

## 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	42588
Lot Number	2538733
Description	1-Chlorobutane, 99.8%, for HPLC HPLC HPLC
CAS Number	109-69-3
Quality Test/Release Date	27/May/2025
Expiry Phrase	Use within 5 years of opening
Country of Origin	Germany

Result Name	Units	Specifications	Test Value
Absorbance @ 230 nm	A.U.	<= 0.2	0.128
Absorbance @ 240 nm	A.U.	<= 0.05	0.035
Absorbance @ 250 nm	A.U.	<= 0.01	0.01
Acidity/alkalinity (meq/g)	meq/g	<= 0.0003	0.0001
Assay (GC)	%	>= 99.7	99.94
Chemical form		Mobile liquid	Mobile liquid
Colour	APHA	<= 10	<5
Residue after evaporation (ppm)	ppm	<= 2	None Detected
Visual colour		Clear colourless	Clear colourless
Water	%	<= 0.02	0.017

**Additional Information** Filtered to 0.2 micron



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.

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.