

# 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>	16608
<b>Product</b>	<b>(S)-4-Oxopyrrolidine-1,2-dicarboxylic acid 1- tert-butyl 2-methyl diester</b>
<b>Lot Number</b>	000672-0331-0084-01 Boc-4-oxo-L-proline methyl ester
<b>CAS Number</b>	102195-80-2
<b>Molecular Formula</b>	C <sub>11</sub> H <sub>17</sub> NO <sub>5</sub>
<b>Molecular Weight</b>	243.26

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<b>Appearance</b>	White powder
<b>Solubility</b>	Clear colorless solution (1 g/10 mL Ethyl acetate); Clear solution (1 g/10 mL Dichloromethane)
<b>Melting Point</b>	42.5 °C
<b>Optical Rotation</b>	[α] <sub>D</sub> <sup>22</sup> = +14.7° (C=1 in CHCl <sub>3</sub> )
<b><sup>13</sup>C NMR</b>	Conforms to structure
<b><sup>1</sup>H NMR</b>	Conforms to structure
<b>Purity by GC</b>	98.2%
<b>Chiral Purity</b>	99.9% (ee, GC)
<b>Storage</b>	Store at 0-8 °C
<b>Remarks</b>	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