aldrich Z654779)

IKA® VORTEX 3 (Aldrich Z654760)

analytical column

Ascentis® Express HILIC, 2.7 Micron HPLC Column (Supelco 53939-U)

mobile phase component

Acetonitrile (Fluka 14261)

Ammonium formate (Fluka 14266)

Formic acid (Fluka 14265)

Water (Fluka 14263)

SPE tube or plate

HybridSPE®-Phospholipid (Supelco 575656-U)

standard

Amiodaron hydrochloride solution (Cerilliant A-060)

N-Desethylamiodaron hydrochloride solution (Cerilliant D-055)

(±)-Flecainide solution (Cerilliant F-017)

Lidocaine solution (Cerilliant L-018)