



## CERTIFICATE OF ANALYSIS

20 Martin Ross Avenue, North York, ON, M3J 2K8, CANADA  
Tel: (416) 665-9696, Fax: (416) 665-4439  
Email: orders.trc@lgcgroup.com Website: www.trc-canada.com

### 1. Identification

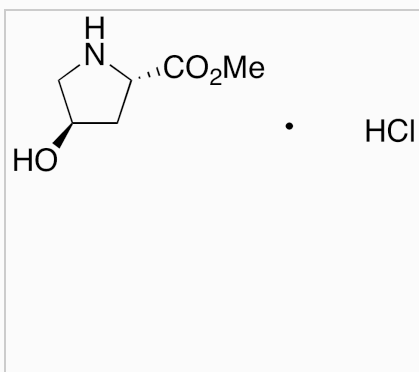
**Catalogue Number:** H952395

**CAS Number:** 40216-83-9

**Product:** trans-4-Hydroxy-L-proline Methyl Ester Hydrochloride

**Synonym:** L-Hydroxyproline Methyl Ester Hydrochloride; Methyl (2S,4R)-4-Hydroxy-2-pyrrolidinecarboxylate Hydrochloride; Methyl L-Hydroxyprolinate Hydrochloride; Methyl trans-4-Hydroxy-L-prolinate Hydrochloride; trans-4-Hydroxy-L-proline Methyl Ester Hydrochloride; trans-4-Hydroxyproline Methyl Ester Hydrochloride; 2S,4R)-Methyl 4-hydroxypyrrolidine-2-carboxylate Hydrochloride

**Structure:**



**Molecular Formula:**

C<sub>6</sub>H<sub>12</sub>ClNO<sub>3</sub>

**Molecular weight:**

181.62

**Source of Product:**

N/A

**Solubility:**

Methanol (Slightly), Water (Sparingly)

**Lot Number:** 2023-CPO-133

**Purity:** 97%

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

**Storage Condition:** -20°C

### 2. Warning

**Warning 1:**

**Warning 2:**

**Warning 3:**

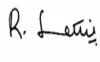
### 3. Analytical Information

| Tests:             | Specifications:          | Results:                      |
|--------------------|--------------------------|-------------------------------|
| Appearance         | White to Off-White Solid | White to Off-White Solid      |
| NMR                | Conforms to Structure    | Conforms                      |
| Elemental Analysis | Conforms                 | %C: 39.92, %H: 6.68, %N: 7.64 |
| HPLC Purity        | Report Result            | 97.44% (ELSD)                 |
| MS                 | Conforms to Structure    | Conforms                      |
| Chloride Content   | Report Result            | 20.8%                         |
| Specific Rotation  | Report Result            | -32.4° (c = 0.3, Water)       |
| C NMR              | Conforms to Structure    | Conforms                      |

**Additional Information:** N/A

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of ± 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 |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|-------------|
| swathi reddy                                                                      | Toni Rantanen                                                                     | Chanell Chu                                                                       | 8/9/2023  | 8/7/2027    |
|  |  |  |           |             |