

# Chem-Impex International, Inc.

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825 Dillon Drive

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## Certificate of Analysis

<b>Catalogue Number</b>	29367
<b>Lot Number</b>	000630-20576
<b>Product</b>	<b>1,5-bis-Boc-1,5,9-triazanonane</b> N1,N4-bis-Boc-norspermidine
<b>CAS Number</b>	122248-82-2
<b>Molecular Formula</b>	C <sub>16</sub> H <sub>33</sub> N <sub>3</sub> O <sub>4</sub>
<b>Molecular Weight</b>	331.45

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<b>Appearance</b>	Colorless oil
<b>TLC System</b>	System 1: BuOH/H <sub>2</sub> O/AcOH: (4/1/1) Impurities < 3% System 2: CHCl <sub>3</sub> /MeOH/AcOH (120/10/5) Impurities < 3%
<b>Analysis by Mass Spectra</b>	[M+H] <sup>+</sup> = 332
<b><sup>13</sup>C NMR</b>	Conforms to structure
<b><sup>1</sup>H NMR</b>	Conforms to structure
<b>Purity by TLC</b>	> 97%
<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