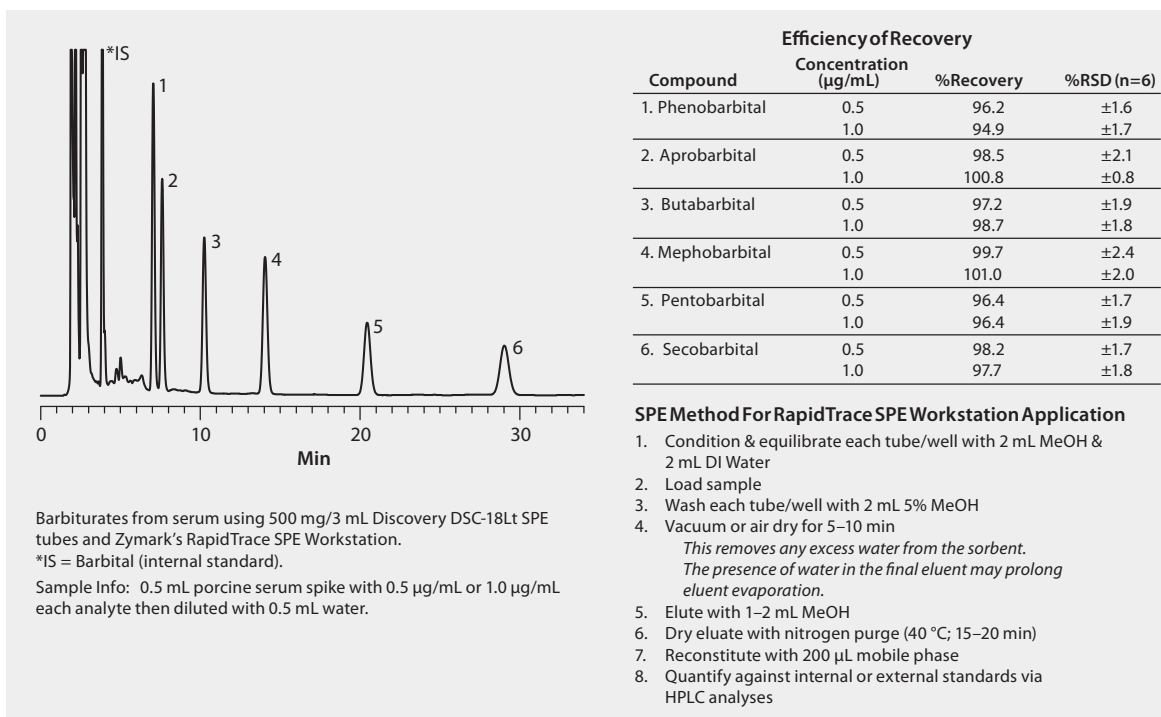


HPLC Analysis of Barbiturates in Serum on Discovery® C18 after SPE using Discovery® DSC-18Lt

Barbiturates are commonly abused and among the most widely tested compounds in clinical, forensic, or therapeutic drug monitoring applications. Shown here is the baseline separation of a set of barbiturates on a Discovery C18 HPLC column after extraction from spiked serum with Discovery DSC-18Lt SPE. Highest grade HPLC solvents were used to supply low background interference and low particulate contamination for robust, trouble-free operation. Cerilliant and Sigma-Aldrich reference standards provided reliable identification and quantification. A Zymark® RapidTrace® SPE Workstation was used in this study.

market focus	Forensics and Toxicology
sample preparation	SPE (Solid Phase Extraction)
sample/matrix	0.5 mL porcine serum spiked with 0.5 µg/mL or 1.0 µg/mL each analyte then diluted with 0.5 mL water
SPE tube/cartridge	Discovery DSC-18Lt, 500 mg/3 mL (52613-U)
condition	2 mL methanol; 2 mL DI water
sample addition	1 mL at 0.75 mL/min
washing	2 mL 5% methanol, then vacuum or air dry for 5-10 min
elution	1-2 mL methanol
eluate post-treatment	dry eluate with nitrogen purge (40 °C; 15-20 min), reconstitute in 20 µL mobile phase
column	Discovery C18, 15 cm × 4.6 mm, 5 µm preceded by a 2 cm C18 guard column and 0.5 µm frit filter (504955)
mobile phase	[A] methanol; [B] water (40:60, A:B)
flow rate	1 mL/min
column temp.	30 °C
detector	UV, 214 nm
injection	30 µL, diluted porcine serum extract
Application No.	G001056



Related Products

analytical column

Discovery® C18 HPLC Column ([Supelco 504955](#))

SPE tube or plate

Discovery® DSC-18Lt SPE Tube ([Supelco 52613-U](#))

standard

Aprobarbital ([Sigma A7023](#))

Barbiturate Mix-5 solution ([Cerilliant B-041](#))

Butabarbital solution ([Cerilliant B-024](#))

Mephobarbital ([Fluka 1386000](#))

Pentobarbital solution ([Cerilliant P-010](#))

Phenobarbital solution ([Cerilliant P-008](#))

Secobarbital solution ([Cerilliant S-002](#))