



Physical Description: Cryst. (CH₂Cl₂/petrol)

Melting Point: Mp 133°

Optical Rotation: $[\alpha]_{\text{D}}^{23} +28$ (CHCl₃)

>> **Derivative:** *N*⁵-Benzyloxycarbonyl, *N*²-*tert*-butyloxycarbonyl

CAS Registry Number: 2480-93-5

Molecular Formula: C₁₈H₂₆N₂O₆

Molecular Weight: 366.413

Accurate Mass: 366.179088

Percentage Composition: C 59.00%; H 7.15%; N 7.65%; O 26.20%

Physical Description: Cryst.

Melting Point: Mp 95-97°

Optical Rotation: $[\alpha]_{\text{D}}^{20} -3.1$ (c, 1.0 in AcOH)

>> **Derivative:** *N*⁵-Benzyloxycarbonyl, *N*²-*tert*-butyloxycarbonyl, Me ester

CAS Registry Number: 2480-95-7

Molecular Formula: C₁₉H₂₈N₂O₆

Molecular Weight: 380.44

Accurate Mass: 380.194738

Percentage Composition: C 59.99%; H 7.42%; N 7.36%; O 25.23%

Physical Description: Cryst. (Et₂O/petrol)

Melting Point: Mp 70-71°

Optical Rotation: $[\alpha]_{\text{D}} -10.5$ (c, 1.0 in MeOH)

>> **Derivative:** *N*⁵-Benzyloxycarbonyl, *N*²-*tert*-butyloxycarbonyl, *tert*-butyl ester

CAS Registry Number: 53054-02-7

Molecular Formula: C₂₂H₃₄N₂O₆

Molecular Weight: 422.52

Accurate Mass: 422.241688

Percentage Composition: C 62.54%; H 8.11%; N 6.63%; O 22.72%

Physical Description: Viscous oil

Optical Rotation: $[\alpha]_{\text{D}} -14.66$ (c, 1.03 in MeOH)

>> **Derivative:** *N*⁵-Benzyloxycarbonyl, *N*²-*tert*-butyloxycarbonyl, 2,4,6-trichlorophenyl ester

CAS Registry Number: 70830-95-4

Molecular Formula: C₂₄H₂₇Cl₃N₂O₆

Molecular Weight: 545.845

Accurate Mass: 544.093469

Percentage Composition: C 52.81%; H 4.99%; Cl 19.49%; N 5.13%; O 17.59%

Physical Description: Cryst. (Et₂O/petrol)

Melting Point: Mp 114-115°

Optical Rotation: $[\alpha]_{\text{D}}^{20} -24$ (c, 1 in MeOH)

>> **Derivative:** *N*²,*N*⁵-Bis(benzyloxycarbonyl)

CAS Registry Number: 2274-58-0

Molecular Formula: C₂₁H₂₄N₂O₆

Molecular Weight: 400.43

Percentage Composition: C 62.99%; H 6.04%; N 7.00%; O 23.97%

Physical Description: Cryst. (Et₂O/petrol)

Melting Point: Mp 112-114°

Optical Rotation: $[\alpha]_{\text{D}}^{20} -4$ (c, 3 in MeOH)

>> **Derivative:** *N*²,*N*⁵-Bis(benzyloxycarbonyl), Me ester

Molecular Formula: C₂₂H₂₆N₂O₆

Molecular Weight: 414.457

Accurate Mass: 414.179088

Percentage Composition: C 63.76%; H 6.32%; N 6.76%; O 23.16%

Physical Description: Cryst. (CHCl₃/petrol)

Melting Point: Mp 71-72°