

# ANALYSIS OF DNPH DERIVATIVES USING XBRIDGE™ PHENYL

## TEST CONDITIONS:

Columns: XBridge™ Phenyl, 4.6 x 100 mm, 3.5 μm  
 Part Number 186003334

Mobile Phase A: H<sub>2</sub>O  
 Mobile Phase B: ACN  
 Mobile Phase C: 0.2% HCOOH in H<sub>2</sub>O

Flow Rate: 1.2 mL/min

Gradient:

Time (min)	Profile		
	%A	%B	%C
0.0	40	50	10
2.67	40	50	10
6.67	0	90	10
7.33	40	50	10
11.00	40	50	10

Injection Volume: 10 μL

Sample: Acetaldehyde-DNPH (10 μg/mL),  
 Acetone-DNPH (10 μg/mL),  
 Cyclohexanone-DNPH (10 μg/mL),  
 Formaldehyde-DNPH (10 μg/mL),  
 Crotonaldehyde-DNPH (10 μg/mL) in H<sub>2</sub>O/ACN (60/40)

Column Temperature: 30 °C

Sample Temperature: 15 °C

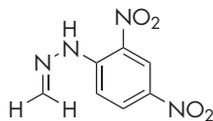
Detection: UV @ 254 nm

Sampling Rate: 5 points/sec

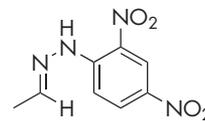
Filter Response: 0.2

Instrument: Alliance® 2695 with 2996 PDA

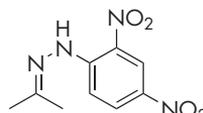
## COMPOUNDS:



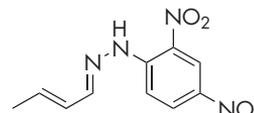
1. Formaldehyde-DNPH



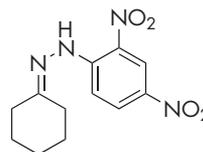
2. Acetaldehyde-DNPH



3. Acetone-DNPH

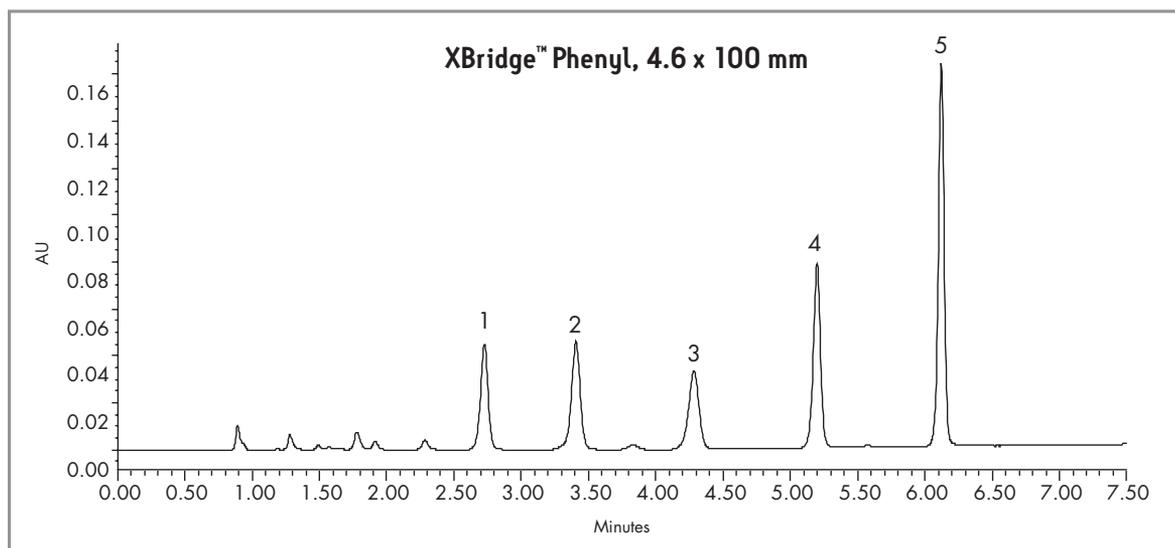


4. Crotonaldehyde-DNPH



5. Cyclohexanone-DNPH

Regulatory agencies around the world are interested in measuring formaldehyde and other aldehydes in the air. Many public health groups are interested in implications of these aldehydes causing respiratory irritation and potentially carcinogenic effects from prolonged exposure. Producers of products that can contribute aldehydes emissions to air and indoor pollutants are manufacturers of materials building and wood products, fabric and textiles, and automotive companies.



### Compounds:

1. Formaldehyde-DNPH
2. Acetaldehyde-DNPH
3. Acetone-DNPH
4. Crotonaldehyde-DNPH
5. Cyclohexanone-DNPH

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June 2007 WA60186 MC-PDF

**Waters Corporation**  
34 Maple Street  
Milford, MA 01757 U.S.A.  
T: 1 508 478 2000  
F: 1 508 872 1990  
[www.waters.com](http://www.waters.com)