

# Chem-Impex International, Inc.

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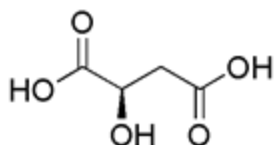
**Web site:** www.chemimpex.com

**Manufacturing site:**

825 Dillon Drive

Wood Dale, IL 60191

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## Product Specifications

<b>Catalogue Number</b>	21933
<b>Product</b>	<b>D-(+)-Malic acid</b>
	(R)-(+)-2-Hydroxysuccinic acid
	(R)-2-Hydroxybutanedicarboxylic acid
<b>CAS Number</b>	636-61-3
<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 crystals or crystalline powder
<b>Anion</b>	Chloride (Cl <sup>-</sup> ) : ≤ 0.01% Sulfate (SO <sub>4</sub> <sup>2-</sup> ) : ≤ 0.04%
<b>Cation</b>	Lead (Pb) : ≤ 20 ppm Arsenic (As203) : ≤ 2 ppm
<b>Optical Rotation</b>	[α] <sub>D</sub> <sup>20</sup> = 1.6 - 2.6 °
<b>Related Substances</b>	Fumaric Acid : ≤ 0.5% Maleic Acid : ≤ 0.050%
<b>Residue On Ignition</b>	≤ 1%
<b>Assay by titration</b>	≥ 99%
<b>L-Enantiomer</b>	≤ 1%
<b>Chiral Purity</b>	≥ 99% (ee)
<b>Storage</b>	Store at 0 - 8 °C

**For Laboratory Use Only**