

Separation of Simvastatin by HPLC

Simvastatin has an action that specifically inhibits hydroxy-3-methylglutaryl-CoA (HMG-CoA) reductase in the cholesterol synthesizing system in the body, and is used as a drug to treat hyperlipidemia.

Separation of a standard sample by HPLC is shown here. Also presented is an example of highly sensitive analysis produced by modifying the eluent composition and using MS detectors.

Figure 1. Chromatogram by HPLC conditions

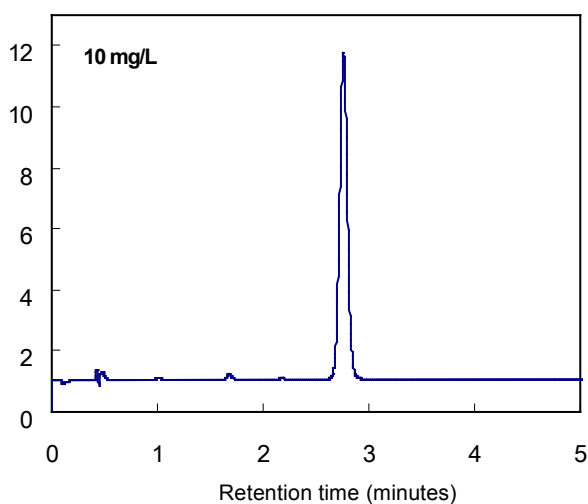


Table 1. Conditions

Column:	TSKgel ODS-100V, 3µm, 4.6mm ID x 5cm
Mobile phase:	0.1% H ₃ PO ₄ acetonitrile = 30/70
Flow rate:	1.0mL/min
Temperature:	25°C
Injection vol.:	5µL
Detection:	UV@238nm
Instrument:	Agilent 1200SL series

Figure 2. Chromatogram by MS Conditions

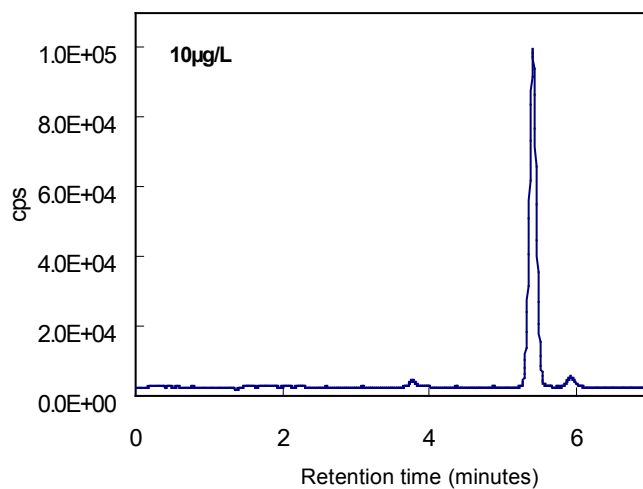


Table 2. Conditions

Column:	TSKgel ODS-100V, 3µm, 2.0mm ID x 15cm
Eluent:	0.1% formic acid / acetonitrile = 20/80
Gradient:	0min (10%B) → 10min (60%B) → 15min (60%B)
Flow rate:	0.2mL/min
Temperature:	40°C
Injection vol.:	2µL
Instrument:	Agilent 1200SL series QTRAP® (AB SCIEX)
Ion Source:	ESI (Positive) m/z = 419.5 (M+H)
