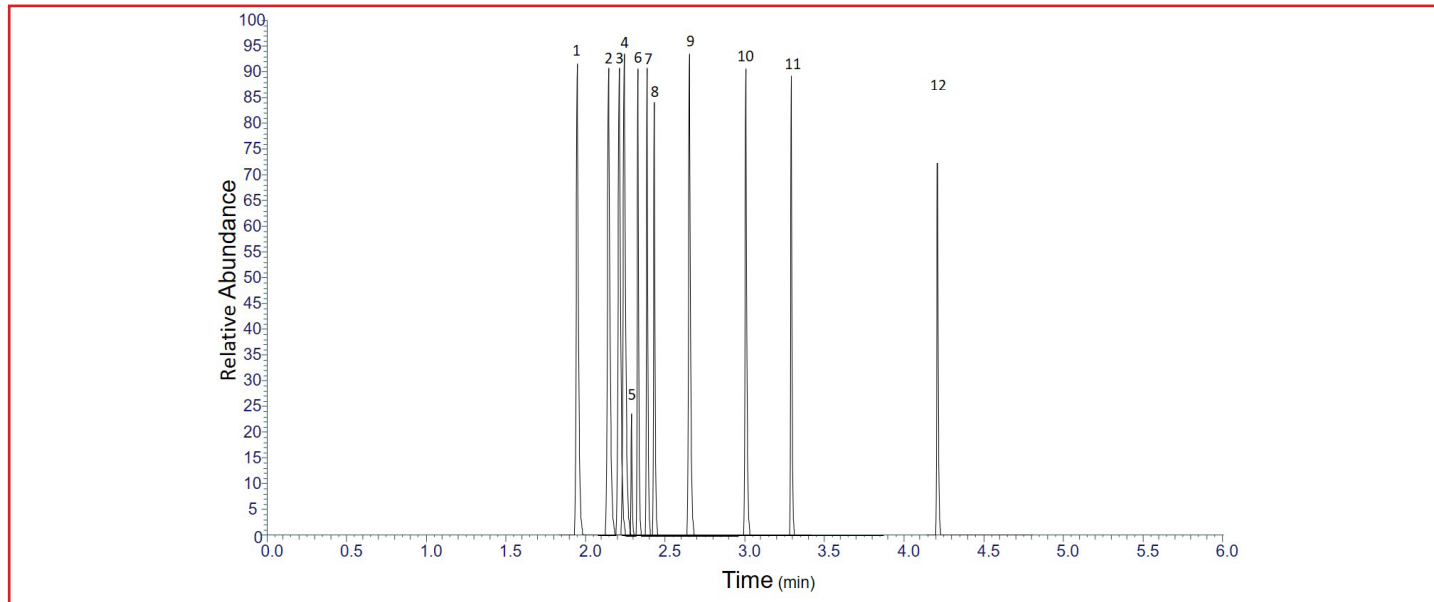




LC-MS Separation SAMHSA 5 Panel on HALO® Biphenyl 2 µm

Application Note: 205-TOX



The 2 µm HALO® Biphenyl is an ideal choice for high throughput analysis of drug panels, in which isobaric species separation is needed. Note the resolution between methamphetamine and phentermine, (peaks 3 and 5, respectively). The SAMHSA 5 panel consists of amphetamines, cocaine, marijuana, opiates, and phencyclidine (PCP).

TEST CONDITIONS:

Column: HALO 90 Å Biphenyl, 2 µm,
2.1 x 100
Part Number: 91812-611
Mobile Phase A: Water/0.1% Formic acid
Mobile Phase B: Methanol/0.1% Formic acid
Gradient:

| Time | %B |
|------|-----|
| 0.0 | 5 |
| 4.00 | 98 |
| 5.00 | 98 |
| 5.01 | 5 |
| 7.00 | END |

Flow Rate: 0.4 mL/min
Initial Pressure: 325 bar
Temperature: 40 °C
Injection Volume: 2 µL
Sample Solvent: 95/5 MeOH/Water
LC System: Shimadzu Nexera X2

MS CONDITIONS:

Detection: +ESI MS
Mass Spectrometer: Thermo Exactive HF
Sheath gas flow rate: 50 (arbitrary units)
Aux gas flow rate: 13 (arbitrary units)
Sweep gas flow rate: 0 (arbitrary units)
Spray voltage: 3.50 kV
Cap temp: 263 °C
S-lens RF level: 70 V
Aux gas heater temperature: 425 °C

PEAK IDENTITIES:

1. Morphine (MH⁺= 286.341 g/mol)
2. Amphetamine (MH⁺= 136.206 g/mol)
3. Methamphetamine (MH⁺= 150.237 g/mol)
4. MDA (MH⁺= 180.221 g/mol)
5. Phentermine (MH⁺= 150.233 g/mol)
6. Codeine (MH⁺= 300.364 g/mol)
7. 6-MAM (MH⁺= 328.380 g/mol)
8. MDMA (MH⁺= 194.246 g/mol)
9. MDEA (MH⁺= 208.271 g/mol)
10. Benzoyllecgonine (MH⁺= 290.331 g/mol)
11. PCP (MH⁺= 244.387 g/mol)
12. THC-COOH (MH⁺= 345.415 g/mol)

