

## CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by Intertek. Certificate Number. 2317548

Catalogue Number	41077
Lot Number	A0467438
Description	Formic acid,88%,ACS reagent
CAS Number	64-18-6
Quality Test/Release Date	20/Nov/2024
Suggested retest date	20/Nov/2029
Country of Origin	SPAIN
Declaration of Origin	synthetic

Result Name	Units	Specifications	Test Value
Appearance (Form)		Clear liquid	Clear liquid
Color scale	APHA	≤15	10
Infrared spectrum		Conforms	Conforms
Titration with NaOH	%	≥88.0	89.8
Heavy metals (as Pb)	ppm	≤5	≤2
Refractive index		1.3694 to 1.3714 (20°C, 589 nm)	1.3705 (20°C, 589 nm)
Ammonium (NH <sub>4</sub> )	ppm	≤50	≤5
Chloride (Cl)	ppm	≤10	≤2
Sulfate (SO <sub>4</sub> )	ppm	≤20	≤20
Iron (Fe)	ppm	≤5	≤2
Dilution test		passes test	passes test
Sulfite (SO <sub>3</sub> )		passes test	passes test
Residue after evaporation	%	≤0.002	0.0002
Free acid (CH <sub>3</sub> COOH)	%	≤0.4	≤0.4



Geert Torfs  
Supervisor, QC

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.