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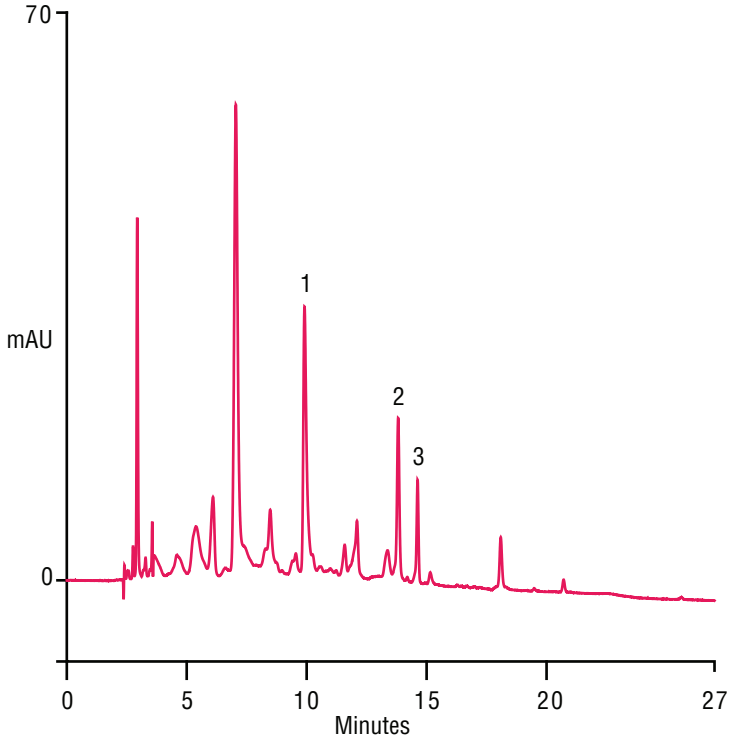
Separation of Resveratrol in Red Wine on a Thermo Scientific™ Acclaim™ RSLC PolarAdvantage II (PA2) Column

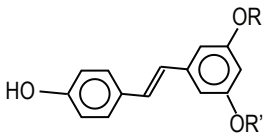


Column:	Thermo Scientific™ Acclaim™ RSLC PA2, 3 µm
Dimensions:	3.0 × 250 mm
LC System:	Thermo Scientific™ Dionex™ UltiMate™ 3000 RSLC
Mobile Phases:	A. Methanol B. 0.02% H_3PO_4 (v/v)

Gradient Time (min):	–10	0	2	20	27
%A	45	45	45	95	95
%B	55	55	55	5	5

Flow Rate:	0.60 mL/min
Temperature:	25 °C
Injection:	2 µL
Detection:	UV at 310 nm Spectral confirmation 200–450 nm

Peaks:	R	R'
1. Polydatin	H	glucose
2. Resveratrol	H	H
3. Pterostilbene	CH_3	CH_3



Sample Preparation:
1. 5.0 mL Zinfandel red wine
2. Fortify to 2 µg/mL resveratrol
3. Extract with 2 × 1 mL ethyl acetate
4. Weight of combined extracts approx. 1.5 g

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The composition of wine is highly complex. The superior peak capacity of the Acclaim 3 µm 3.0 × 250 mm column resolves resveratrol and related compounds against a difficult background of flavonoids. The Acclaim PA2 column surface chemistry has a unique selectivity for polyphenolic compounds and gives excellent service life under acidic conditions. In this example, methanol provides better separation than acetonitrile, but generates much higher operating pressures. The high pressure rating (800 bar) for the separation column and LC system provide excellent solutions to applications requiring high plate counts (>30,000 plates/column) and high operating pressure (>400 bar).

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