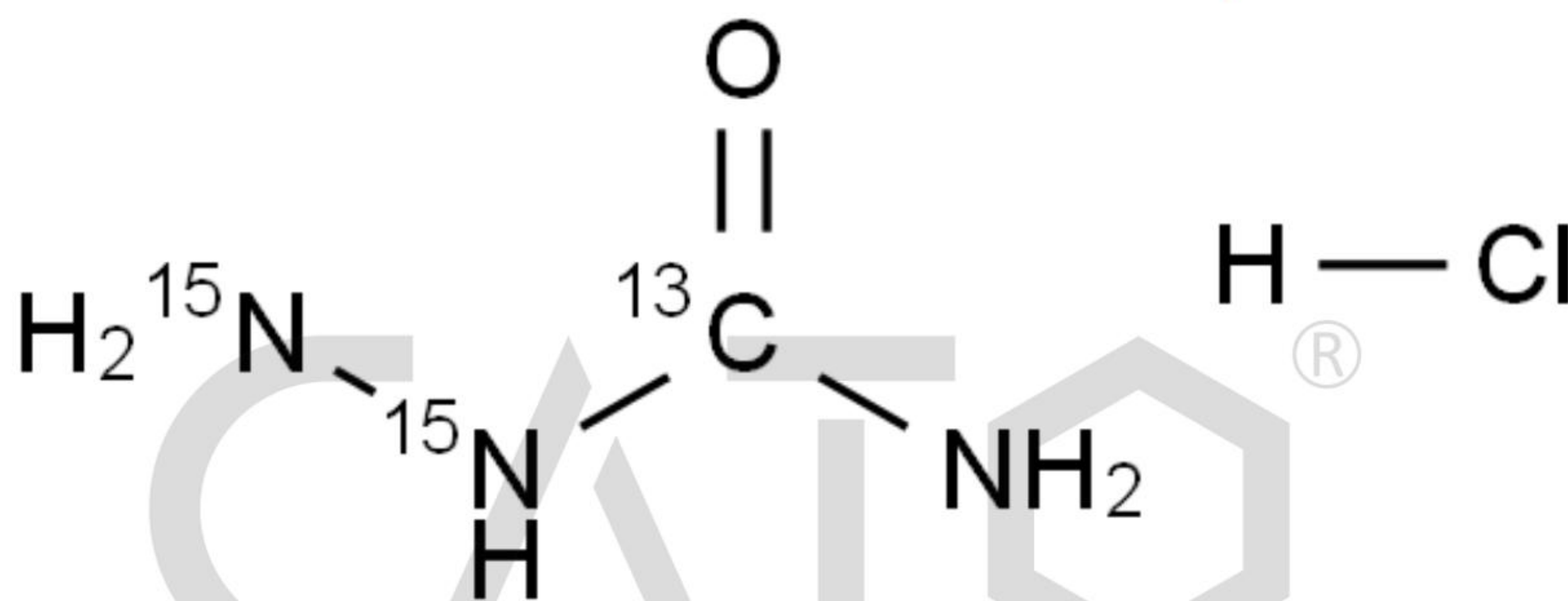


Certificate of Analysis

Reference Material & Standard

Product Name:	Semicarbazide-13C,15N2 Hydrochloride	Catalogue Number:	CCAD300656
Synonyms:	N/A	Lot Number:	0122-RG-0009
CAS Number:	1173020-16-0	Expiry Date:	Jan 04, 2027
Molecular Formula:	[13C]H5N[15N]2O HCl	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	78.05 36.46	Warning:	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White Crystalline Solid
Identification	HNMR	Confirmed
Chemical Purity	HPLC	99.8%
Isotopic Purity		98.0% 15N; 99.0% 13C
Residual Solvents	NMR	0.7% ethanol
Uncertainty		±2.0%

Comment:

The uncertainty values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Signature:

Prepared by:

Lisa

Reviewed by:

Hinlam

Approved by General Manager:

David

Date: Jan 24, 2025

Date: Jan 24, 2025

Date: Jan 24, 2025

