

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Formic Acid, LC-MS Grade, 50 mL.

PRODUCT NUMBER: 85178

LOT NUMBER: UL2852281

SPECIFICATIONS:

CONTENT: Formic Acid: $\geq 99\%$

CHLORIDE: ≤ 5 ppm

COLOR: ≤ 10 APHA

EVAPORATION RESIDUE: 1 ppm maximum

IDENTIFICATION: Must Pass Test

ELEMENTAL ANALYSIS:

Aluminium (Al):	≤ 20 ppb
Calcium (Ca):	≤ 50 ppb
Copper (Cu):	≤ 10 ppb
Iron (Fe):	≤ 10 ppb
Lead (Pb):	≤ 10 ppb
Magnesium (Mg):	≤ 10 ppb
Manganese (Mn):	≤ 10 ppb
Nickel (Ni):	≤ 10 ppb
Potassium (K):	≤ 20 ppb
Silver (Ag):	≤ 10 ppb
Sodium (Na):	≤ 50 ppb
Zinc (Zn):	≤ 20 ppb

SUITABILITY TEST:

LCMS Gradient Suitability: Must Pass Test

UV ANALYSIS:

210 nm	≤ 1.25
220 nm	≤ 0.85
230 nm	≤ 0.55
254 nm	≤ 0.01

SULFATE: ≤ 50 ppm

SULFIDE: ≤ 20 ppm

RESULTS:

CONTENT: Formic Acid: 99.5 %

CHLORIDE: <5 ppm

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CERTIFICATE OF ANALYSIS

COLOR: <10 APHA

EVAPORATION RESIDUE: <1 ppm

IDENTIFICATION: Passed Test

ELEMENTAL ANALYSIS:

Aluminium (Al):	1 ppb
Calcium (Ca):	<1 ppb
Copper (Cu):	<1 ppb
Iron (Fe):	<1 ppb
Lead (Pb):	<1 ppb
Magnesium (Mg):	<1 ppb
Manganese (Mn):	<1 ppb
Nickel (Ni):	<1 ppb
Potassium (K):	1 ppb
Silver (Ag):	<1 ppb
Sodium (Na):	2 ppb
Zinc (Zn):	<1 ppb

SUITABILITY TEST:

LCMS Gradient Suitability: Pass Test

UV ANALYSIS:

210 nm	1.24
220 nm	0.84
230 nm	0.36
254 nm	0.01

SULFATE: <50 ppm

SULFIDE: <20 ppm

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Liam F. Garrity, Senior Manager, Analytical Services
Laboratory



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