

Certificate of Analysis

Date of Testing: 2023-04-12 22:10:22
Date of Next Testing: 2027-04-11 22:10:22
Product Name: **1-Chlorobutane**
CAS Number: 109-69-3
Specifications & Purity: for HPLC, $\geq 99.5\%$
Lot #: D23061381
SKU #: **C103252**
Analysis: **199994**
Storage Temperature: Room temperature

Parameter	Limit Values	Result
Alkalinity (as NH ₃)	0-0.0002 (%)	0.00 %
free acid (as HCl)	0-0.001 (%)	0.00 %
UV Absorbance 240nm	0-0.02	0.01
Purity(GC)	99.5-100 (%)	99.78 %
UV Absorbance 230nm	0-0.2	0.19
UV Absorbance 250nm	0-0.01	0.00
Evaporation Residue	0-0.001 (%)	0.00 %
Refractive index n ₂₀ /D	1.401-1.403	1.40
Water by Karl Fischer	0-0.01 (%)	0.01 %
Appearance (C103252)	Colorless liquid	Colorless liquid
Infrared spectrum	Conforms to Structure	Conforms to Structure
λ , H ₂ O reference	Pass	Pass



John Su
QA & QC Manager