

Ultrasphere®

Columns **will not be manufactured**
by Beckman Coulter® from January 1, 2010.

**You asked for alternatives.
We listened...**



Phenomenex® offers
two great solutions.

 **phenomenex**®
...breaking with traditionSM



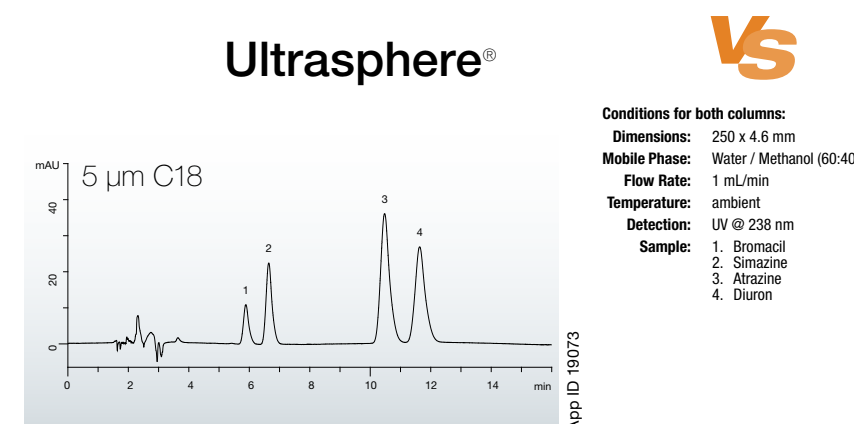
Solution 1: Direct Replacement: Ultremex™

- Ultremex™ closely mimics the performance of Ultrasphere®
- Highly Reproducible
- Long Column Life
- Fully Guaranteed*

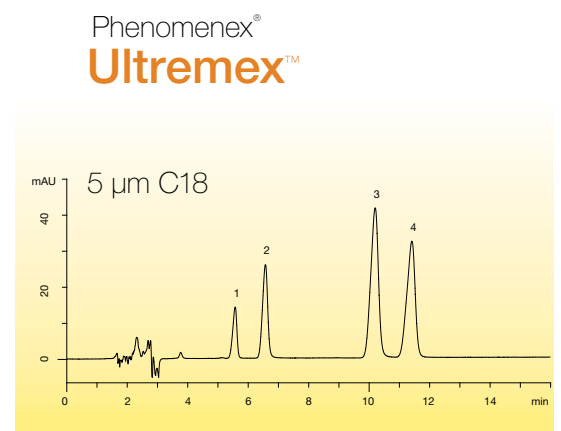
Compare Selectivity

Compare physical and chemical specifications:

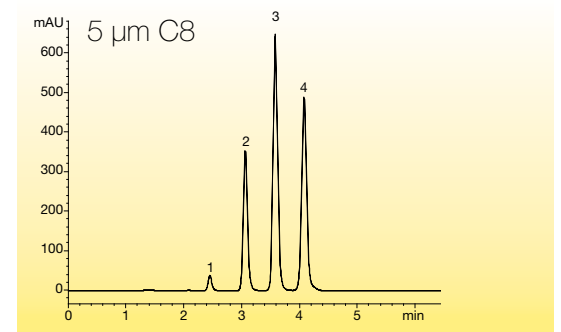
	Phase	Carbon Load	Pore Size	pH Range	Endcapped	Surface Area
Ultrasphere	C18	12 %	80 Å	2.5 to 7.5	yes	190 m ² /g
Ultremex	C18	13 %	80 Å	2.5 to 7.5	yes	200 m ² /g



Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: Water / Methanol (60:40)
Flow Rate: 1 mL/min
Temperature: ambient
Detection: UV @ 238 nm
Sample:
 1. Bromacil
 2. Simazine
 3. Atrazine
 4. Diuron



Conditions for both columns:
Dimensions: 150 x 4.6 mm
Mobile Phase: Acetonitrile / Water (65:35)
Flow Rate: 1 mL/min
Temperature: 30 °C
Detection: UV @ 210 nm
Sample:
 1. Acetophenone
 2. Benzene
 3. Toluene
 4. Naphthalene



Comparative separations may not be representative of all applications.

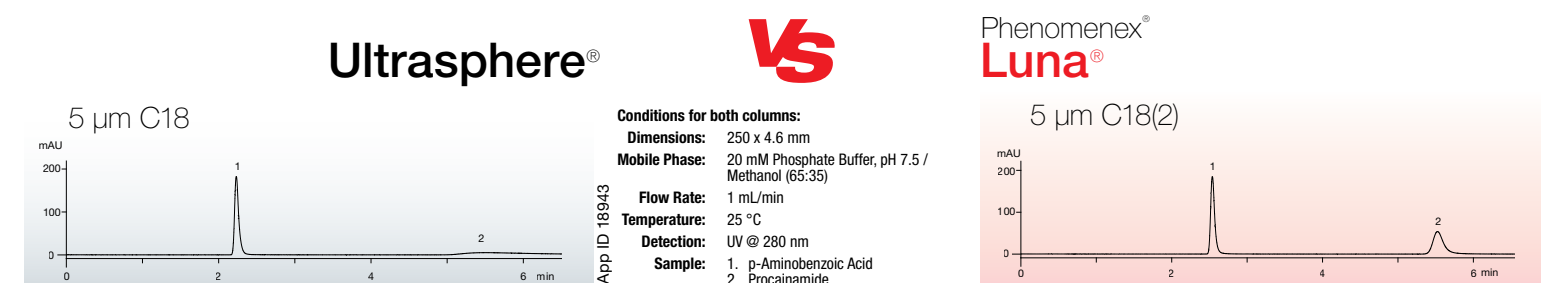
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guarantee
 * If Ultremex does not provide you with equivalent separation to an Ultrasphere column of the same phase, particle size, and dimension, send in your comparative data within 45 days and keep the Ultremex column for FREE.

