YMC SEPARATION TECHNOLOGY

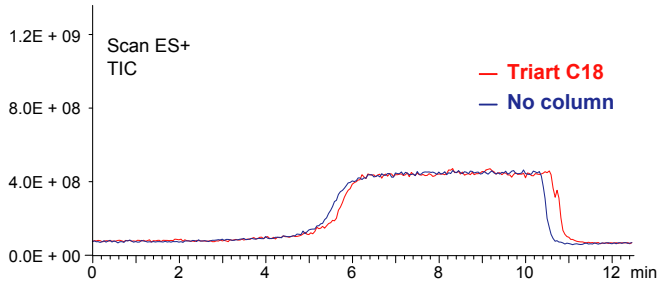
HPLC DATA SHEET

YMC-Triart C18 : Highly sensitive LC/MS applications

S100215AE

Reduced column bleed

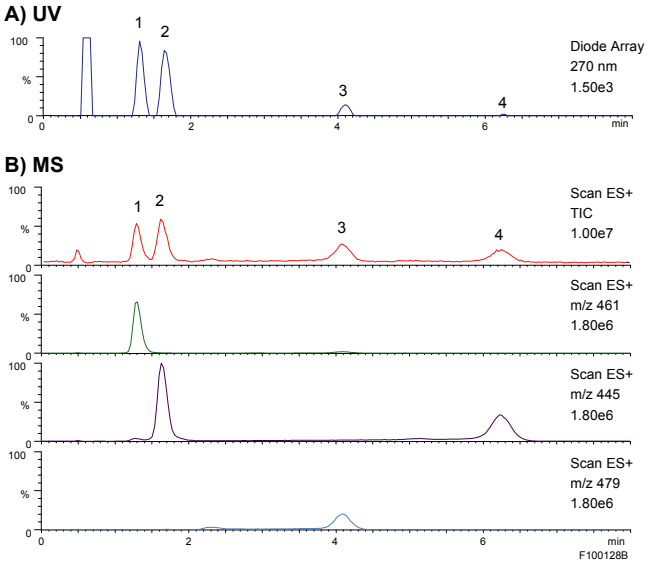
Bleed test by LC/MS



Bleeding of stationary phase can often contribute to high background signals when employing MS and other hyphenated detection techniques. In the example cited below, use of a 2 x 50 mm YMC-Triart C18 column shows no contribution to the signal observed by the MS positive total ion current (TIC) trace. Such performance allows for low limits of detection (high S/N ratio) for MS and other detection techniques. The inherent hybrid particle strength is also superior to conventional silica materials for detection techniques that are sensitive to particle degradation.

Column	: YMC-Triart C18 (5 μm, 12 nm) 50 X 2.0 mmI.D.
Eluent	: A) water/HCOOH (100/0.1) B) acetonitrile/HCOOH (100/0.1) 5%B (0-1 min), 5-100%B (1-5 min), 100%B (5-10 min), 100-5%B (10-10.1 min), 5%B (10.1-12.5 min)
Flow rate	: 0.4 mL/min
Temperature	: 40 ℃
Detection	: ESI positive, TIC (m/z 50-1000)

Application : Tetracycline antibiotics



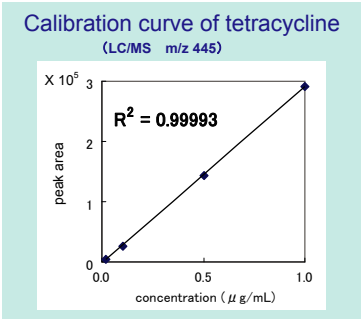
Triart C18 provides excellent peak shapes for coordination compounds such as tetracycline antibiotics and it is sutable for highly sensitive and quantitative analysis.

1 Oxytetracycline (MW 460.4)

2 Tetracycline (MW 444.4)

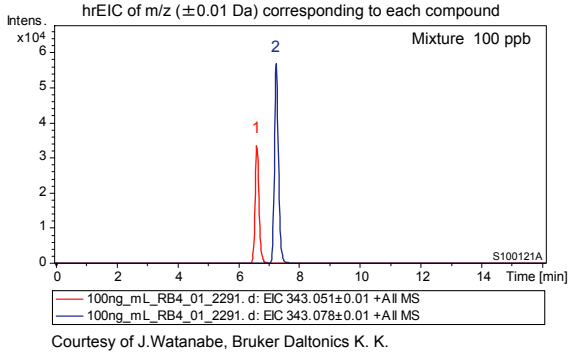
3 Chlortetracycline (MW 478.8)

4 Doxycycline (MW 444.4)



Column	: YMC-Triart C18 (5 μm, 12 nm) 50 X 2.0 mmI.D.
Eluent	: acetonitrile/water/formic acid (15/85/0.1)
Flow rate	: 0.4 mL/min
Temperature	: 40℃
Detection	: A) UV at 270 nm B) ESI positive-mode
Injection	: 10 μL (0.02-1 μg/mL)

Application : Triazolam and Etizolam



Courtesy of J.Watanabe, Bruker Daltonics K. K.

As shown in the results of LC/MS analysis of triazolam and etizolam (100ppb), both compounds, which monoisotopic mass are very closed, are detected with excellent peak shapes by high resolution extracted ion chromatogram (hrEIC).

1. Triazolam (MW 343.22)

2. Etizolam (MW 342.85)

Column	: YMC-Triart C18 (5 μm, 12 nm) 50 X 2.0 mmI.D.
Eluent	: A) 10 mM HCOOH, B) acetonitrile 25-50%B (0-10 min), 25%B (10-15 min)
Flow rate	: 0.2 mL/min
Temperature	: 40℃
Detection	: ESI, positive mode (Bruker Daltonics micrOTOF)
Injection	: 5 μL