

# Chem-Impex International, Inc.

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## Certificate of Analysis

<b>Catalogue Number</b>	16167
<b>Lot Number</b>	000129-13222
<b>Product</b>	<b>D-Glutamic acid <math>\gamma</math>-benzyl ester <math>\alpha</math>-<i>tert</i>-butyl ester hydrochloride</b> D-Glu(OBzl)-OtBu•HCl
<b>CAS Number</b>	90159-60-7
<b>Molecular Formula</b>	C <sub>19</sub> H <sub>23</sub> NO <sub>4</sub> •HCl
<b>Molecular Weight</b>	329.8

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<b>Appearance</b>	White crystalline powder
<b>Melting Point</b>	108-109 °C
<b>Optical Rotation</b>	[ $\alpha$ ] <sub>D</sub> <sup>20</sup> = -15.7° (C=2 in EtOH)
<b>Assay by titration</b>	99.8%
<b>L-Enantiomer</b>	< 0.1%
<b>Purity by HPLC</b>	99.6%
<b>Purity by TLC</b>	> 99%
<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