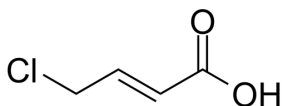


## Certificate of Analysis

**Product Name:** 4-Chloro-2-butenic acid  
**Cat. No.:** CS-0139553  
**CAS No.:** 16197-90-3  
**Batch No.:** 149638  
**Chemical Name:** 2-Butenoic acid, 4-chloro-

### PHYSICAL AND CHEMICAL PROPERTIES

**Molecular Formula:** C<sub>4</sub>H<sub>5</sub>ClO<sub>2</sub>  
**Molecular Weight:** 120.53  
**Storage:** Storage temp. 2-8°C  
**Chemical Structure:**



### ANALYTICAL DATA

**Appearance:** White to off-white (Solid)  
**<sup>1</sup>H NMR Spectrum:** Consistent with structure  
**Purity (NMR):** ≥97.0%  
**Conclusion:** The product has been tested and complies with the given specifications.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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