

Material No: 9821.1000GL  
Batch No: 2327205851  
Manufactured Date: 2023/09/29  
Expiration Date: 2026/09/29

## Certificate of Analysis

Test	Specification	Result
Assay (by GC)	$\geq 99.9\%$	100.0
Residue after Evaporation	$\leq 1$ ppm	$< 1$
Water (H <sub>2</sub> O)	$\leq 0.01\%$	$< 0.01$
LC-Gradient-Diode Array Detection (AU), test solution is modified with 0.1% (v/v) formic acid:		
at 220 nm	$\leq 0.002$	$< 0.002$
at 254 nm	$\leq 0.001$	$< 0.001$
LC-MS Gradient Suitability Test (TIC, 100 to 2000 m/z), test solution is modified with 0.1% (v/v) formic acid:		
Positive ESI-MS Sensitive Impurities (as Reserpine)	$\leq 50$ ng/ml	$< 50$
Trace Impurities (in ppb)		
Aluminium (Al)	$\leq 50$	$< 50$
Calcium (Ca)	$\leq 50$	$< 50$
Iron (Fe)	$\leq 50$	$< 50$
Magnesium (Mg)	$\leq 50$	$< 50$
Potassium (K)	$\leq 50$	$< 50$
Sodium (Na)	$\leq 50$	$< 50$
Ultraviolet Absorbance (1.00-cm path vs water):		
at 200 nm	$\leq 0.05$	0.01
at 220 nm	$\leq 0.01$	0.01
at 254 nm	$\leq 0.01$	$< 0.01$

Material No: 9821.1000GL  
Batch No: 2327205851

For Laboratory, Research or Manufacturing use.  
For Use in Liquid Chromatography and Mass Spectrometry  
Element concentrations are at time of lot release.

Country of Origin: UNITED STATES

Packaging Site: Gliwice Mfg & DC



Jamie Ethier  
Vice President Global Quality

For questions on this Certificate of Analysis, please contact Customer Service at [avantor.emea@avantorinc.com](mailto:avantor.emea@avantorinc.com)  
The information in this document is property of Avantor Performance Materials Poland S.A.  
Avantor Performance Materials Poland S.A. Sowińskiego 11 Gliwice 44-101 Poland Tel:+48 322392000