

Benzodiazepines on Allure® PFP Propyl (LC/MS/MS)

Analyze 27 benzodiazepines in less than 10 minutes!

Sample: benzodiazepines
 Inj.: 20µL
 Conc.: NA
 Solvent: NA

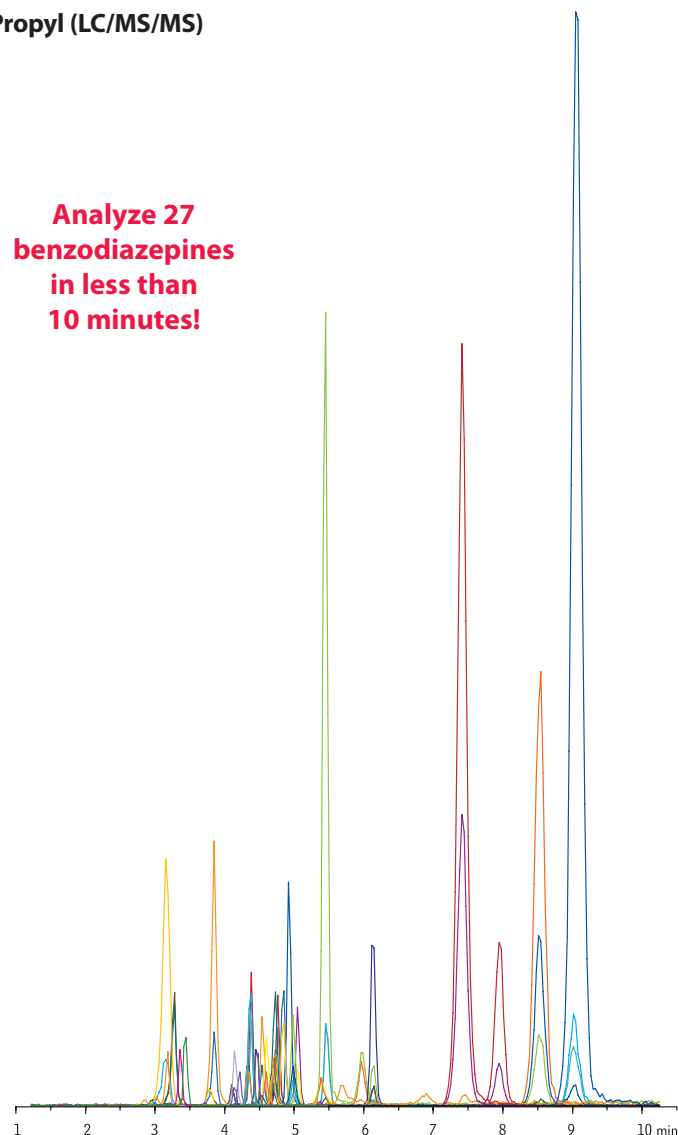
Column: Allure® PFP Propyl
 Cat.#: 9169552
 Dimensions: 50mm x 2.1mm
 Particle size: 5µm
 Pore size: 60Å

Conditions:
 Instrument: Shimadzu Prominence HPLC
 Mobile phase: A: 0.1% formic acid and 1mM ammonium formate in water
 B: 0.1% formic acid and 1mM ammonium formate in acetonitrile

| Time (min.) | Flow (µL/min.) | %B |
|-------------|----------------|----|
| 0.0 | 500 | 10 |
| 10.00 | 1000 | 90 |
| 15.00 | 1000 | 90 |
| 15.50 | 500 | 10 |
| 17.50 | 500 | 10 |

Flow: see gradient table
 Temp.: 40°C
 Det.: Applied Biosystems/MDS Sciex API 3200™ MS/MS system
 Ion Source: Electrospray, positive
 IonSpray Voltage: NA
 Gas 1: NA
 Gas 2: NA
 Source Temp.: 500°C

Data courtesy of: Applied Biosystems MDS Sciex



LC_PH0463

MRM Transitions, retention times, and LOQ values.

