

# Chem-Impex International, Inc.

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825 Dillon Drive

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## Certificate of Analysis

<b>Catalogue Number</b>	03269
<b>Lot Number</b>	000424-190816-16140
<b>Product</b>	<b>D-Alanine <i>tert</i>-butyl ester hydrochloride</b> D-Ala-OtBu•HCl
<b>CAS Number</b>	59531-86-1
<b>Molecular Formula</b>	C <sub>7</sub> H <sub>15</sub> NO <sub>2</sub> •HCl
<b>Molecular Weight</b>	181.7

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<b>Appearance</b>	White powder
<b>Solubility</b>	Clear solution (0.3 g in 2 mL Water)
<b>Elemental Analysis (Found)</b>	< 5% (C, H, N)
<b>Water Content (Karl Fisher)</b>	0.2%
<b>Optical Rotation</b>	[α] <sub>D</sub> <sup>20</sup> = - 1.1 ° (C=4 in DMF)
<b>Infrared Spectrum</b>	Conforms to structure
<b>Analysis by Mass Spectra</b>	Conforms to standard
<b>Loss on Drying</b>	0.26% (40 °C, 2h)
<b><sup>1</sup>H NMR</b>	Conforms to structure
<b>Purity by HPLC</b>	99.89%
<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**