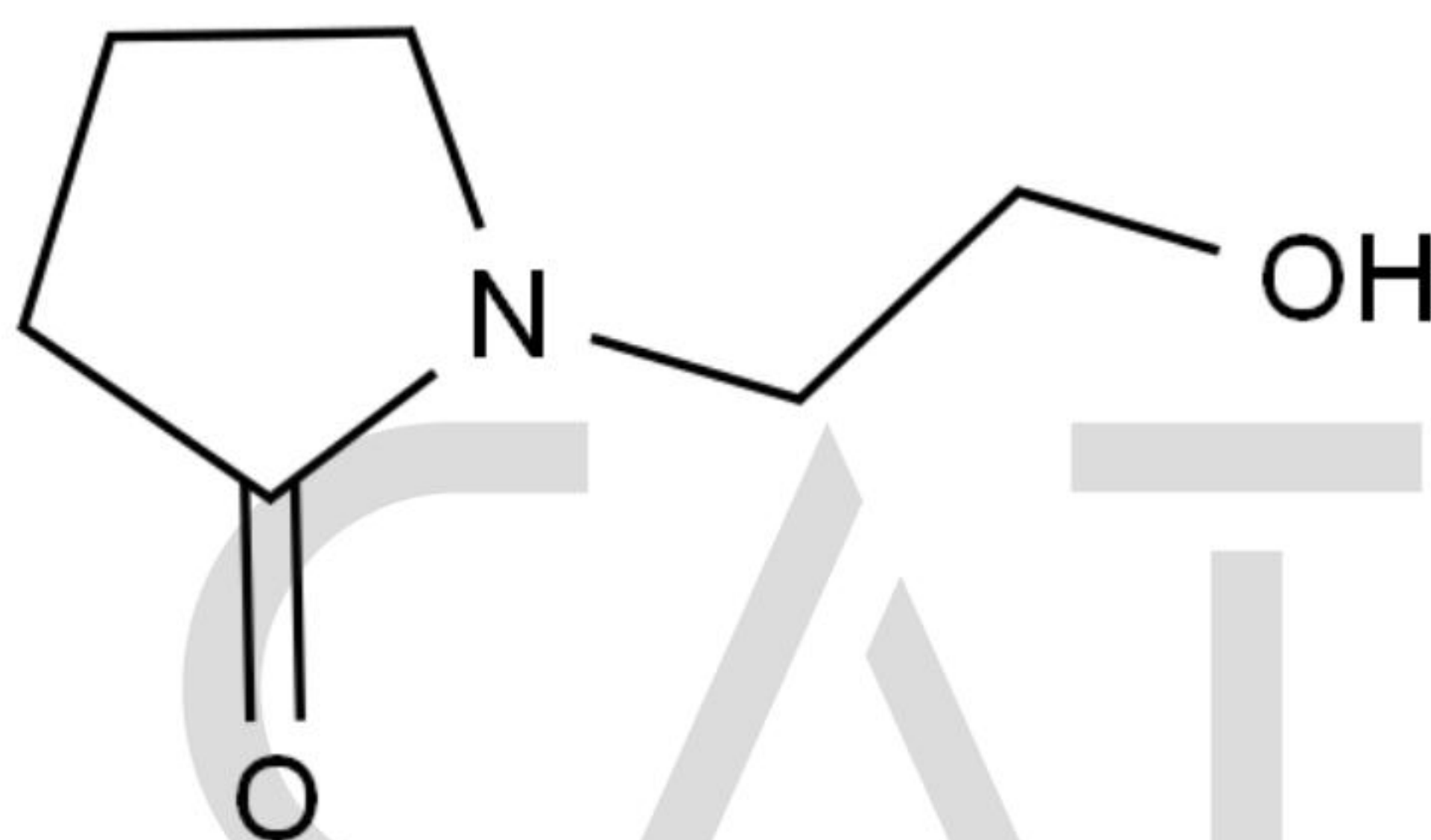


Certificate of Analysis

Reference Material & Standard

Product Name:	1-(2-Hydroxyethyl)-2-pyrrolidone	Catalogue Number:	CCHM704974
Synonyms:	N/A	Lot Number:	1110-RE-0059
CAS Number:	3445-11-2	Expiry Date:	Nov 13, 2027
Molecular Formula:	C ₆ H ₁₁ NO ₂	Storage:	Room Temp Protected from light and Sealed
Molecular Weight:	129.16	Warning:	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Colourless Liquid
Identification	GCMS&HNMR	Confirmed
Purity	GC	99.7%
Assay	qNMR	98.0%
Uncertainty		±2.0%

Comment:

1. Assay was determined by quantitative ¹H-NMR.
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:

Prepared by:

Nice

Reviewed by:

Lisa

Aproved by General Manager:

David

Date: Nov 14, 2023

Date: Nov 14, 2023

Date: Nov 14, 2023