| Compound Name | Retention Time (min.) | Precursor Ion (amu) | MRM 1 (amu) | MRM 2 (amu) | DP | CE (MRM 1) | CE (MRM 2) | LOQ (ng/mL) |
|--------------------------|-----------------------|---------------------|-------------|-------------|----|------------|------------|-------------|
| 7-aminonitrazepam | 3.2 | 252.1 | 121.1 | 94.0 | 51 | 35 | 53 | 1.0 |
| 7-aminoclonazepam | 3.3 | 286.1 | 121.0 | 222.2 | 46 | 41 | 35 | 0.5 |
| 7-aminoflunitrazepam | 3.8 | 284.1 | 135.1 | 226.0 | 51 | 39 | 49 | 0.5 |
| Bromazepam | 3.8 | 316.0/318.0 | 182.1 | 182.1 | 51 | 45 | 45 | 5.0 |
| α-hydroxyalprazolam | 4.1 | 325.1 | 297.2 | 204.9 | 51 | 31 | 59 | 2.0 |
| α-hydroxytriazolam | 4.1 | 359.0 | 239.2 | 176.0 | 61 | 63 | 37 | 5.0 |
| Oxazepam | 4.2 | 287.0 | 241.1 | 268.9 | 41 | 27 | 19 | 10.0 |
| Lorazepam | 4.3 | 321.0/323.1 | 275.0 | 277.0 | 41 | 31 | 27 | 5.0 |
| Estazolam | 4.4 | 295.0 | 205.0 | 267.1 | 51 | 53 | 31 | 2.0 |
| Zaleplon | 4.4 | 306.2 | 236.3 | 264.2 | 56 | 35 | 27 | 0.5 |
| 2-hydroxyethylflurazepam | 4.5 | 333.1 | 211.2 | 109.0 | 56 | 51 | 41 | 1.0 |
| Desmethyflunitrazepam | 4.5 | 300.1 | 254.2 | 198.2 | 56 | 35 | 51 | 2.0 |
| Nitrazepam | 4.6 | 282.0 | 236.1 | 180.2 | 71 | 35 | 51 | 2.0 |
| Clonazepam | 4.7 | 316.0 | 270.2 | 214.0 | 56 | 41 | 51 | 2.0 |
| Desalkylflurazepam | 4.7 | 289.1 | 140.1 | 226.1 | 71 | 41 | 39 | 2.0 |
| Temazepam | 4.7 | 301.1/303.1 | 255.1 | 257.2 | 35 | 30 | 30 | 5.0 |
| Triazolam | 4.7 | 343.0 | 238.9 | 314.9 | 61 | 53 | 37 | 1.0 |
| Alprazolam | 4.8 | 309.1 | 205.1 | 281.1 | 56 | 53 | 35 | 1.0 |
| Lormetazepam | 4.8 | 335.0/337.1 | 289.0 | 291.1 | 41 | 29 | 29 | 2.0 |
| Clobazam | 4.9 | 301.1 | 259.1 | 224.3 | 46 | 29 | 47 | 1.0 |
| Flunitrazepam | 5.0 | 314.0 | 268.1 | 239.1 | 56 | 35 | 49 | 1.0 |
| Nordiazepam | 5.0 | 271.1 | 140.2 | 164.9 | 46 | 37 | 35 | 2.0 |
| Zolpiclone | 5.4 | 389.1 | 244.8 | 217.0 | 16 | 25 | 41 | 1.0 |
| D5-Diazepam | 5.4 | 290.1 | 198.2 | - | 55 | 41 | - | - |
| Diazepam | 5.5 | 285.0 | 193.2 | 154.1 | 55 | 41 | 37 | 1.0 |
| Chlordiazepoxide | 6.0 | 300.1 | 227.1 | 283.2 | 36 | 31 | 21 | 5.0 |
| Prazepam | 6.1 | 325.1 | 271.1 | 140.0 | 81 | 31 | 53 | 2.0 |
| Zolpidem | 7.4 | 308.1 | 235.1 | 236.1 | 56 | 39 | 35 | 0.2 |
| Midazolam | 7.9 | 326.1 | 291.3 | 222.0 | 56 | 33 | 63 | 0.5 |
| Flurazepam | 8.5 | 388.2 | 315.1 | 317.1 | 36 | 27 | 27 | 0.1 |
| Medazepam | 9.0 | 271.0 | 91.1 | 207.3 | 46 | 41 | 39 | 2.0 |
| D3-Doxepine | 9.1 | 283.0 | 107.1 | - | 41 | 35 | - | - |

Bar color indicates shared precursor ions. Note compounds with shared precursor ions are baseline resolved on the Allure® PFP Propyl column, as shown by retention time comparison.
 Data courtesy of Applied Biosystems MDS Sciex.

