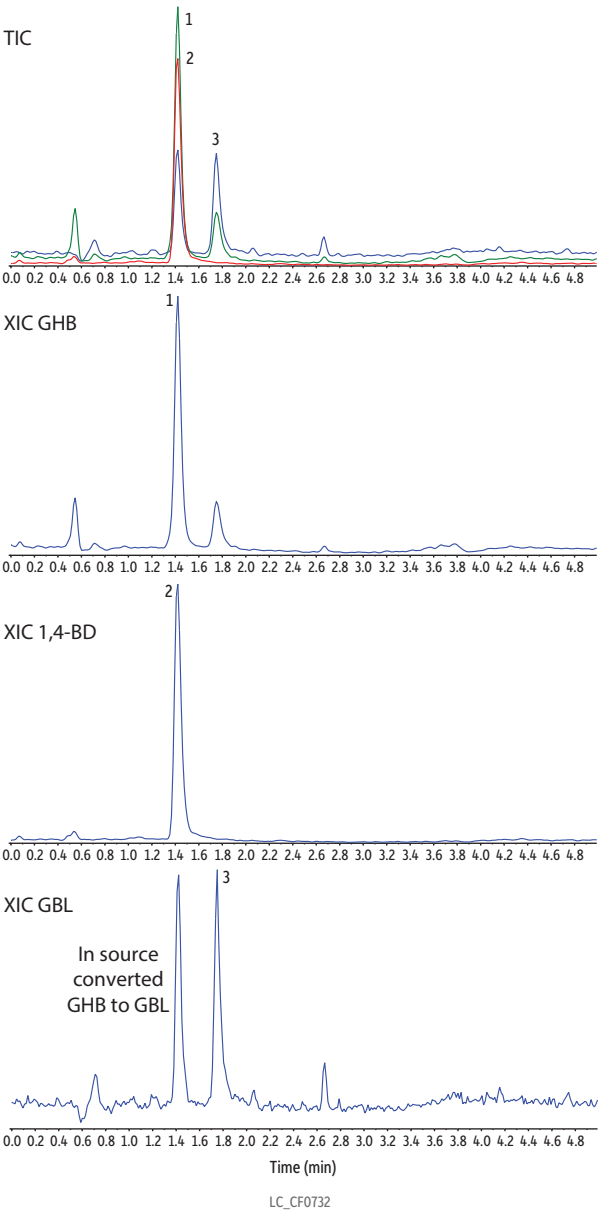
GHB and Related Compounds in Human Blood by LC-MS/MS

- Simultaneous analysis of GHB, GBL, and 1,4-BD in whole blood.
- Fast 5-minute cycle time.
- Separation of actual GBL and GBL from GHB in-source conversion.
- Sufficient sensitivity to measure endogenous GHB and identify exogenous drug ingestion.



LC_CF0732

Peaks	t_R (min)	Precursor Ion	Product Ion
1. γ-Hydroxybutyric acid (GHB)	1.42	105.2	87.0
2. 1,4-Butanediol (1,4-BD)	1.42	91.0	55.0
3. γ-Butyrolactone (GBL)	1.75	87.0	45.0

Column
Dimensions: 100 mm x 3.0 mm ID
Particle Size: 3 µm
Pore Size: 100 Å
Guard Column: Force C18 EXP guard column cartridge 5 mm, 3.0 mm ID, 3 µm (cat.# 963450253)
Temp.: 30 °C

Standard/Sample
Diluent: Water
Conc.: 500 ng/mL
Inj. Vol.: 10 µL

Mobile Phase
A: 0.5% Formic acid in water
B: 0.5% Formic acid in methanol

Time (min)	Flow (mL/min)	%A	%B
0.00	0.7	95	5
0.50	0.7	95	5
3.00	0.7	50	50
3.01	0.7	95	5
5.00	0.7	95	5

Detector MS/MS
Ion Mode: ESI+
Mode: MRM
Instrument HPLC
Sample Preparation 100 µL of whole human blood was fortified at 50 µg/mL with GHB, GBL, 1,4-BD, and GHB-D6 (IS) using 5 µL of 1 mg/mL solutions. The blood was precipitated with 380 µL methanol. The sample was then vortexed at 1000 rpm for 10 seconds and centrifuged at 3000 rpm for 10 minutes at 10 °C. 50 µL of the supernatant was removed and diluted to 1 mL with water. The sample was then vortexed and subjected to LC-MS/MS analysis. (Internal standard not shown on chromatogram.)