



Reversed Phase HPLC Separation of Sulfa Drugs on a Luna[®] Omega 3 μm Polar C18 Column

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Overview

For decades, sulfa-drugs have been used in the treatment of a range of bacterial infections. These drugs are a diverse class of antibacterial and anticonvulsant compounds that contain a sulfonamide moiety. Historically, sulfa-drugs have been and currently are of great significance in modern medicine because of their wide applicability. Considering the historic and modern importance of this compound class, a fast, efficient and robust separation technique is imperative for the pharmaceutical industry when dealing with these substances. This application illustrates a rapid and selective separation for a sulfa drug mixture under reversed phase HPLC/UV conditions on a Luna Omega 3 μm Polar C18 stationary phase. Excellent peak shape along with separation and resolution between all the compounds can be attributed to the combination of the inert, high efficiency HPLC Luna Omega particle with the dual non-polar and polar selectivity provided by the Polar C18 stationary phase.

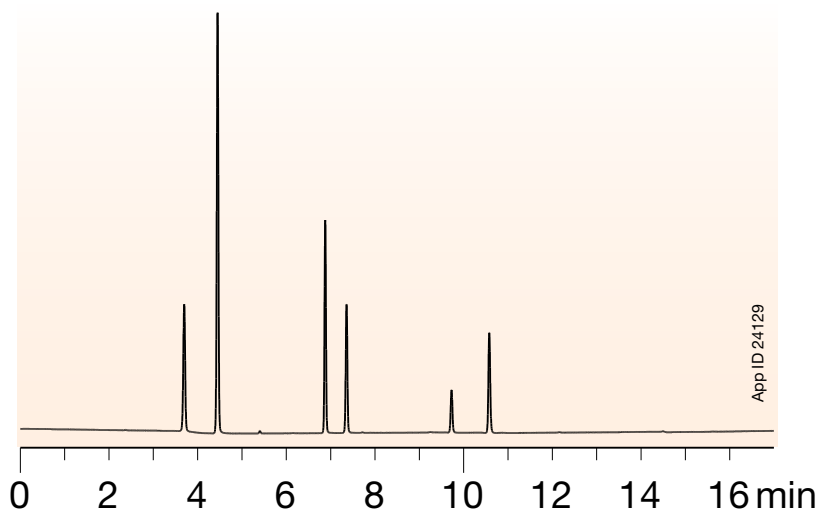
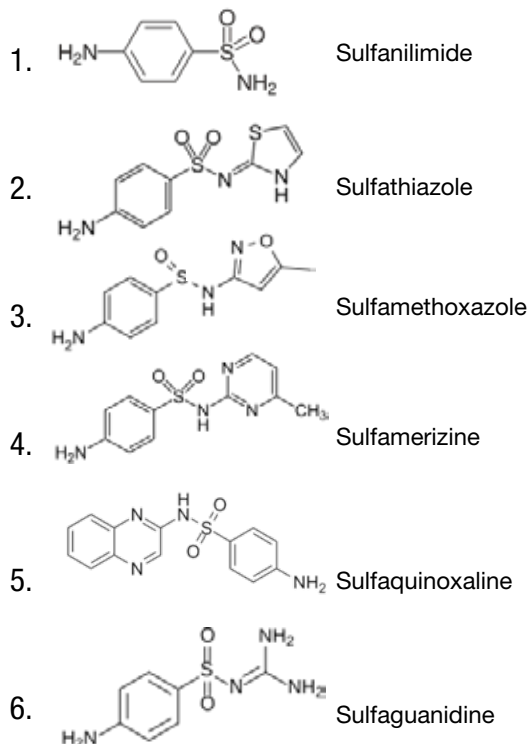


LC Conditions

Column: Luna Omega 3 μm Polar C18
Dimensions: 150 x 4.6 mm
Part No.: 00F-4760-E0
Mobile Phase: A: 0.1% Formic acid in Water
B: 0.1% Formic Acid in Acetonitrile

Gradient:	Time (min)	% B
	0	25
	10	65

Injection Volume: 1 μL
Flow Rate: 1 mL/min
Temperature: 22 °C
Detection: UV @ 254 nm
Analytes: 1. Sulfanilimide
2. Sulfathiazole
3. Sulfamethoxazole
4. Sulfamerizine
5. Sulfaquinoxaline
6. Sulfaguandine



APPLICATION

Luna® Omega Ordering Information

5 µm Minibore and MidBore™ Columns (mm)								SecurityGuard™ Cartridges (mm)
Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	50 x 3.0	100 x 3.0	150 x 3.0	4 x 2.0*
Polar C18	00A-4754-AN	00B-4754-AN	00D-4754-AN	00F-4754-AN	00B-4754-YO	00D-4754-YO	00F-4754-YO	AJO-7600 for ID: 2.0 - 3.0 mm

5 µm Analytical Columns (mm)					SecurityGuard Cartridges (mm)
Phases	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	4 x 3.0*
Polar C18	00B-4754-E0	00D-4754-E0	00F-4754-E0	00G-4754-E0	AJO-7601 for ID: 3.2-8.0 mm

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3 µm Minibore Columns (mm)						SecurityGuard Cartridges (mm)
Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	4 x 2.0*	
Polar C18	00A-4760-AN	00B-4760-AN	00D-4760-AN	00F-4760-AN	AJO-7600	for ID: 2.0 - 3.0 mm

3 µm MidBore Columns (mm)					SecurityGuard Cartridges (mm)
Phases	50 x 3.0	100 x 3.0	150 x 3.0	4 x 2.0*	
Polar C18	00B-4760-Y0	00D-4760-Y0	00F-4760-Y0	AJO-7600	for ID: 2.0 - 3.0 mm

3 µm Analytical Columns (mm)						SecurityGuard Cartridges (mm)
Phases	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	4 x 3.0*	
Polar C18	00B-4760-E0	00D-4760-E0	00F-4760-E0	00G-4760-E0	AJO-7601	for ID: 3.2-8.0 mm

1.6 µm Microbore Columns (mm)			
Phases	50 x 1.0	100 x 1.0	150 x 1.0
Polar C18	00B-4748-A0	00D-4748-A0	00F-4748-A0

1.6 µm Minibore Columns (mm)						SecurityGuard ULTRA Cartridges [†]
Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	3/pk	
Polar C18	00A-4748-AN	00B-4748-AN	00D-4748-AN	00F-4748-AN	AJO-9505	for 2.1 mm ID

[†] SecurityGuard ULTRA Cartridges require holder, Part No.: AJO-9000

^{*} SecurityGuard Analytical Cartridges require holder, Part No.: KJO-4282



If Luna analytical columns do not provide at least an equivalent separation as compared to a competing column of the same particle size, similar phase and dimensions, return the column with comparative data within 45 days for a FULL REFUND.

Terms and Conditions

Subject to Phenomenex Standard Terms and Conditions, which may be viewed at <http://www.phenomenex.com/TermsAndConditions>.

Trademarks

Luna is a registered trademark and MidBore and SecurityGuard are trademarks of Phenomenex.

SecurityGuard is patented by Phenomenex. U.S. Patent No. 6,162,362
CAUTION: this patent only applies to the analytical-sized guard cartridge holder, and does not apply to SemiPrep, PREP or ULTRA holders, or to any cartridges.

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