

Certificate of Analysis

Product: Water
Grade: LC-MS
Part No.'s: 1939-5
CAS No: 7732-18-5

Lot:	N3S104
Mfg. Date:	2023-03-28
Exp. Date:	2 years after Mfg. Date

Manufactured by Duksan Pure Chemicals

LC-MS Suitability

Test	Unit	Specification (Max)	Results
ESI+ mode (as Reserpine)	ppb	50	<50
ESI- mode (as 4-Nitrophenol)	ppb	50	<50
Residue After Evaporation	ppm	1	<1
Ultraviolet Spectrophotometry			
Wavelength	Unit	Maximum UV Absorbance	
200	nm	0.01	<0.01
250 - 400	nm	0.005	<0.005
Gradient Elution Test			
Test	Unit	Specification (Max)	
Largest Eluted Peak(254nm)	mAU	1	<1
Largest Eluted Peak(210nm)	mAU	5	<5
Fluorescence Trace Impurities			
Test	Unit	Specification (Max)	
At 450nm Emissions	ppb	0.1	<0.1
At Emissions Maximum for Impurities	ppb	0.2	<0.2

Metal Impurities

Metal	Unit	Specification (Max)	Results
Aluminum (Al)	ppb	25	<1
Barium (Ba)	ppb	5	<1
Cadmium (Cd)	ppb	5	<1
Calcium (Ca)	ppb	25	<3
Chromium (Cr)	ppb	5	<1

Cobalt (Co)	ppb	5	<1
Copper (Cu)	ppb	5	<1
Iron (Fe)	ppb	5	<1
Lead (Pb)	ppb	5	<1
Magnesium (Mg)	ppb	25	<1
Manganese (Mn)	ppb	5	<1
Lithium (Li)	ppb	5	<1
Nickel (Ni)	ppb	5	<1
Potassium (K)	ppb	25	<2
Silver (Ag)	ppb	5	<1
Sodium (Na)*	ppb	50	<12
Tin (Sn)	ppb	5	<1
Zinc (Zn)	ppb	5	<1

* May change over time

Tested to ACS specifications

Filtered by 0.2um filter

Created By:

James Osborn
Quality Supervisor