



Biological Source: Isol. from acorns of *Quercus mongolica*

Physical Description: Needles + 1½H₂O

Melting Point: Mp 143-145°

Optical Rotation: $[\alpha]_{\text{D}}^{17} -47.5$ (c, 0.5 in MeOH)

>>Variant: (1*R**,2*R**)-form

Synonym(s): *threo*-form

Molecular Formula: C₁₀H₁₄O₅

Molecular Weight: 214.218

Accurate Mass: 214.084125

Percentage Composition: C 56.07%; H 6.59%; O 37.34%

Biological Source: Isol. from extracts of *Pinus* spp. A degradn. prod. of lignin

Use/Importance: Intermed. in lignin biosynth.

Optical Rotation: $[\alpha]_{\text{D}}^{22} -18$

>>Variant: (1*R*S,2*R*S)-form

Synonym(s): (±)-*threo*-form

CAS Registry Number: 27391-16-8

Molecular Formula: C₁₀H₁₄O₅

Molecular Weight: 214.218

Accurate Mass: 214.084125

Percentage Composition: C 56.07%; H 6.59%; O 37.34%

Biological Source: Constit. of *Eucommia ulmoides*, *Picea* spp., *Pinus* spp. and *Scorodocarpus borneensis*

Physical Description: Syrup

>>Derivative: 1-*O*-β-D-Glucopyranoside

Molecular Formula: C₁₆H₂₄O₁₀

Molecular Weight: 376.36

Accurate Mass: 376.13695

Percentage Composition: C 51.06%; H 6.43%; O 42.51%

Biological Source: Isol. from *Pinus sylvestris* needles

Physical Description: Cryst.

Melting Point: Mp 162-166°

Optical Rotation: $[\alpha]_{\text{D}}^{22} +45$

>>Derivative: 2-*O*-β-D-Glucopyranoside

Molecular Formula: C₁₆H₂₄O₁₀

Molecular Weight: 376.36

Accurate Mass: 376.13695

Percentage Composition: C 51.06%; H 6.43%; O 42.51%

Biological Source: Isol. from *Pinus sylvestris* needles

Physical Description: Amorph.

Optical Rotation: $[\alpha]_{\text{D}}^{22} -16$

>>Derivative: Tetra-Ac

CAS Registry Number: 14065-28-2

Molecular Formula: C₁₈H₂₂O₉

Molecular Weight: 382.366

Accurate Mass: 382.126385

Percentage Composition: C 56.54%; H 5.80%; O 37.66%

Melting Point: Mp 113-114°