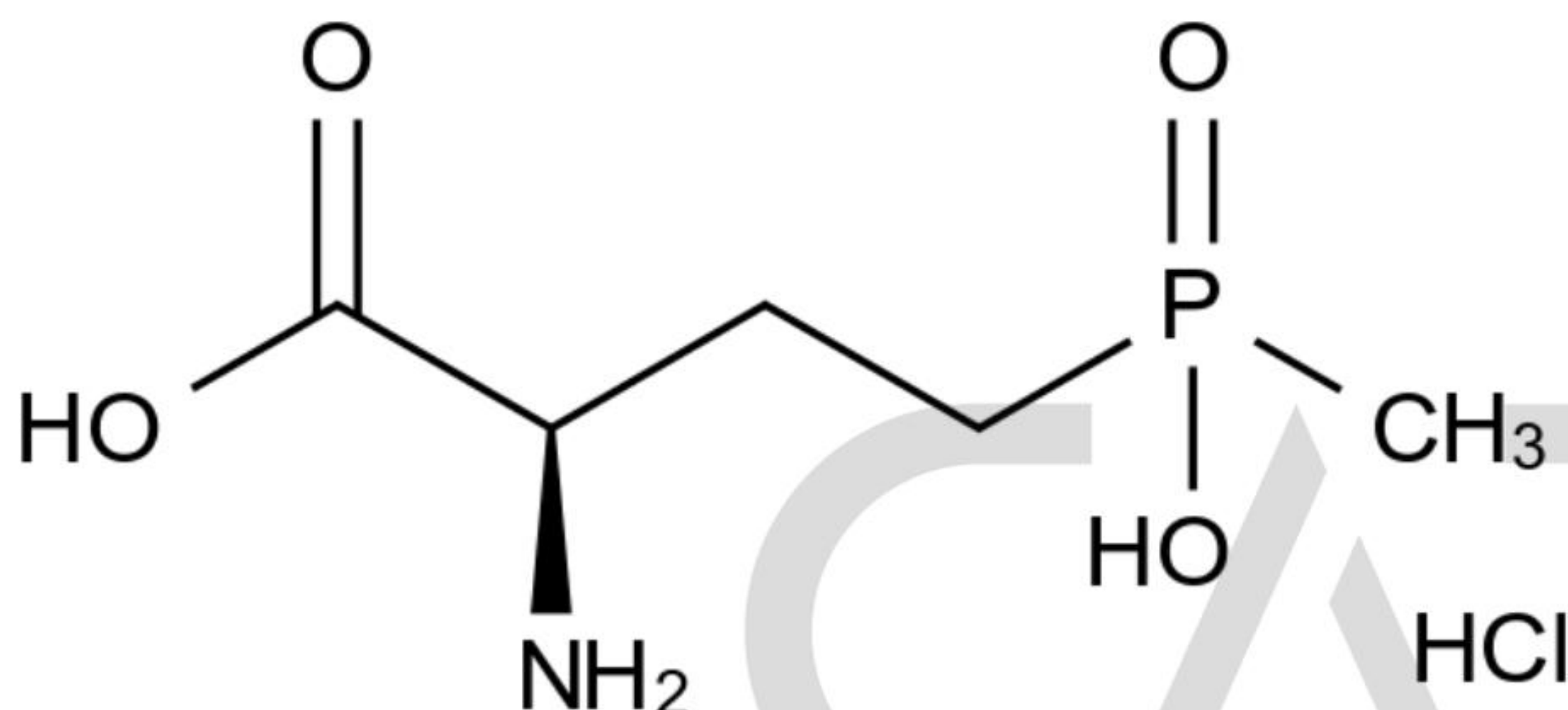


Certificate of Analysis

Reference Material & Standard

Product Name:	D-Glufosinate HCl	Catalogue Number:	CCPD103485
Synonyms:	N/A	Lot Number:	1018-RE-0003
CAS Number:	104361-75-3	Expiry Date:	Sep 20, 2026
Molecular Formula:	C ₅ H ₁₂ NO ₄ P HCl	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	181.13 36.46	Warning:	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White to Off-White Solid
Identification	LCMS&IR&HNMR	Confirmed
Purity	ELSD	98.8%
Optical Rotation		[α] _D ^{23.0} (c=0.43, 1N HCl(aq)): -20.3°
Assay	qNMR	88.3%
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:

Lisa

Reviewed by:

Hinlam

Aporoved by General Manager:

David

Date: Oct 18, 2023

Date: Oct 19, 2023

Date: Oct 19, 2023

