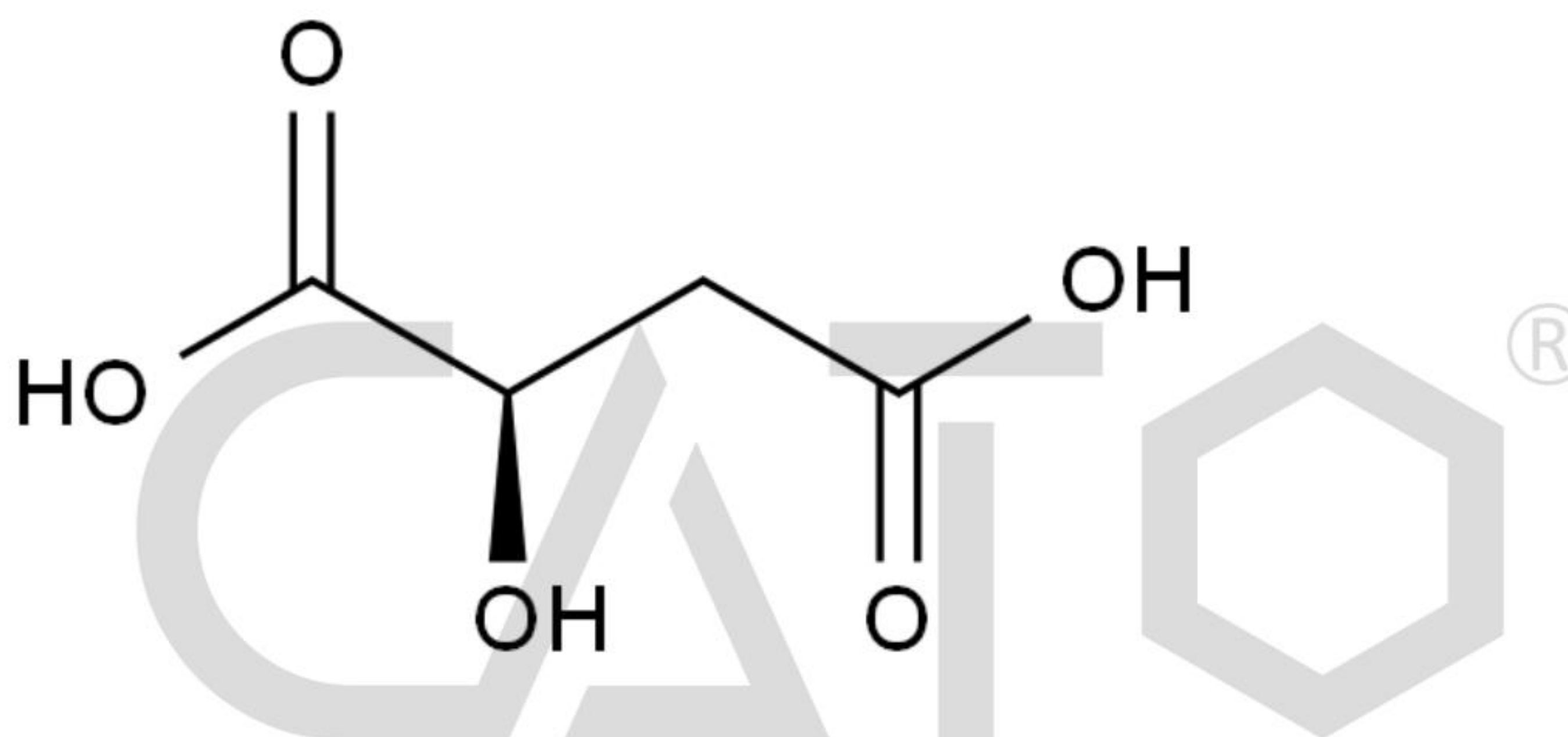


Certificate of Analysis

Reference Material & Standard

Product Name:	D-(+)-Malic Acid	Catalogue Number:	CCFD200572
Synonyms:	N/A	Lot Number:	0523-RF-0033
CAS Number:	636-61-3	Expiry Date:	Jun 02, 2028
Molecular Formula:	C ₄ H ₆ O ₅	Storage:	Room Temp Protected from light and Sealed
Molecular Weight:	134.09	Warning:	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White Solid
Identification	LCMS&HNMR	Confirmed
Purity	ELSD	100.0%
Assay	qNMR	97.7%
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

Approved by General Manager:

David

Date: Jun 03, 2024

Date: Jun 03, 2024

Date: Jun 03, 2024

