

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-08-15 14:09:52  
Date of Next Testing: 2025-08-14 14:09:52  
Product Name: **Ethyl 4-Chlorobutyrate**  
CAS Number: 3153-36-4  
Specifications & Purity:  $\geq 98.0\%$ (GC)  
Lot #: K2109708  
SKU #: **E135072**  
Analysis: **264203**

| Parameter                           | Limit Values                        | Result                              |
|-------------------------------------|-------------------------------------|-------------------------------------|
| Refractive index n <sub>20</sub> /D | 1.43-1.432                          | 1.43                                |
| Density (20°C)                      | 1.076-1.08                          | 1.08                                |
| Purity(GC)                          | 98-100 (%)                          | 98.00 %                             |
| Appearance (E135072)                | colorless to yellow to brown liquid | colorless to yellow to brown liquid |
| Proton NMR spectrum                 | Conforms to structure               | Conforms to Structure               |



John Su  
QA & QC Manager