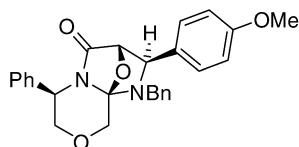


Stereochemistry abstracts

Yu Gan, Laurence M. Harwood*, Simon C. Richards, Ian E.D. Smith, Victoria Vinader

Tetrahedron: Asymmetry 20 (2009) 723



$C_{27}H_{26}N_2O_4$

(1R,5R,8S,9R)-10-Benzyl-9-(4-methoxyphenyl)-5-phenyl-6,10-diaza-3,11-dioxatricyclo[6.2.1.0^{1,6}]undecan-7-one

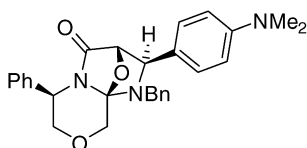
$[\alpha]_D^{20} = -212.7$ (c 0.5 CHCl₃)

Source of chirality: chiral auxiliary

Absolute configuration: (1R,5R,8S,9R)

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$C_{28}H_{29}N_3O_3$

(1R,5R,8S,9R)-10-Benzyl-9-(4-dimethylaminophenyl)-5-phenyl-6,10-diaza-3,11-dioxatricyclo[6.2.1.0^{1,6}]undecan-7-one

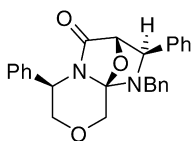
$[\alpha]_D^{20} = -128.2$ (c 1.6 CHCl₃)

Source of chirality: chiral auxiliary

Absolute configuration: (1R,5R,8S,9R)

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$C_{26}H_{24}N_2O_3$

(1R,5R,8S,9R)-10-Benzyl-5,9-diphenyl-6,10-diaza-3,11-dioxatricyclo[6.2.1.0^{1,6}]undecan-7-one

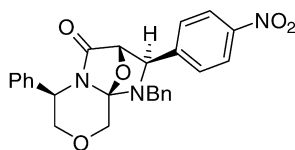
$[\alpha]_D^{20} = -175.2$ (c 0.4 CHCl₃)

Source of chirality: chiral auxiliary

Absolute configuration: (1R,5R,8S,9R)

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$C_{26}H_{23}N_3O_5$

(1R,5R,8S,9R)-10-Benzyl-9-(4-nitrophenyl)-5-phenyl-6,10-diaza-3,11-dioxatricyclo[6.2.1.0^{1,6}]undecan-7-one

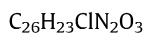
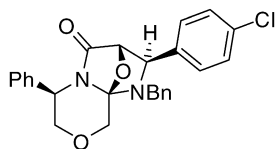
$[\alpha]_D^{20} = -224.7$ (c 0.7 CHCl₃)

Source of chirality: chiral auxiliary

Absolute configuration: (1R,5R,8S,9R)

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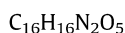
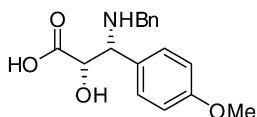


(1R,5R,8S,9R)-10-Benzyl-9-(4-chlorophenyl)-5-phenyl-6,10-diaza-3,11-dioxatricyclo[6.2.1.0^{1,6}]undecan-7-one

$[\alpha]_D^{20} = -127.9$ (c 1.8 $CHCl_3$)
Source of chirality: chiral auxiliary
Absolute configuration: (1R,5R,8S,9R)

Yu Gan, Laurence M. Harwood*, Simon C. Richards, Ian E.D. Smith, Victoria Vinader

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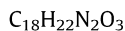
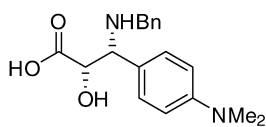


(2S,3R)-3-Benzylamino-2-hydroxy-3-(4-methoxyphenyl)propionic acid

$[\alpha]_D^{20} = -31.7$ (c 1.0 MeOH)
Source of chirality: chiral auxiliary
Absolute configuration: (2S,3R)

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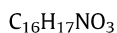
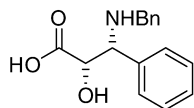


(2S,3R)-3-Benzylamino-3-(4-dimethylaminophenyl)-2-hydroxypropionic acid

$[\alpha]_D^{20} = -45.6$ (c 0.4 MeOH)
Source of chirality: chiral auxiliary
Absolute configuration: (2S,3R)

