



YMC-Actus

***for fast semi-preparative HPLC
high throughput separations***



YMC-Actus



Fast semi-preparative chromatography

Semi-preparative chromatography is the link between analytical HPLC and preparative LC. Even though the chromatographic systems used for semi-preparative LC do not reach the size of preparative LC systems, the objectives remain the same:

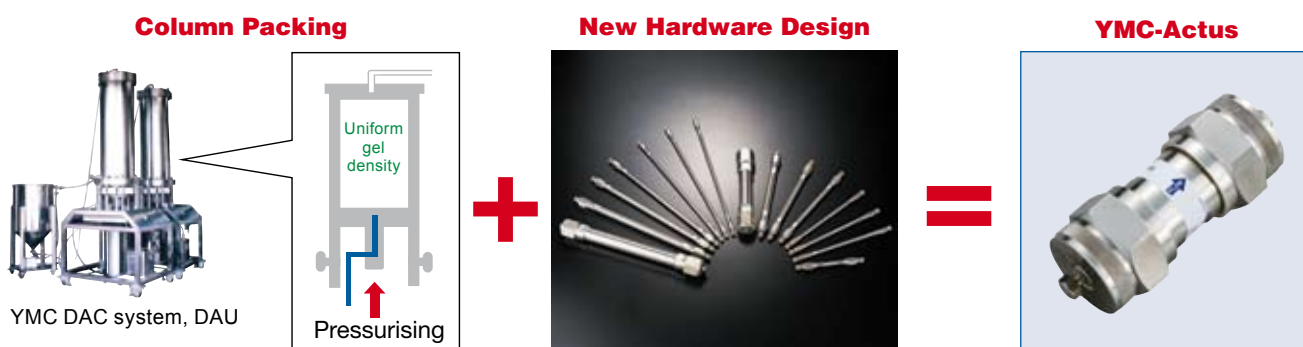
- Purification and isolation of maximum sample quantity
- Savings in time and costs.

With YMC-Actus time is on your side!

Technology

YMC, well known for its experience in DAC column technology, both in terms of hardware and packing procedures, has modified its robust DAC-column packing knowledge for semi-preparative column applications.

In combination with a new hardware design, YMC-Actus columns achieve an outstanding durability and efficiency.



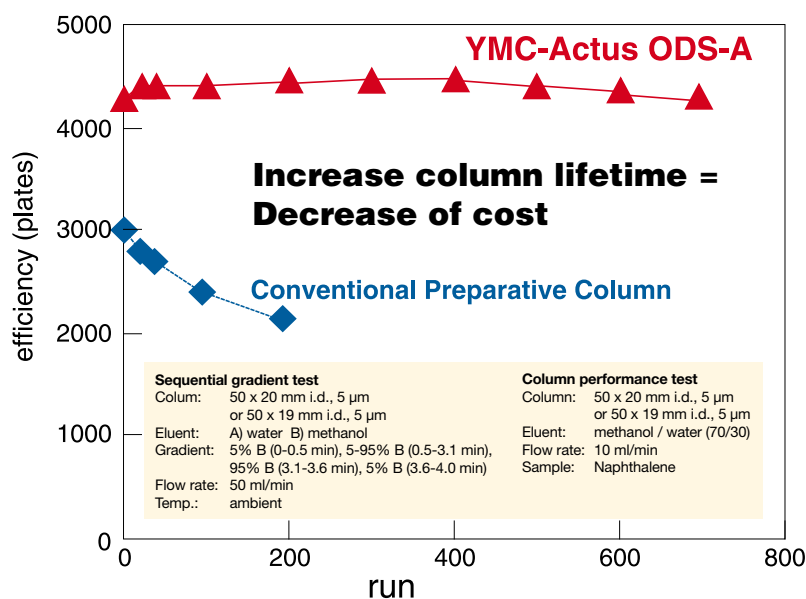
Durability

Rapid pressure changes under high-speed gradient conditions may lead to column degradation and loss of column performance.

With YMC-Actus, a new hardware and packing technology has been applied to these semi-preparative columns to provide a uniform packing density which results in a longer lifetime than conventional semi-preparative columns.

In order to determine the quality of the packing, the column performance was evaluated every 100 runs with a sequential high throughput gradient.

YMC-Actus columns offer outstanding efficiency without compromising resolution. Furthermore, YMC-Actus columns provide reliable results, even after exposure to severe, rapid gradient conditions and multiple injections.



YMC-Actus

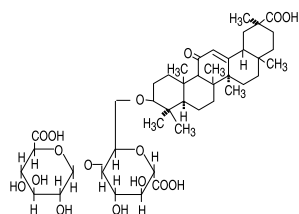
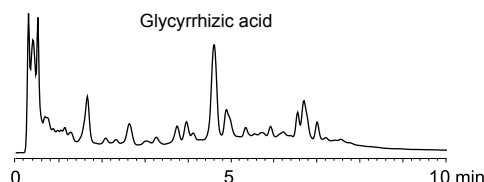
Excellent durability and efficiency under fast gradient condition at high flow rate

Glycyrrhizic acid in herb medicine

Analysis

YMC-Pack ODS-AQ, 50 x 4.6 mm i.d., 5 µm

3 ml/min, 10 µl injection

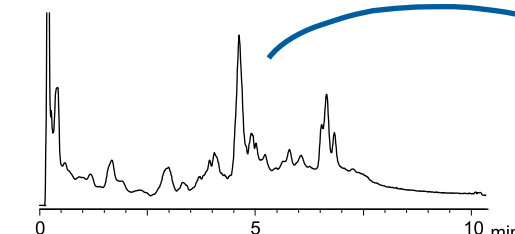


Glycyrrhizic acid

Purification

YMC-Actus ODS-AQ, 50 x 20 mm i.d., 5 µm

60 ml/min, 500 µl injection



After purification
99.5%

Eluent : A) water/acetic acid (99/1)
: B) methanol/acetic acid (99/1)
: 20%B (0-2 min), 20-45%B (2-7 min),
: 45%B (7-10 min)
Temperature : ambient
Detection : UV at 260 nm
Sample : water/methanol/acetic acid extract of
: commercially available herb medicine
: (0.1 g/ml)

R&D Kits

To minimise the problems that the process of scale-up may introduce, YMC offers YMC R&D kits, which consist of one analytical column and one YMC-Actus column packed with exactly the same packing material from the same production lot. Therefore no further method development is needed, just a simple linear scale-up calculation.

