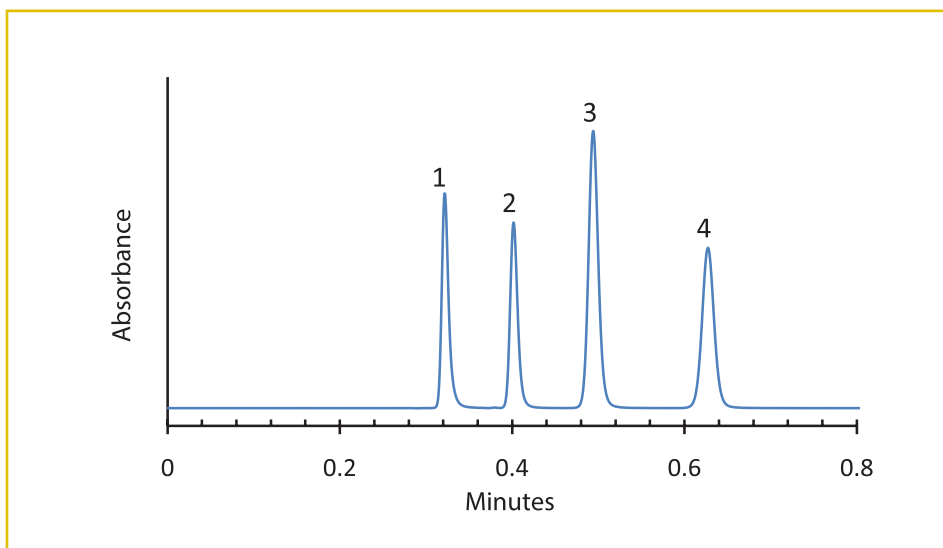




## Separation of Xanthines on HALO® RP-Amide Phase

Application Note 48-XA



### PEAK IDENTITIES:

1. Hypoxanthine
2. Theobromine
3. Theophylline
4. Caffeine

Xanthines are stimulants that can be found in coffee, chocolate, and other foods and are often used in medications. These materials can be rapidly analyzed on a HALO® RP-Amide column in less one minute.

### TEST CONDITIONS:

**Column:** HALO 90 Å RP-Amide, 2.7 µm,  
4.6 x 50 mm

**Part Number:** 92814-407

**Mobile Phase:** 85/15 - A/B

A: 0.03 M phosphate buffer, pH 3.0,  
in water

B: Acetonitrile

**Flow Rate:** 1.5 mL/min

**Pressure:** 150 bar

**Temperature:** 35 °C

**Detection:** UV 254 nm, VWD

**Injection Volume:** 0.5 µL

**Sample Solvent:** 30% methanol in water

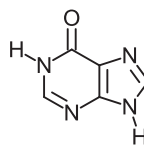
**Response Time:** 0.02 sec

**Flow Cell:** 2.5 µL semi-micro

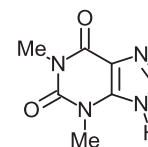
**LC System:** Shimadzu Prominence UFLC XR

**Extra Column Volume:** ~14 µL

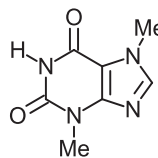
### STRUCTURES:



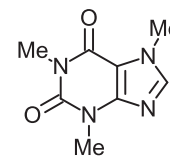
Hypoxanthine



Theophylline



Theobromine



Caffeine