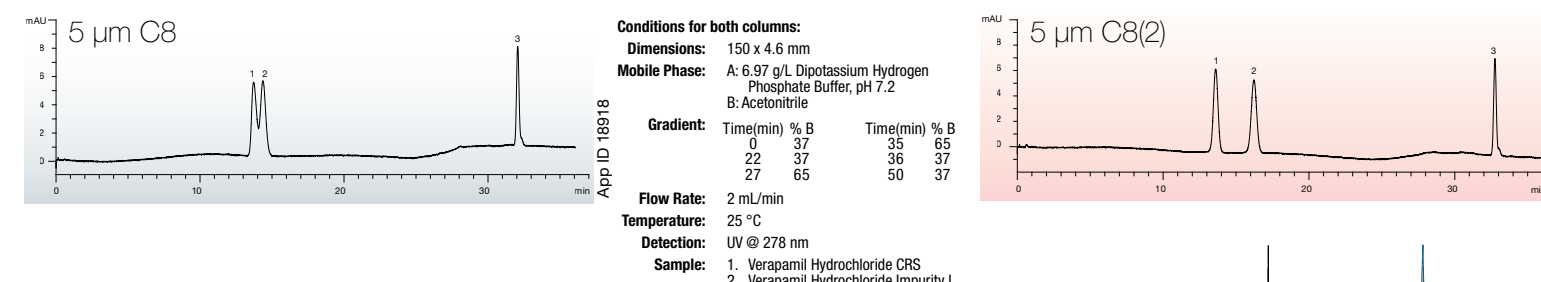
Solution 2: Recommended Alternative: Luna®

- Very High Efficiencies
- Excellent Peak Shape
- Highly Reproducible
- Fully Guaranteed**

Compare Performance



Conditions for both columns:
Dimensions: 250 x 4.6 mm
Mobile Phase: 20 mM Phosphate Buffer, pH 7.5 / Methanol (65:35)
Flow Rate: 1 mL/min
Temperature: 25 °C
Detection: UV @ 280 nm
Sample:
 1. p-Aminobenzoic Acid
 2. Procainamide



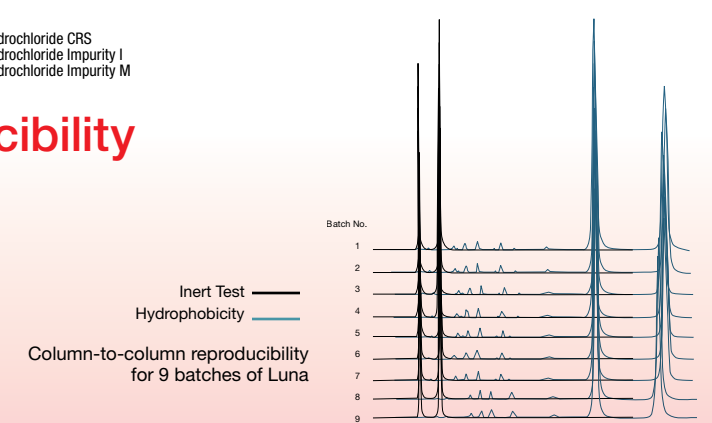
Conditions for both columns:
Dimensions: 150 x 4.6 mm
Mobile Phase: A: 6.97 g/L Dipotassium Hydrogen Phosphate Buffer, pH 7.2
 B: Acetonitrile
Gradient:

Time(min)	% B	Time(min)	% B
0	37	35	65
22	37	36	37
27	65	50	37

Flow Rate: 2 mL/min
Temperature: 25 °C
Detection: UV @ 278 nm
Sample:
 1. Verapamil Hydrochloride CRS
 2. Verapamil Hydrochloride Impurity I
 3. Verapamil Hydrochloride Impurity M

Luna® Column to Column Reproducibility

The chromatograms **on the right** show consistency of inertness (black) and hydrophobicity (blue) for Luna 5 µm C18(2) columns from 9 different batches. Almost no variation is observed.



Comparative separations may not be representative of all applications.

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guarantee
 ** If Luna does not provide you with at least equivalent separation to an Ultrasphere column of the same phase, particle size, and dimension, send in your comparative data within 45 days and keep the Luna column for FREE.

Need Re-Validation Assistance?

We offer FREE Support!

Phenomenex Chromatography Services

Method development, optimization, and re-validation services are available for your current Ultrasphere methods.

Simply give us a call, fill out a Project Data Sheet (PDS), and mail us your sample (and current method if applicable).*



How to move forward:

For more information on these services or any of our service offerings, please call your local Technical Consultant, or visit us on the web at

www.phenomenex.com/info/phenodev

* Depending on the complexity of a project, extended timelines and certain fees may be involved. These are determined at the start of a project.