

## Morphine and Metabolites on Luna 5um HILIC

**Column:** Luna® 5 µm HILIC 200 Å, LC Column 100 x 2 mm, Ea

**Dimensions:** 100 x 2 mm ID

**Order No:** 00D-4450-B0

**Elution Type:** Gradient

**Eluent A:** 90/10 Acetonitrile/100mM Ammonium Formate pH 3.2

**Eluent B:** 50/50 Acetonitrile/20mM Ammonium Formate pH 3.2

| Gradient Profile: | Step No. | Time (min) | Pct A | Pct B |
|-------------------|----------|------------|-------|-------|
|                   | 1        | 0          | 100   | 0     |
|                   | 2        | 1          | 100   | 0     |
|                   | 3        | 3          | 0     | 100   |
|                   | 4        | 4.5        | 0     | 100   |
|                   | 5        | 4.51       | 100   | 0     |
|                   | 6        | 9.51       | 100   | 0     |

**Flow Rate:** 0.4 mL/min

**Col. Temp.:** ambient

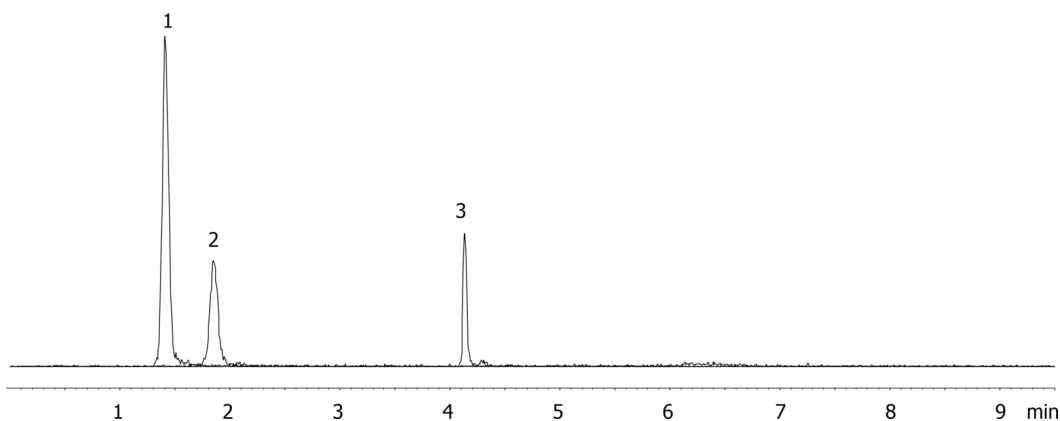
**Detection:** Mass Spectrometer (MS) @ amu (ambient)

**Detector Info:** ABI 3000 Triple Quad MS

**Analyst Note:** The pH of the aqueous buffer is specified. The pH in mixed organic was not measured.  
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Products used in this application:



### ANALYTES:

- 1 Morphine
- 2 Normorphine
- 3 Morphine-3-beta-D-glucuronide