Yu Gan, Laurence M. Harwood*, Simon C. Richards, Ian E.D. Smith, Victoria Vinader

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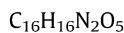
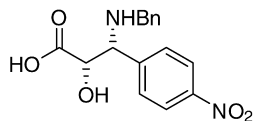


(2S,3R)-3-Benzylamino-2-hydroxy-3-phenylpropionic acid

$[\alpha]_D^{20} = -33.8$ (c 1.3 MeOH)
Source of chirality: chiral auxiliary
Absolute configuration: (2S,3R)

Yu Gan, Laurence M. Harwood*, Simon C. Richards, Ian E.D. Smith, Victoria Vinader

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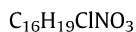
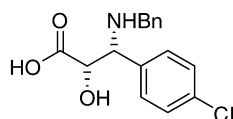


(2S,3R)-3-Benzylamino-2-hydroxy-3-(4-nitrophenyl)propionic acid

$[\alpha]_D^{20} = -46.6$ (c 1.5 MeOH)
Source of chirality: chiral auxiliary
Absolute configuration: (2S,3R)

Yu Gan, Laurence M. Harwood*, Simon C. Richards, Ian E.D. Smith, Victoria Vinader

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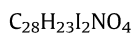
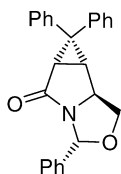


(2S,3R)-3-Benzylamino-3-(4-chlorophenyl)-2-hydroxypropionic acid

$[\alpha]_D^{20} = -50.1$ (c 0.4 MeOH)
Source of chirality: chiral auxiliary
Absolute configuration: (2S,3R)

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley, Mark G. Moloney*

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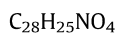
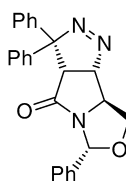


7,7-Diphenyl-9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0.4]nonan-2-one

$[\alpha]_D = -30.2$ (c 6.3, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R)

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley, Mark G. Moloney*

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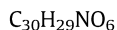
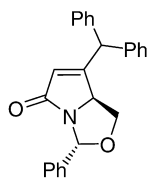


7,8-Diaza-2-oxa-3,6a,6a-triphenyl-1,2,3,5a,6,8b-hexahydrocyclopenta[a]pyrrolizin-5(8aH)-one

$[\alpha]_D = +235.6$ (c 3, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R)

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley, Mark G. Moloney*

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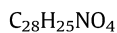
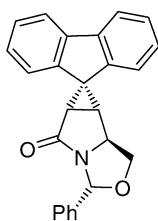


6-benzhydryl-8-oxo-2-phenyl-1-aza-3-oxa-bicyclo[3.3.0]oct-6-ene

$[\alpha]_D = -69.7$ (c 1, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R)

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley, Mark G. Moloney*

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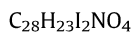
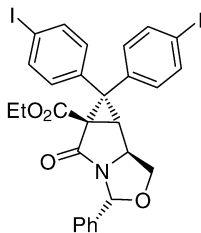


Spiro[9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0,4,5.0,6,8]nonan-2-one-7,9'-fluorene]

$[\alpha]_D = +195.3$ (c 1, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S)

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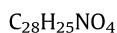
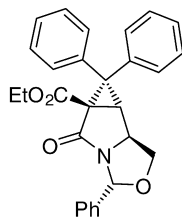


7,7-Di(p-iodophenyl)-8-ethoxycarbonyl-9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0,4,5.0,6,8]nonan-2-one

$[\alpha]_D = -30.2$ (c 6.3, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R)

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley, Mark G. Moloney*

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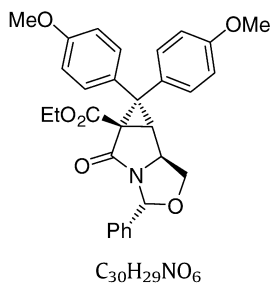


7,7-Di(p-iodophenyl)-8-ethoxycarbonyl-9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0,4,5.0,6,8]nonan-2-one

$[\alpha]_D = +235.6$ (c 3, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R)

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley,
Mark G. Moloney*

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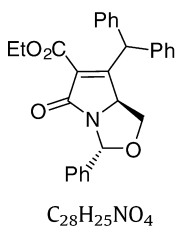


$[\alpha]_D = -69.7$ (c 1, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R)

7,7-Diphenyl-8-ethoxycarbonyl-9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0.4, 5.06, 8]nonan-2-one

