

**Certificate of Analysis**

**Product:** Acetonitrile  
**Grade:** LC-MS  
**Part No.'s:** 1930-1

<b>Lot:</b>	<b>J3S122</b>
<b>Mfg. Date:</b>	<b>2019-03-28</b>
<b>Exp. Date:</b>	<b>3 years after Mfg. Date</b>

Manufactured by Duksan Pure Chemicals  
**LC-MS Suitability**

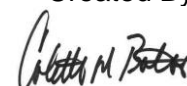
Test	Unit	Specification	Results
ESI+ mode (as Reserpine)	ppb	Max. 50	<50
ESI- mode (as 4-Nitrophenol)	ppb	Max. 50	<50
Assay (by GC)	%	Min. 99.9	99.9
Color (APHA)		Max. 10	2
Water	%	Max. 0.01	0.001
Residue After Evaporation	ppm	Max. 1	<1
Titration Acid	mEq/g	Max. 0.008	0.0006
Titration Base	mEq/g	Max. 0.0006	0.00001
Ultraviolet Spectrophotometry			
Wavelength	Unit	Maximum UV Absorbance	Results
195	nm	0.15	0.04
200	nm	0.05	0.02
205	nm	0.04	0.01
210	nm	0.02	0.01
220	nm	0.01	0.004
254	nm	0.005	0.001
UV Cutoff	nm	Max. 190	<190
Gradient Elution Test			
Test	Unit	Specification (Max)	
Largest eluted peak (254nm)	mAU	0.5	<0.5
Largest eluted peak (210nm)	mAU	2	<2

Fluorescence Trace Impurities			
Test	Unit	Specification (Max)	
At 450nm Emission	ppb	0.3	<0.3
At Emission Maximum for Impurities	ppb	0.5	<0.5

### 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	<2
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	<1
Silver (Ag)	ppb	5	<1
Sodium (Na)	ppb	50	<8
Tin (Sn)	ppb	5	<1
Zinc (Zn)	ppb	5	<1

Created By:



Colette Batog  
Technical Support