



## CERTIFICATE OF ANALYSIS

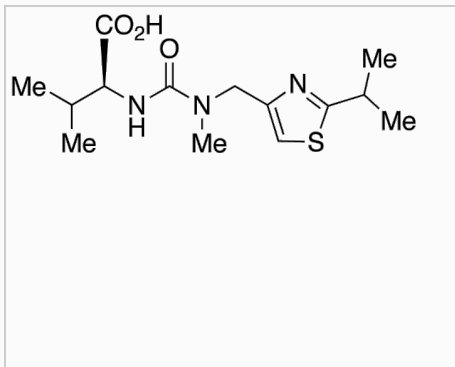
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### 1. Identification

**Catalogue Number:** M314850

**Product:** N-[[N-Methyl-N-[(2-isopropyl)-4-thiazolyl)methyl]amino]carbonyl-L-valine Carboxylic Acid

**Structure:**



**CAS Number:** 154212-61-0

**Synonym:** N-[[Methyl[[2-(1-methylethyl)-4-thiazolyl)methyl]amino]carbonyl]-L-valine; Ritonavir EP Impurity A;

**Molecular Formula:**

C<sub>14</sub>H<sub>23</sub>N<sub>3</sub>O<sub>3</sub>S

**Molecular weight:**

313.42

**Source of Product:**

N/A

**Solubility:**

Chloroform (Slightly),  
Methanol (Slightly)

**Lot Number:** 1-SYQ-120-1

**Purity:** 98%

**Shipping Condition:** This Product Is Stable To Be Shipped At Room Temperature

**Storage Condition:** 4°C

### 2. Warning

**Warning 1:** Not Determined

**Warning 2:**

**Warning 3:**

### 3. Analytical Information

Tests:	Specifications:	Results:
Appearance	Light Yellow to Beige Solid	Beige Solid
NMR	Conforms to Structure	Conforms
Elemental Analysis	Conforms	%C: 53.59, %H: 7.39, %N: 13.30
MS	Conforms to Structure	Conforms
HPLC Purity	>95%	99.68%

**Additional Information:** NA

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of  $\pm 2\%$ . Isotopic purity is based on mass distribution observed. The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.

### 4. Signatures

Reviewed By	Reviewed By	C of A Approved By	Test Date	Retest Date
Eric Beaton	Neha Khanna	Clarissa Santos	3/28/2019	3/26/2026