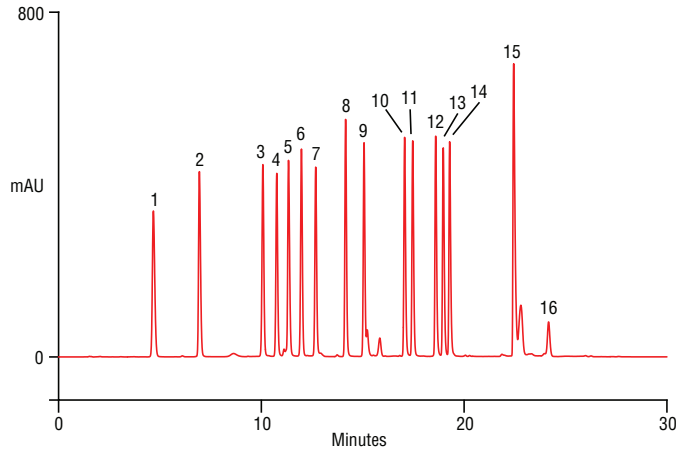


## Amino Acids by Automated OPA Derivatization on a Thermo Scientific™ Acclaim™ PolarAdvantage (PA) Column



Column:	Thermo Scientific™ Acclaim™ PolarAdvantage, 5 µm 4.6 × 150 mm	Peaks:	1. Aspartic acid 2. Glutamic acid 3. Serine 4. Histidine 5. Arginine 6. Glycine 7. Threonine 8. Alanine 9. Tyrosine 10. Valine 11. Methionine 12. Isoleucine 13. Phenylalanine 14. Leucine 15. Lysine 16. Artifact
Pump:	Thermo Scientific™ Dionex™ UltiMate™ 3000 LPG-3400		
Mobile Phases:	(A) Acetonitrile (B) Methanol (C) 1.0 mL/L Et <sub>2</sub> NH + 3.0 g/L KH <sub>2</sub> PO <sub>4</sub> in water, pH 6.75		
Gradient:	Time -9 0 2 20 32 %B 10 10 10 0 0 %C 90 90 90 60 35		
Flow:	1.2 mL/min		
Temperature:	TCC-3200 at 30 °C		
Detector:	VWD-3400 UV at 340 nm; RF-2000 ex 340, em 445		
Reagents:	(A) 2 mg/mL o-phthalaldehyde in pH 10.4 borate buffer (B) 10 mg/ml N,N-dimethylamino- ethanethiol HCl in water	Standards:	2 mM in water
Injection:	WPS-3000 SL sampler with automated derivatization program: 40 µL reagent A + 30 µL reagent B + 10 µL sample; reaction time 3 min.; inject 30 µL		

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While there are many methods used for analysis of amino acids, the OPA/thiol reaction remains a popular means of selectively tagging primary amines. The derivative provides low detection limits using either UV or fluorescence detection. Automated sample derivatization in the autosampler makes this method convenient and repeatable. The separation on the Acclaim PolarAdvantage (PA) column gives baseline resolution for 15 common amino acids.