



Optical Rotation: $[\alpha]_{\text{D}}^{20} +19.5$ (EtOH)

>> **Derivative:** *N*-Benzenesulfonyl, Et ester

CAS Registry Number: 191792-79-7

Molecular Formula: $\text{C}_{13}\text{H}_{19}\text{NO}_4\text{S}$

Molecular Weight: 285.363

Accurate Mass: 285.103479

Percentage Composition: C 54.72%; H 6.71%; N 4.91%; O 22.43%; S 11.24%

Physical Description: Cryst. (petrol)

Melting Point: Mp 56°

Optical Rotation: $[\alpha]_{\text{D}}^{20} -1.04$ (EtOH)

>> **Derivative:** *N*-4-Methylbenzenesulfonyl

CAS Registry Number: 17360-25-7

Molecular Formula: $\text{C}_{12}\text{H}_{17}\text{NO}_4\text{S}$

Molecular Weight: 271.337

Accurate Mass: 271.087829

Percentage Composition: C 53.12%; H 6.31%; N 5.16%; O 23.59%; S 11.82%

Physical Description: Needles (EtOH aq.)

>> **Derivative:** *N*-4-Methylbenzenesulfonyl, Et ester

Molecular Formula: $\text{C}_{14}\text{H}_{21}\text{NO}_4\text{S}$

Molecular Weight: 299.39

Accurate Mass: 299.119129

Percentage Composition: C 56.17%; H 7.07%; N 4.68%; O 21.38%; S 10.71%

Physical Description: Cryst. (petrol)

Melting Point: Mp 59°

Optical Rotation: $[\alpha]_{\text{D}}^{20} +3.99$ (EtOH)

>> **Derivative:** *N*-Me

CAS Registry Number: 2480-23-1

Biological Source: Constit. of Enniatins and other antibiotics

Physical Description: Cryst. (EtOH aq.)

Melting Point: Mp 300° (265°)

Optical Rotation: $[\alpha]_{\text{D}}^{25} +29.3$ (6*M* HCl)

>> **Derivative:** *N*-Me; hydrochloride

Melting Point: Mp 171-173°

Optical Rotation: $[\alpha]_{\text{D}}^{20} +26.5$

>> **Derivative:** *N*-Me; hydrobromide

Melting Point: Mp 183-184°

Optical Rotation: $[\alpha]_{\text{D}}^{20} +22.6$

>> **Derivative:** *N*-Tri-Me, betaine

Molecular Formula: $\text{C}_8\text{H}_{17}\text{NO}_2$

Molecular Weight: 159.228

Accurate Mass: 159.125929

Percentage Composition: C 60.35%; H 10.76%; N 8.80%; O 20.10%

Biological Source: Isol. from *Callista brevisiphonata* and *Aturia pectinata*