

Certificate of Analysis

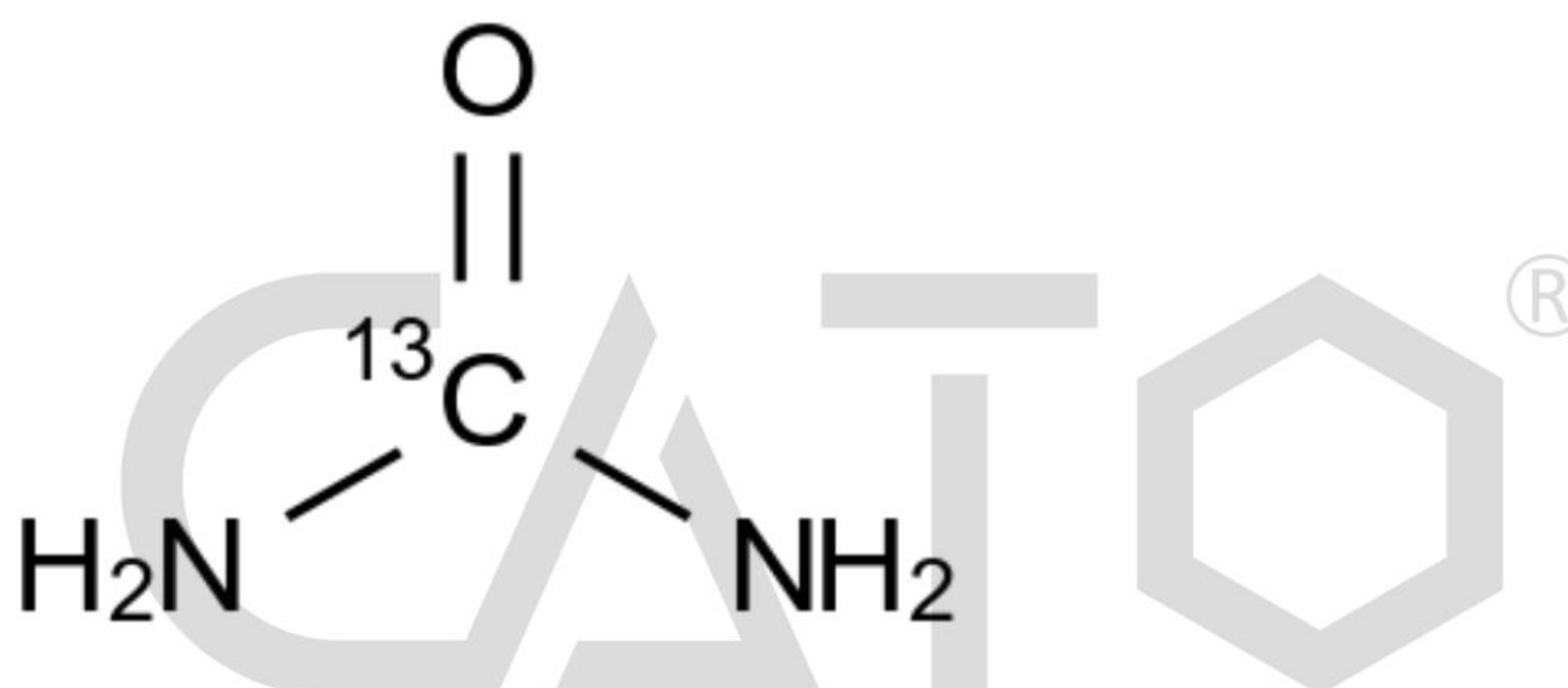
Reference Material & Standard

Product Name:	Urea-13C	Catalogue Number:	CCFD202103
Synonyms:	N/A	Lot Number:	0226-RH-0071
CAS Number:	58069-82-2	Expiry Date:	Feb 23, 2029
Molecular Formula:	[13C]H ₄ N ₂ O	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	61.05	Shipping Condition:	Shipping at Room Temperature

Warning:



Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White to Off-White Solid
Chemical Purity	HPLC	99.1%
Isotopic Purity		99.7%
Water Content	Karl Fischer	0.10%
Assay		99.0%
Uncertainty		±0.3%

Comment:

1. The calculation of the mass balance method follows the formula (calculated on the non-dried basis):

$\text{Assay (\%)} = (100\% - \text{Water Content}) * \text{Purity HPLC (\%)} / 100\%$

Water Content is considered as absolute effect, HPLC purity is considered as relative effect.

2. 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:

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Approved by General Manager:

David

Date: Mar 03, 2026

Date: Mar 04, 2026

Date: Mar 04, 2026

