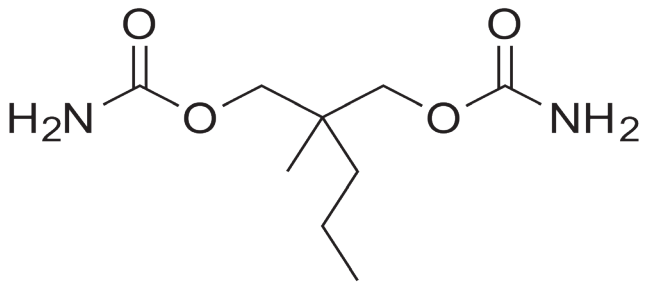
Determination of Carisoprodol and Meprobamate in Whole Blood and Urine Samples by LC/MS-MS



UCT Part Numbers

SLDAGDC21-5UM
SELECTRA® DA (10 mm x 2.1 mm) Guard Column

SLDA100ID21-5UM
Selectra® DA (100 mm x 2.1 mm, 5 µm) LC Column

CSDAU206
CLEAN SCREEN® DAU 200 mg / 6 mL

SPHPHO6001-5
0.1M Phosphate Buffer pH 6

Procedure:

1. Prepare Sample

a) To 1 mL of whole blood or urine add internal standard(s)* and 3 mL of 100 mM phosphate buffer (pH 6.0).
b) Mix/vortex.
c) Sample pH should be 6.0 ± 0.5.
d) Centrifuge for 10 minutes at 3000 rpm.
e) Discard pellet.

2. Condition Clean Screen® Extraction Column

a) 1 x 3 mL CH_3OH.
b) 1 x 3 mL D.I. H_2O.
c) 1 x 1 mL 100 mM phosphate buffer (pH 6.0).
Note: Aspirate at < 3 inches Hg to prevent sorbent drying.

3. Apply Sample

a) Load sample at 1 to 2 mL/minute

4. Wash Column

a) 1 x 3 mL DI H_2O.
b) 1 x 1 mL 100 mM acetic acid.
c) Dry column (5 minutes at > 10 inches Hg).
d) 1 x 2 mL hexane.

5. Elute Carisoprodol/Meprobamate

a) 1 x 3 mL hexane/ethyl acetate (50:50); Collect eluate at 1 to 2 mL / minute.

6. Dry Eluates

a) Evaporate to dryness under nitrogen < 40°C
b) Reconstitute in 100 µL of mobile phase

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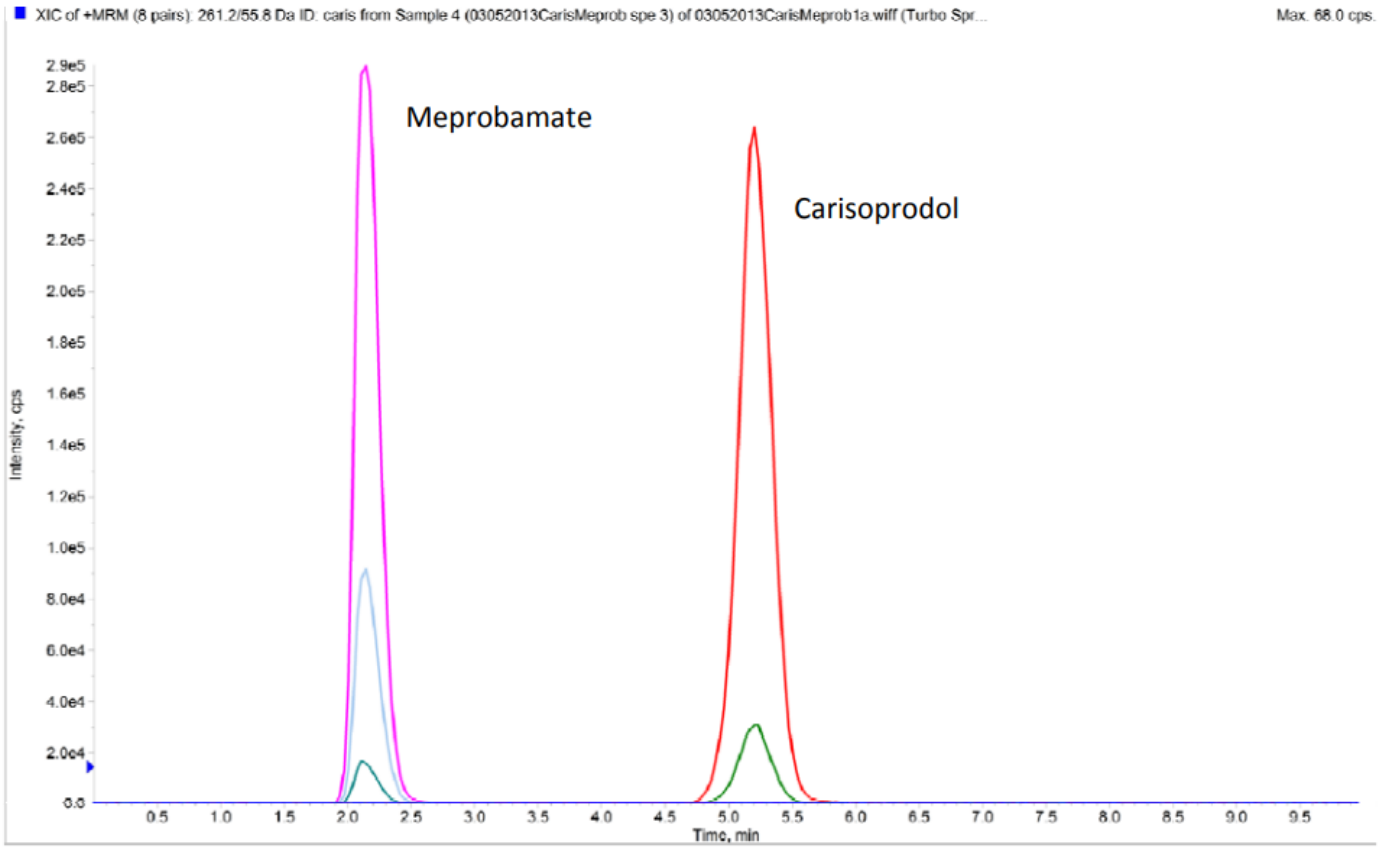
Instrument Conditions	
Column	100 x 2.1 mm (5 µm) SELECTRA ® DA (UCT, Inc.,)
Column Temperature	40 °C
Mobile phase	Isocratic 50:50 CH_3OH (0.1% Formic acid): DI H_2O (0.1% Formic acid)
Flowrate	0.5 mL/ minute
Detector	API 4000 MS/MS

Compound	Q1	Q3	Time /ms	DP /volts	EP /volts	CXP /volts	CE /volts
Carisprodol (1)	261.2	55.8	200	16	11	4	47
Carisoprodol (2)	261.2	176.2	200	16	11	4	13
†Carisoprodol-d7 (1)	268.2	183.2	200	31	11	4	15
Meprobamate (1)	219.2	158.2	200	26	8.5	4	13
Meprobamate (2)	219.2	54.7	200	26	8.5	4	25
†Meprobamate-d7 (1)	226.3	165.2	200	31	9.55	4	13

*Time = Dwell Time; *DP= Declustering Potential; *EP= Exit Potential; *CXP= Collision Cell Exit Potential;
* CE = Collision Energy
†Internal Standard

Chromatogram of: Meprobamate, Carisoprodol



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