



## 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

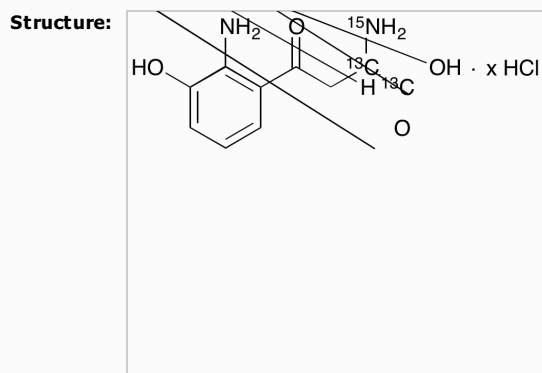
### 1. Identification

**Catalogue Number:** H943697

**CAS Number:** NA

**Product:** rac 3-Hydroxy Kynurenine-13C2,15N Hydrochloride Salt

**Synonym:**  $\alpha$ ,2-Diamino-3-hydroxy- $\gamma$ -oxobenzenebutanoic Acid-13C2,15N Hydrochloride Salt; 3-(3-Hydroxyanthraniloyl)alanine-13C2,15N; 3-Hydroxy-DL-kynurenine-13C2,15N Hydrochloride Salt; 3-Hydroxykynurenine-13C2,15N; DL-3-Hydroxykynurenine Hydrochloride Salt; Hydroxykynurenine-13C2,15N Hydrochloride Salt; NSC 96400-13C2,15N Hydrochloride Salt



**Molecular Formula:**

$C_8^{13}C_2H_{12}N^{15}NO_4 \cdot xHCl$

**Molecular weight:**

227.19 + x(36.46)

**Source of Product:**

Synthetic

**Solubility:**

Aqueous Acid (Slightly),  
Methanol (Slightly, Heated)

**Lot Number:** 2-ANF-125-1

**Purity:** 95%

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

**Storage Condition:** -20°C

### 2. Warning

**Warning 1:** Hygroscopic

**Warning 2:**

**Warning 3:**

### 3. Analytical Information

Tests:	Specifications:	Results:
Appearance	Dark Green to Very Dark Yellow Solid	Dark Green to Very Dark Yellow Solid
NMR	Conforms to Structure	Conforms
C NMR	Conforms to Structure	Conforms
Elemental Analysis	Conforms	%C: 47.20, %H: 5.08, %N: 10.89
MS	Conforms to Structure	Conforms
Isotopic Purity	>95%	98.7%
Specific Rotation	Report Result	-7.7° (c = 0.1, 1N HCl)
Chloride Content	Report Result	6.0%
HPLC Purity	Report Result	98.74% (230 nm)

**Additional Information:**

TLC Conditions: C18; Acetonitrile : Water : Ammonium Hydroxide = 8 : 2 : 1; Visualized with UV, Ninhydrin, and Naked Eye; Single Spot, Rf = 0.60. Elemental Analysis: (Theoretical) %C: 48.97, %H: 5.13, %N: 11.43 (for x = 0.5) Normalized Intensity: d0 = 0.07%, d1 = 0.10%, d2 = 3.63%, d3 = 96.20%

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**

<b>Reviewed By</b>	<b>Reviewed By</b>	<b>C of A Approved By</b>	<b>Test Date</b>	<b>Retest Date</b>
Eric Beaton	Toni Rantanen	My Nguyen	3/12/2020	3/10/2027
				