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley,
Mark G. Moloney*

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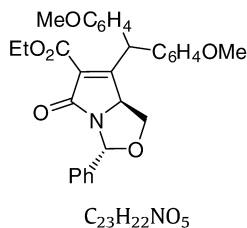


$[\alpha]_D = +195.3$ (c 1, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S)

6-Benzhydryl-7-ethoxycarbonyl-8-oxo-2-phenyl-1-aza-3-oxa-bicyclo[3.3.0]oct-6-ene

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley,
Mark G. Moloney*

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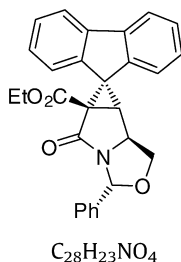


$[\alpha]_D = +31.7$ (c 2.2, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S)

6-(Dimethoxy)benzhydryl-7-ethoxycarbonyl-8-oxo-2-phenyl-1-aza-3-oxabicyclo[3.3.0]oct-6-ene

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Mark G. Moloney*

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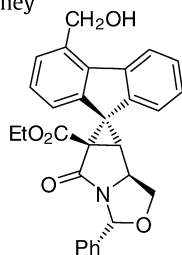


$[\alpha]_D = +145.5$ (c 2.4, $CHCl_3$)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R)

Spiro[8-ethoxycarbonyl-9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0.4,5.06,8]nonan-2-one-7,9'-fluorene]

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley,
Mark G. Moloney*

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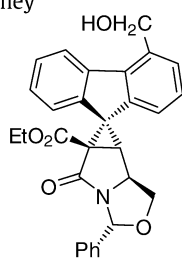
C₂₉H₂₅NO₅

4'-Hydroxymethylspiro[8-ethoxycarbonyl-9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0.4.5.0.6.8]nonan-2-one-7,9'-fluorene]

[α]_D = +131.0 (c 1, CHCl₃)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R,9S)

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Mark G. Moloney*

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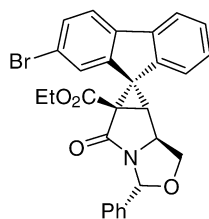
C₂₉H₂₅NO₅

4'-Hydroxymethylspiro[8-ethoxycarbonyl-9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0.4.5.0.6.8]nonan-2-one-7,9'-fluorene]

[α]_D = +133 (c 1, CHCl₃)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R,9R)

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley,
Mark G. Moloney*

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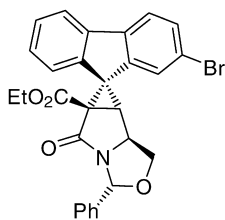
C₂₈H₂₂BrNO₄

3'-Bromospiro[8-ethoxycarbonyl-9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0.4.5.0.6.8]nonan-2-one-7,9'-fluorene]

[α]_D = +156.9 (c 0.8, CHCl₃)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R,9S)

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley,
Mark G. Moloney*

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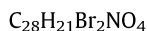
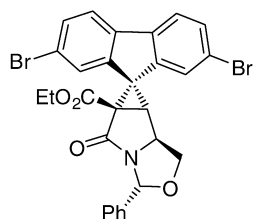
C₂₈H₂₂BrNO₄

3'-Bromospiro[8-ethoxycarbonyl-9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0.4.5.0.6.8]nonan-2-one-7,9'-fluorene]

[α]_D = +42.2 (c 1, CHCl₃)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R,9R)

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Mark G. Moloney*

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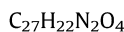
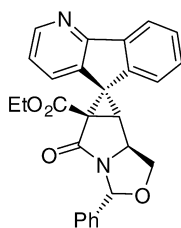


Spiro[8-ethoxycarbonyl-9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0.4.5.0.6.8]nonan-2-one-7,5'-indeno[1,2-b]pyridine]

[α]_D = +69.1 (c 0.75, CHCl₃)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R)

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley,
Mark G. Moloney*

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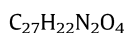
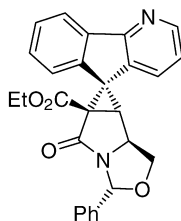


3'-Dibromospiro[8-ethoxycarbonyl-9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0.4.5.0.6.8]nonan-2-one-7,9'-fluorene]

[α]_D = +96.4 (c 1, CHCl₃)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R,9S)

