



>>Derivative: 1-Me

Synonym(s): 1-*O*-Methyl-D-*chiro*-inositol

CAS Registry Number: 58769-21-4

Molecular Formula: C<sub>7</sub>H<sub>14</sub>O<sub>6</sub>

Molecular Weight: 194.184

Accurate Mass: 194.07904

Percentage Composition: C 43.30%; H 7.27%; O 49.44%

Biological Source: Present in *Afrormosia elata*

Melting Point: Mp 207-208°

Optical Rotation:  $[\alpha]_{\text{D}}^{20} +60.7$  (c, 2 in H<sub>2</sub>O)

>>Derivative: 1-Me, penta-Ac

Synonym(s): 2,3,4,5,6-Penta-*O*-acetyl-1-*O*-methyl-*chiro*-inositol

Molecular Formula: C<sub>17</sub>H<sub>24</sub>O<sub>11</sub>

Molecular Weight: 404.37

Accurate Mass: 404.131865

Percentage Composition: C 50.50%; H 5.98%; O 43.52%

Melting Point: Mp 111-112°

Optical Rotation:  $[\alpha]_{\text{D}}^{19} +29.1$  (c, 2 in CHCl<sub>3</sub>)

>>Derivative: 3-Me

Synonym(s): 3-*O*-Methyl-D-*chiro*-inositol. D-**Pinitol**. Matezitol. Sennitol. Cathartomannitol

CAS Registry Number: 10284-63-6

Molecular Formula: C<sub>7</sub>H<sub>14</sub>O<sub>6</sub>

Molecular Weight: 194.184

Accurate Mass: 194.07904

Percentage Composition: C 43.30%; H 7.27%; O 49.44%

Biological Source: Widely distributed in plants. Produced on a large scale from the heartwood of *Pinus lambertiana*

Use/Importance: Use as a synthetic precursor

Biological Use/Importance: Shows hypoglycaemic and antidiabetic activity. Feeding stimulant for larvae of butterfly *Eurema hecabe mandarina*, inhibitor of *Heliothis zea* larval growth

Melting Point: Mp 185-186°

Optical Rotation:  $[\alpha]_{\text{D}}^{20} +67$  (c, 2.5 in H<sub>2</sub>O)

Aldrich: 44125-2

>>Derivative: 3-Me, 2-*O*-[α-D-galactopyranosyl-(1→6)-α-D-galactopyranosyl-(1→6)-α-D-galactopyranoside]

CAS Registry Number: 136788-71-1

Molecular Formula: C<sub>25</sub>H<sub>44</sub>O<sub>21</sub>

Molecular Weight: 680.61

Accurate Mass: 680.237515

Percentage Composition: C 44.12%; H 6.52%; O 49.37%

>>Derivative: 3-Me, 1,2:5,6-di-*O*-isopropylidene

Synonym(s): 1,2:5,6-Di-*O*-isopropylidene-3-*O*-methyl-D-*chiro*-inositol

Molecular Formula: C<sub>13</sub>H<sub>22</sub>O<sub>6</sub>

Molecular Weight: 274.313

Accurate Mass: 274.14164

Percentage Composition: C 56.92%; H 8.08%; O 35.00%

Melting Point: Mp 105-106°

Optical Rotation:  $[\alpha]_{\text{D}}^{23} -45.4$  (CHCl<sub>3</sub>)

>>Derivative: 4-Me, 2-*O*-α-D-galactopyranoside

Synonym(s): Galactopinitol A

CAS Registry Number: 64290-91-1