

Certificate of Analysis

Product: Methanol
Grade: LC-MS
Part No: 1935-5

Lot:	LAP205
Mfg. Date:	2021-10-25
Exp. Date:	3 years after Mfg. Date

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	3
Water	%	Max. 0.03	0.001
Residue After Evaporation	ppm	Max. 1	<1
Titration Acid	mEq/g	Max. 0.0003	0.0001
Titration Base	mEq/g	Max. 0.0002	0.00003
Ultraviolet Spectrophotometry			
Wavelength	Unit	Maximum UV Absorbance	
220	nm	0.25	0.15
230	nm	0.15	0.07
254	nm	0.02	0.01
280	nm	0.01	0.001

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	<1
Chromium (Cr)	ppb	5	<1
Cobalt (Co)	ppb	5	<1
Copper (Cu)	ppb	5	<1
Iron (Fe)	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	<1
Tin (Sn)	ppb	5	<1

* May change over time

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