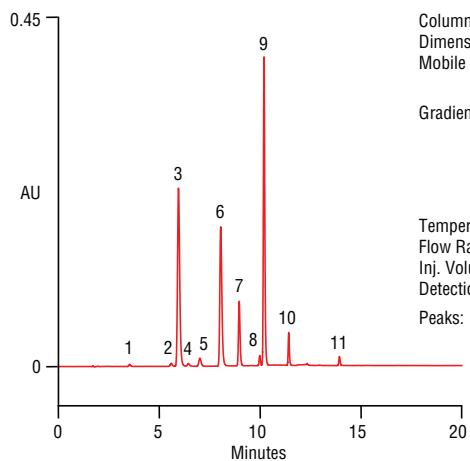


## Phenol Standards by EPA Method 604 on a Thermo Scientific™ Acclaim™ PolarAdvantage (PA) Column



Column: Thermo Scientific™ Acclaim™ PA, 3  $\mu$ m  
Dimensions: 4.6  $\times$  150 mm  
Mobile Phase: (A) 2.5 mM MSA in H<sub>2</sub>O  
(B) Methanol

Gradient: 

Time (min)	% B
0	60
4.5	60
10.5	95
20	95

Temperature: 25 °C  
Flow Rate: 1 mL/min  
Inj. Volume: 5  $\mu$ L  
Detection: UV, 285 nm

Peaks: (50–250  $\mu$ g/mL each)  
1. Phenol  
2. 2-Chlorophenol  
3. 4-Nitrophenol  
4. 2-Nitrophenol  
5. 2,4-Dimethylphenol  
6. 4-Chloro-3-methylphenol  
7. 2,4-Dichlorophenol  
8. 2,4-Dinitrophenol  
9. 2-Methyl-4,6-dichlorophenol  
10. 2,4,6-Trichlorophenol  
11. Pentachlorophenol

Note: The lower pH provided by methanesulfonic acid (compared to acetic acid in the standard method) gives optimum separation for the Acclaim PA column.

20106

The Acclaim PA column provides good separation for all 11 phenolic compounds specified in EPA Method 604. Because the selectivity of the Acclaim PA column is somewhat different than C18, the optimum mobile phase conditions are slightly different than in the standard method.