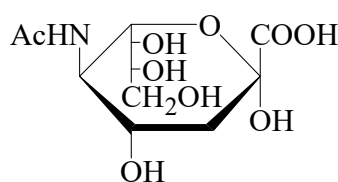




>>Entry Name: *N*-Acetylneuraminic acid

ENTRY UNDER REVIEW

Synonym(s): 5-(Acetylamino)-3,5-dideoxy-D-*glycero*-D-*galacto*-2-nonulosonic acid, 9Cl. *O*-Sialic acid. **Aceneuramic acid**, INN. Lactaminic acid. Gynaminic acid. Serolactaminic acid. KI 111. NANA. Neu5Ac. Neu5NAc



α -D-Pyranose-*form*

CAS Registry Number: 131-48-6

Related CAS Registry Numbers(s): 19342-33-7 126934-33-6

Molecular Formula: C₁₁H₁₉NO₉

Molecular Weight: 309.272

Accurate Mass: 309.105984

Percentage Composition: C 42.72%; H 6.19%; N 4.53%; O 46.56%

General Statement: See also Sialic acids [BXM23-E](#)

Biological Source: Isol. from eggs, milk, colostrum, submaxillary mucin and meconium by acid or enzymic hydrol. of the constit. sialoproteins and oligosaccharides. Present in urine of patients with sialuria. Most abundant source is Collocalia mucoid, the nest cementing glycoprotein substance of the Chinese Swiftlet

Use/Importance: Chiral synthon

Biological Use/Importance: Antiinflammatory, antiviral and antitussive agent. Involved with blood protein half-life regulation, bacterial adhesion, toxin neutralisation, glycoprotein lytic protection

Melting Point: Mp 185-187 dec.°

Optical Rotation: [α]_D²² -32 (H₂O)

Other Data: The only sialic acid formed in human tissues. Store below 0° in the dark

Aldrich: 85565-0

Fluka: 1401

Sigma: A2751

Other: CarboMer Inc.

>>Derivative: Me ester

Synonym(s): Methyl *N*-acetylneuramate

Molecular Formula: C₁₂H₂₁NO₉

Molecular Weight: 323.299

Accurate Mass: 323.121634

Percentage Composition: C 44.58%; H 6.55%; N 4.33%; O 44.54%

Melting Point: Mp 194-195°

Optical Rotation: [α]_D -28 (c, 3.5 in H₂O)

>>Derivative: 4-Ac

Molecular Formula: C₁₃H₂₁NO₁₀

Molecular Weight: 351.31

Accurate Mass: 351.116549

Percentage Composition: C 44.45%; H 6.02%; N 3.99%; O 45.54%

Melting Point: Mp 199-200°

Optical Rotation: [α]_D -62 (H₂O)

>>Derivative: 7-Ac

Synonym(s): *B*-Sialic acid

Molecular Formula: C₁₃H₂₁NO₁₀

Molecular Weight: 351.31

Accurate Mass: 351.116549

Percentage Composition: C 44.45%; H 6.02%; N 3.99%; O 45.54%

Melting Point: Mp 138-140°

Optical Rotation: [α]_D +6