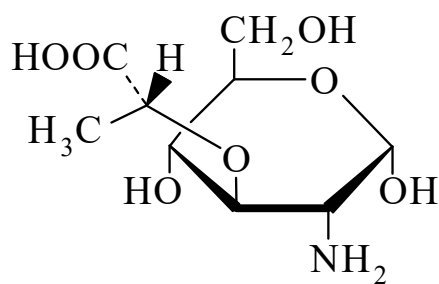




>>Entry Name: Muramic acid

Synonym(s): 2-Amino-3-*O*-(1-carboxyethyl)-2-deoxyglucose, 9Cl. 3-*O*-(1-Carboxyethyl)-glucosamine



α -D-Pyranose-form

Related CAS Registry Numbers(s): 40461-66-3 40525-29-9

Molecular Formula: C₉H₁₇NO₇

Molecular Weight: 251.236

Accurate Mass: 251.100504

Percentage Composition: C 43.03%; H 6.82%; N 5.58%; O 44.58%

>>Variant: D-form

CAS Registry Number: 1114-41-6

Molecular Formula: C₉H₁₇NO₇

Molecular Weight: 251.236

Accurate Mass: 251.100504

Percentage Composition: C 43.03%; H 6.82%; N 5.58%; O 44.58%

Biological Source: Component of bacterial cell walls

Physical Description: Cryst. (EtOH aq.)

Melting Point: Mp 160-162 dec.°

Optical Rotation: [α]_D²²+146 → +116 (c, 0.57 in H₂O)

Aldrich: 17043-7

Fluka: 70005

Sigma: M8160

>>Derivative: N-Ac

Synonym(s): Acetylmuramic acid

CAS Registry Number: 10597-89-4

Molecular Formula: C₁₁H₁₉NO₈

Molecular Weight: 293.273

Accurate Mass: 293.111069

Percentage Composition: C 45.05%; H 6.53%; N 4.78%; O 43.64%

Biological Source: Component of bacterial cell walls

Physical Description: Prisms (EtOAc/MeOH)

Melting Point: Mp 119-120°

Optical Rotation: [α]_D²⁰+60 → +40 (c, 1.2 in H₂O)

Aldrich: 85290-2

Fluka: 1355

Sigma: A3007

>>Derivative: 1'-Epimer

Synonym(s): Isomuramic acid

Molecular Formula: C₉H₁₇NO₇

Molecular Weight: 251.236

Accurate Mass: 251.100504

Percentage Composition: C 43.03%; H 6.82%; N 5.58%; O 44.58%

Melting Point: Mp 130-131°

Optical Rotation: [α]_D²⁵+40 (c, 0.8 in H₂O)

>>Derivative: 1'-Epimer, N-Ac

Synonym(s): N-Acetylisomuramic acid