

# Chem-Impex International, Inc.

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Tel: (630) 766-2112

E-mail: sales@chemimpex.com

Shipping and Correspondence:

935 Dillon Drive

Wood Dale, IL 60191

Fax: (630) 766-2218

Web site: www.chemimpex.com

Manufacturing site:

825 Dillon Drive

Wood Dale, IL 60191

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## Certificate of Analysis

<b>Catalogue Number</b>	01183
<b>Lot Number</b>	001542-150108
<b>Product</b>	<b>L-Malic acid</b>  L-Hydroxybutanedioic acid  (S)-(-)-2-Hydroxysuccinic acid
<b>CAS Number</b>	97-67-6
<b>Molecular Formula</b>	C <sub>4</sub> H <sub>6</sub> O <sub>5</sub>
<b>Molecular Weight</b>	134.09

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<b>Appearance</b>	White crystalline powder
<b>Heavy Metals</b>	< 10 mg/kg (as Pb)
<b>Arsenic (As<sub>2</sub>O<sub>2</sub>)</b>	< 2.0 mg/kg
<b>Anion</b>	Chloride (Cl <sup>-</sup> ): < 0.002% Sulfate (SO <sub>4</sub> <sup>2-</sup> ): < 0.02%
<b>Cation</b>	Lead (Pb): < 2 mg/kg
<b>Optical Rotation</b>	[α] <sub>D</sub> <sup>20</sup> = -2.1°
<b>Transmission</b>	State of solution: Passes test
<b>Residue On Ignition</b>	0.02%
<b>Assay by titration</b>	99.2%
<b>Application</b>	Used to selectively protect the α-amino group of amino acids. It is the starting material for the preparation of chiral compounds.
<b>Storage</b>	Store at RT
<b>Additional Information</b>	Fumaric Acid: 0.03% Maleic Acid: < 0.01%

# *Certificate of Analysis*

Catalog Number: 01183

Lot Number: 001542-150108

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**Remarks**

See material safety data sheet for additional information

For laboratory use only

**The foregoing is a copy of the Certificate of Analysis as provided by our supplier**



**Bala Kumar**  
**Quality Control Manager**