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley,
Mark G. Moloney*

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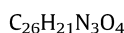
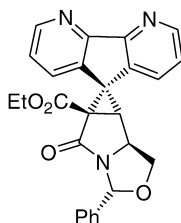


Spiro[8-ethoxycarbonyl-9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0.4.5.0.6.8]nonan-2-one-7,5'-indeno[1,2-b]pyridine]

[α]_D = +111 (c 1, CHCl₃)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R,9R)

Lawrence Harris, Martin Gilpin, Amber L. Thompson, Andrew R. Cowley,
Mark G. Moloney*

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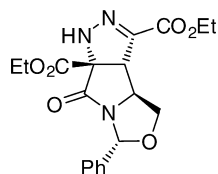


4',5'-Diazaspiro[9-oxo-2-phenyl-1-aza-3-oxa-tricyclo[4.3.0.4.5.0.6.8]nonan-2-one-7,9'-fluorene]

[α]_D = +77.9 (c 1.7, CHCl₃)
Source of chirality: (S)-pyroglutamic acid
Absolute configuration: (2R,5S,6R,7R)

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Mark G. Moloney*

Tetrahedron: Asymmetry 20 (2009) 726



$C_{19}H_{21}N_3O_6$

6',7'-Diaza-5a,8-diethoxycarbonyl-2-oxa-3-phenyl-1,2,3,5a,6,8b-hexahydrocyclopenta[a]pyrrolizin-5(8aH)-one

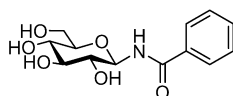
$[\alpha]_D = -52.2$ (c 4.6, $CHCl_3$)

Source of chirality: (S)-pyroglutamic acid

Absolute configuration: (2R,5S,6R,7R)

Evangelia D. Chrysina*, Éva Bokor, Kyra-Melinda Alexacou, Maria-Despoina Charavgi,
George N. Oikonomakos, Spyros E. Zographos, Demetres D. Leonidas,
Nikos G. Oikonomakos, László Somsák*

Tetrahedron: Asymmetry 20 (2009) 733



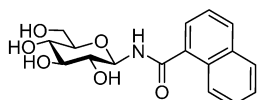
$C_{13}H_{17}NO_6$

N-benzoyl- β -D-glucopyranosylamine

$[\alpha]_D = +6$ (c 1.0, MeOH)

Evangelia D. Chrysina*, Éva Bokor, Kyra-Melinda Alexacou, Maria-Despoina Charavgi,
George N. Oikonomakos, Spyros E. Zographos, Demetres D. Leonidas,
Nikos G. Oikonomakos, László Somsák*

Tetrahedron: Asymmetry 20 (2009) 733



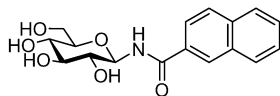
$C_{17}H_{19}NO_6$

N-(1-naphthoyl)- β -D-glucopyranosylamine

$[\alpha]_D = +45$ (c 0.16, DMSO)

Evangelia D. Chrysina*, Éva Bokor, Kyra-Melinda Alexacou, Maria-Despoina Charavgi,
George N. Oikonomakos, Spyros E. Zographos, Demetres D. Leonidas,
Nikos G. Oikonomakos, László Somsák*

Tetrahedron: Asymmetry 20 (2009) 733



$C_{17}H_{19}NO_6$

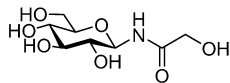
N-(2-naphthoyl)- β -D-glucopyranosylamine

$[\alpha]_D = +26$ (c 0.2, DMSO)

Evangelia D. Chrysina*, Éva Bokor, Kyra-Melinda Alexacou, Maria-Despoina Charavgi,
George N. Oikonomakos, Spyros E. Zographos, Demetres D. Leonidas,
Nikos G. Oikonomakos, László Somsák*

Tetrahedron: Asymmetry 20 (2009) 733

$[\alpha]_D = -2$ (c 0.22, MeOH)



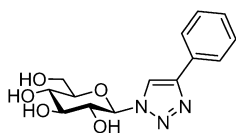
$C_8H_{15}NO_7$

N-hydroxyacetyl- β -D-glucopyranosylamine

Evangelia D. Chrysina*, Éva Bokor, Kyra-Melinda Alexacou, Maria-Despoina Charavgi,
George N. Oikonomakos, Spyros E. Zographos, Demetres D. Leonidas,
Nikos G. Oikonomakos, László Somsák*

