

# Chem-Impex International, Inc.

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## Certificate of Analysis

<b>Catalogue Number</b>	37791
<b>Lot Number</b>	003537-20230315
<b>Product</b>	<b>(+)-cis-Diltiazem hydrochloride</b> (2S,3S)-(+)-3-Acetoxy-2,3-dihydro-5-[2-(dimethylamino)ethyl]-2-(4-
<b>CAS Number</b>	33286-22-5
<b>Molecular Formula</b>	C <sub>22</sub> H <sub>26</sub> N <sub>2</sub> O <sub>4</sub> S•HCl
<b>Molecular Weight</b>	450.98

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<b>Appearance</b>	White crystalline powder
<b>Melting Point</b>	213.1 - 213.5 °C
<b>Heavy Metals</b>	< 20 ppm
<b>pH</b>	4.9
<b>Optical Rotation</b>	[α] <sub>20D</sub> = 114 °
<b>Loss on Drying</b>	0.21%
<b>Related Substances</b>	Single impurity : 0.20% Total impurity : 0.55%
<b>Residue On Ignition</b>	0.02%
<b>Assay</b>	99.66 (On dried basis)
<b>Grade</b>	Meets USP Specification
<b>Storage</b>	Store at 2 - 8 °C
<b>Additional Information</b>	Identification : Test for A : Infrared spectrum : Conforms to structure Test for B : Passes test Test for C : Passes test
<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