

CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by INTERTEK SAI Global
Certificate Number. QMS42099

Catalogue Number	E/0655
Lot Number	2552226
Description	Ethanol, absolute PrimaR
CAS Number	64-17-5
Quality Test/Release Date	11/Sep/2025
Expiry Phrase	Use within 5 yrs of opening
Country of Origin	Germany
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
Acetone	%	<= 0.001	None Detected
Acidity/alkalinity (meq/g)	meq/g	<= 0.0001	0.00003
Aluminium (Al)	ppm	<= 0.1	<0.02
Assay (GC)	%	>= 99.8	100.00
Barium (Ba)	ppm	<= 0.01	<0.005
Cadmium (Cd)	ppm	<= 0.01	<0.005
Calcium (Ca)	ppm	<= 0.5	<0.02
Chemical form		Mobile liquid	Mobile liquid
Chromium (Cr)	ppm	<= 0.01	<0.005
Cobalt (Co)	ppm	<= 0.01	<0.005
Colour	APHA	<= 10	<5
Copper (Cu)	ppm	<= 0.05	<0.01
Furfuraldehyde	%	<= 0.001	None Detected
Iron (Fe)	ppm	<= 0.2	<0.02
Lead (Pb)	ppm	<= 0.05	<0.005
Lithium (Li)	ppm	<= 0.01	<0.005
Magnesium (Mg)	ppm	<= 0.05	<0.01
Manganese (Mn)	ppm	<= 0.01	<0.005
Methanol	%	<= 0.002	None Detected
Molybdenum (Mo)	ppm	<= 0.01	<0.005
Nickel (Ni)	ppm	<= 0.01	<0.005
Other organics	%	<= 0.02	None Detected
Potassium (K)	ppm	<= 0.5	<0.02
Propan-2-ol	%	<= 0.003	0.00098
Residue after evaporation (ppm)	ppm	<= 10	None Detected
Sodium (Na)	ppm	<= 2	<0.1
Strontium (Sr)	ppm	<= 0.01	<0.005
Substances darkened by H2SO4 (APHA)	APHA	<= 10	<5
Substances reducing KMnO4	%	<= 0.0005	<0.0005
Titanium (Ti)	ppm	<= 0.01	<0.005
Total phosphorus (P)	ppm	<= 0.5	<0.02
Total silicon (Si)	ppm	<= 0.05	<0.02
Total sulfur (S)	ppm	<= 1	<0.05
Vanadium (V)	ppm	<= 0.01	<0.005
Visual colour		Clear colourless	Clear colourless
Wt/ml at 20C	g	>= 0.789 and <= 0.791	0.7898
Zinc (Zn)	ppm	<= 0.2	<0.01

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.

A. Ganatra

Ashok Ganatra
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 use or further manufacturing. 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.

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