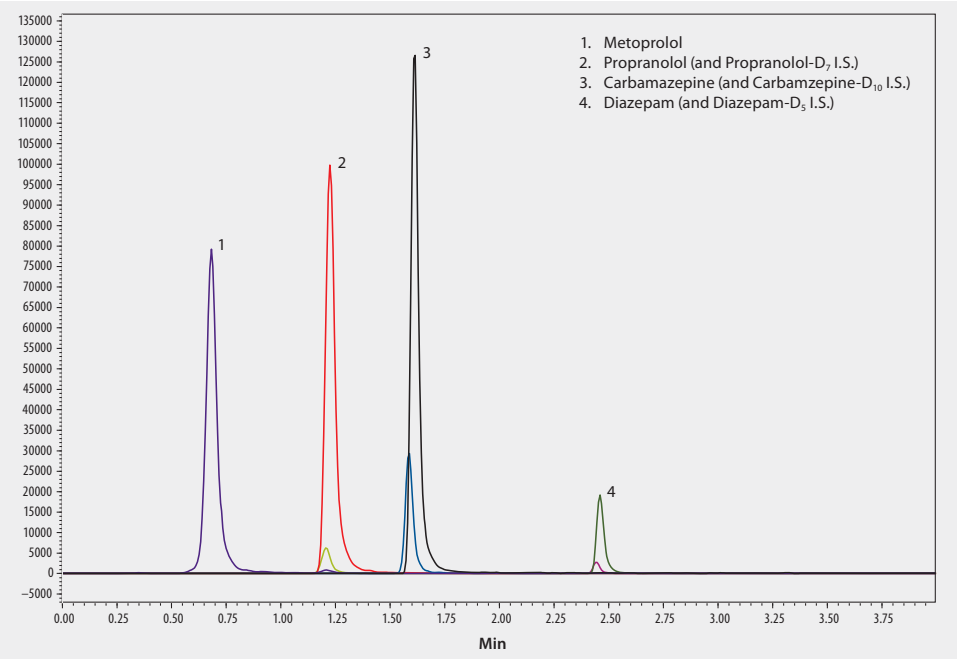
UHPLC/MS Analysis of Drugs in Whole Blood on Titan™ C18 after Biocompatible Solid Phase Microextraction (BioSPME) using SPME LC Tips with C18 Chemistry

Solid phase microextraction (SPME) is a viable technique for microsampling of biological matrices for subsequent HPLC, UHPLC, and LC/MS analysis. The fibers allow direct sampling without additional sample treatment. The concentration effect of the fibers provides increased analyte sensitivity compared to other techniques. Shown here is the separation of a set of drugs on a Titan C18 UHPLC column after using SPME LC tips to extract them from whole blood. Fluka CHROMASOLV solvents provided clean, robust operation. Cerilliant CRMs provided reliable quantification.

market focus	Clinical; Pharmaceutical (small molecule)
sample preparation	Solid Phase Microextraction
sample/matrix	whole blood spiked at 10 ng/mL
SPME fiber	SPME LC Tips (57234-U)
extraction	whole blood, 15 minutes
desorption process	methanol 30 minutes
column	Titan C18, 5 cm x 2.1 mm I.D., 1.9 µm particles (577122-U)
mobile phase	[A] 5 mM ammonium formate, pH 4; [B] 5 mM ammonium formate in acetonitrile:water (90:10, A:B)
gradient	30 to 70% B in 3 min
flow rate	0.3 mL/min
column temp.	35 °C
detector	MS, ESI+, MRM
sample	3 µL
Application No.	G006371



Related Products

analytical column
Titan™ C18 UHPLC Column, 1.9 micron (Supelco 577122-U)
mobile phase component
Acetonitrile (Fluka 14261)
Ammonium formate (Fluka 14266)
Water (Fluka 14263)
SPME fiber
SPME LC Tips (Supelco 57234-U)
standard
Carbamazepine solution (Cerilliant C-053)
Diazepam solution (Cerilliant D-907)
Metoprolol tartrate solution (Cerilliant M-123)
Propranolol hydrochloride solution (Cerilliant P-055)