

## 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/0650
Lot Number	2533712
Description	Ethanol, absolute AR For analysis
CAS Number	64-17-5
Quality Test/Release Date	30/May/2025
Expiry Phrase	Use within 5 yrs of opening
Country of Origin	United Kingdom

Result Name	Units	Specifications	Test Value
Acetone	%	<= 0.001	None Detected
Acidity acetic acid	%	<= 0.002	0.00012
Acidity/alkalinity (meq/g)	meq/g	<= 0.0001	0.00002
Aldehyde	%	<= 0.001	<0.001
Aldehyde (ppm)	ppm	<= 10	<1
Assay (GC)	%	>= 99.8	100.00
Benzene	%	<= 0.0002	None Detected
Benzene (ppm)	ppm	<= 2	None Detected
Calcium (Ca)	ppm	<= 0.5	<0.02
Chemical form		Mobile liquid	Mobile liquid
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
Magnesium (Mg)	ppm	<= 0.05	<0.01
Methanol	%	<= 0.002	None Detected
Other organics	%	<= 0.02	0.00031
Potassium (K)	ppm	<= 0.5	<0.02
Propan-2-ol	%	<= 0.003	None Detected
Relative density		>= 0.79 and <= 0.793	0.791
Residue after evaporation (ppm)	ppm	<= 10	None Detected
Sodium (Na)	ppm	<= 2	<0.1
Substances darkened by H2SO4 (APHA)	APHA	<= 10	<5
Substances reducing KMnO4	%	<= 0.0005	<0.0005
Total phosphorus (P)	ppm	<= 0.5	<0.02
Total silicon (Si)	ppm	<= 0.05	<0.02
Total sulfur (S)	ppm	<= 1	<0.05
Visual colour		Clear colourless	Clear colourless
Water	%	<= 0.2	0.05
Wt/ml at 20C	g	>= 0.789 and <= 0.791	0.7896
Zinc (Zn)	ppm	<= 0.2	<0.01

**Additional Information** Meets the current analytical specification of BP and Ph. Eur. This Certificate of Analysis also applies to E/0650DF (Duty Free)

*A. Ganatra*

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.

Ashok Ganatra  
Supervisor, QC

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