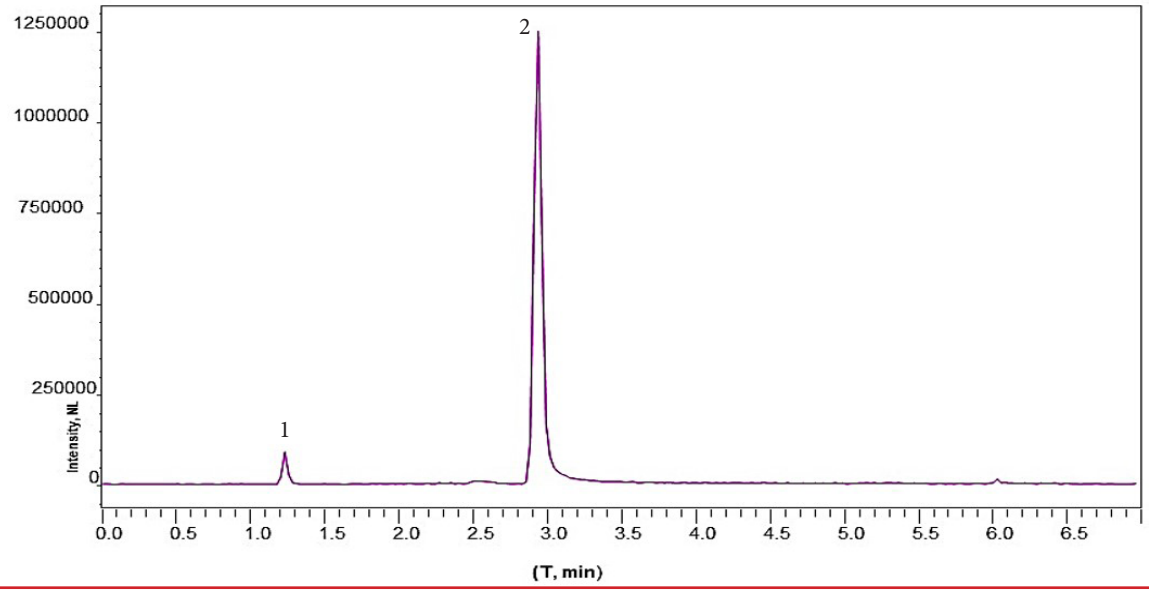
HALO®

CLINICAL / TOXICOLOGY

LC-MS Separation of EtG/EtS from urine on HALO® Penta-HILIC, 2 µm

Application Note: 206-TOX



Ethyl glucuronide (EtG) and ethyl sulfate (EtS) are metabolites of ethanol that are found in urine. The presence of these can be used to determine if an alcoholic beverage was ingested. Zero tolerance programs often use this test.

TEST CONDITIONS:

Column: HALO 90 Å Penta-HILIC, 2 µm
2.1 x 100mm
Part Number: 91812-605
Mobile Phase A: 5 mM ammonium formate/ 0.1% formic acid in 95:5 ACN/water
Mobile Phase B: 5mM ammonium formate/ 0.1% formic acid in 80:20 ACN/water

Gradient:	**Time**	**%B**
	0.00	0
	1.00	100
	5.00	100
	5.01	0
	7.00	END

Flow Rate: 0.4 mL/min
Initial Pressure: 325 bar
Temperature: 40 °C
Injection Volume: 2 µL
Sample prep: 5ng/mL EtG/EtS in 20 uL of synthetic urine. 10 fold dilution with mobile phase A.

PEAK IDENTITIES:

1. EtS (MH-=125.120 g/mol)
2. EtG (MH-=221.193 g/mol)

MS CONDITIONS:

LCMS system: Shimadzu LCMS-2020
Detection: -ESI MS
Spray voltage: 4.50 kV
Drying line temp: 300 °C
Heat Block: 450 °C