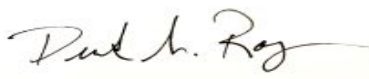


## CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by TUV SUD America Inc.  
Certificate Number. 951001163

Catalogue Number	044063
Lot Number	W19L772
Description	1-Methyl-2-pyrrolidinone, Biograde, 99.5%
CAS Number	872-50-4
Quality Test/Release Date	02/Jan/2026
Suggested retest date	02/Jan/2029
Country of Origin	China
Declaration of Origin	Synthetic
BSE/TSE	Not directly derived from or manufactured with any animal byproducts in any way (including but not limited to fermentation or nutrient broth, catalysts, enzymes).

Result Name	Units	Specifications	Test Value
Assay	ppm	Amines (as Dimethylamine) ≤10.0 ppm	5.5
Assay	ppm	Residue after ignition ≤10ppm	4
Assay (GC)	%	GC-FID ≥99.5%	99.89
Appearance (Color)		Colorless, ≤20 APHA	Colorless, 5 APHA
Form		Liquid	Liquid
Water Content (Karl Fischer Titration)	%	≤0.02%	0.02
Specific Absorbance (E 1%/1cm)	AU	285 nm ≤ 1.00 Au	0.10
Specific Absorbance (E 1%/1cm)	AU	300 nm ≤ 0.50 Au	0.05
Specific Absorbance (E 1%/1cm)	AU	325 nm ≤ 0.10 Au	0.01
Specific Absorbance (E 1%/1cm)	AU	350 nm ≤ 0.03 Au	0.002
Specific Absorbance (E 1%/1cm)	AU	400 nm ≤ 0.01 Au	<0.001



Derek Roy  
Quality Manager, LCD

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.