Outstanding separation of highly polar compounds

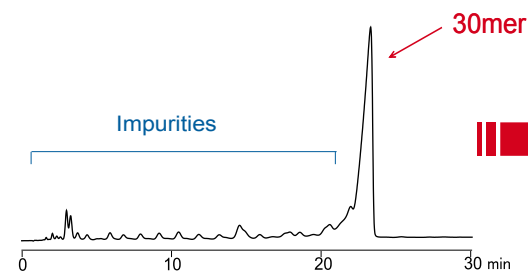
Crude synthetic 30mer oligonucleotide

Analysis 1.0 ml/min, 5 µl injection

Purification 19 ml/min, 100 µl injection

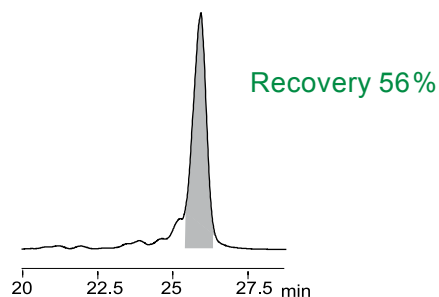
Hydrosphere C18

50 x 4.6 mm i.d., 5 µm



YMC-Actus Hydrosphere C18

50 x 20 mm i.d., 5 µm



Eluent : A) 10 mM DBA-acetic acid (pH6.0) /methanol (60/40)
: B) 10 mM DBA-acetic acid (pH6.0) /methanol (20/80)
: 10-35%B (0-30 min)
Temperature : ambient
Detection : UV at 269 nm
Sample : synthetic oligonucleotide (100 µM)

■ purity > 99%

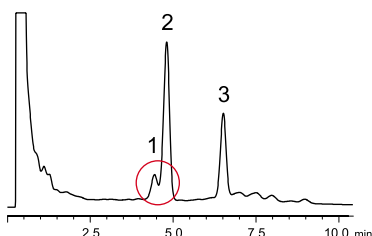
YMC-Actus

Excellent separations of compounds with similar structure

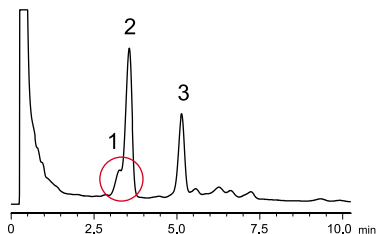
Capsaicinoids in red pepper

Analysis 50 x 4.6 mm i.d., 5 µm
2.0 ml/min, 20 µl injection

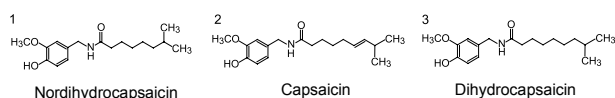
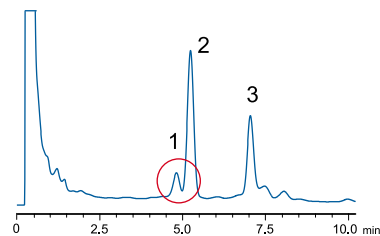
Phenomenex Luna C18, 5 µm, 10 nm



Waters XBridge C18, 5 µm



YMC-Pack Pro C18 RS



Eluent : A) methanol/water/TFA (50/50/0.1)
B) methanol/TFA (100/0.1)
0-30%B (0-5 min), 30%B (5-10 min)

Temperature : 25°C for 50 X 4.6 mm i. d.
ambient for 50 X 20 mm i. d.

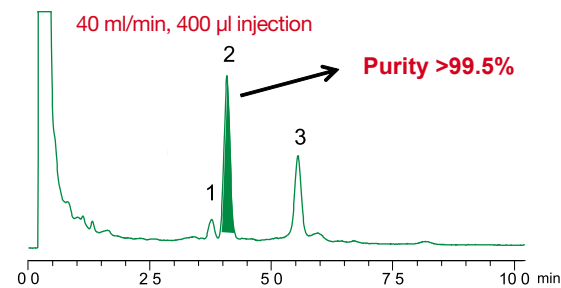
Detection : UV at 280 nm

Sample : methanol extract of a commercial red pepper (1 g/3 ml)

Purification



YMC-Actus Pro C18 RS, 50 x 20 mm i.d. 5 µm



Ordering Information*

Packing material	Particle size (µm)	Pore size (nm)	Column size length x i.d. (mm)	Product number
Pro C18	5	12	50 x 20	AS12S050520WX
Hydrosphere C18	5	12	50 x 20	HS12S050520WX
Pro C18 RS	5	8	50 x 20	RS08S050520WX
ODS-A	5	12	50 x 20	AA12S050520WX
ODS-AQ	5	12	50 x 20	AQ12S050520WX
Pro C8	5	12	50 x 20	OC12S050520WX

* Alternative selectivities, dimensions and particle sizes are available on request.

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