Tetrahedron: Asymmetry 20 (2009) 733

$[\alpha]_D = -69$ (c 0.24, DMSO)



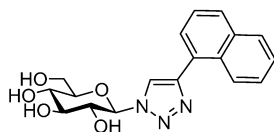
$C_{14}H_{17}N_3O_5$

1-(β -D-glucopyranosyl)-4-phenyl-1,2,3-triazole

Evangelia D. Chrysina*, Éva Bokor, Kyra-Melinda Alexacou, Maria-Despoina Charavgi,
George N. Oikonomakos, Spyros E. Zographos, Demetres D. Leonidas,
Nikos G. Oikonomakos, László Somsák*

Tetrahedron: Asymmetry 20 (2009) 733

$[\alpha]_D = -22$ (c 0.21, MeOH)



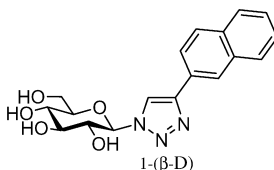
$C_{18}H_{19}N_3O_5$

1-(β -D-glucopyranosyl)-4-(1-naphthyl)-1,2,3-triazole

Evangelia D. Chrysina*, Éva Bokor, Kyra-Melinda Alexacou, Maria-Despoina Charavgi,
George N. Oikonomakos, Spyros E. Zographos, Demetres D. Leonidas,
Nikos G. Oikonomakos, László Somsák*

Tetrahedron: Asymmetry 20 (2009) 733

$[\alpha]_D = -26$ (c 0.21, DMSO)



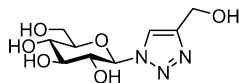
$C_{18}H_{19}N_3O_5$

1-(β -D-glucopyranosyl)-4-(2-naphthyl)-1,2,3-triazole

Evangelia D. Chrysina *, Éva Bokor, Kyra-Melinda Alexacou, Maria-Despoina Charavgi,
George N. Oikonomakos, Spyros E. Zographos, Demetres D. Leonidas,
Nikos G. Oikonomakos, László Somsák *

Tetrahedron: Asymmetry 20 (2009) 733

$[\alpha]_D = -5$ (c 0.16, H₂O)



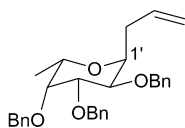
C₉H₁₅N₃O₆

1-(β-D-glucopyranosyl)-4-hydroxymethyl-1,2,3-triazole

Barbara La Ferla, Laura Russo, Cristina Airoidi, Francesco Nicotra *

Tetrahedron: Asymmetry 20 (2009) 744

$[\alpha]_D^{20} = -16.6$ (c 1.5, CHCl₃)
Source of chirality: L-fucose
Absolute configuration (1'S)



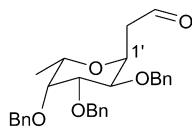
C₃₀H₃₄O₄

3-(Tri-O-benzyl-α-L-fucopyranosyl)-1-propene

Barbara La Ferla, Laura Russo, Cristina Airoidi, Francesco Nicotra *

Tetrahedron: Asymmetry 20 (2009) 744

$[\alpha]_D^{20} = -26.1$ (c 1.8, CHCl₃)
Source of chirality: L-fucose
Absolute configuration (1'S)



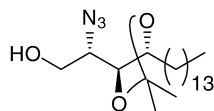
C₂₉H₃₂O₅

2-(Tri-O-benzyl-α-L-fucopyranosyl)-1-acetaldehyde

Yoel R. Garcia Diaz, Justyna Wojno, Liam R. Cox *, Gurdyal S. Besra *

Tetrahedron: Asymmetry 20 (2009) 747

Ee = 100%
 $[\alpha]_D^{22} = +9.6$ (c 1.0, CHCl₃)
Source of chirality: chiral pool
Absolute configuration: (2S,3S,4R)

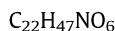
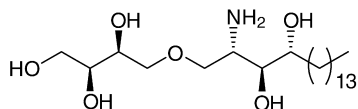


C₂₁H₄₁N₃O₃

(2S,3S,4R)-2-Azido-3,4-O-isopropylidene-1,3,4-octadecanetriol

Yoel R. Garcia Diaz, Justyna Wojno, Liam R. Cox *, Gurdyal S. Besra *

Tetrahedron: Asymmetry 20 (2009) 747



1-O-[L-Threitol]-2-amino-1,3,4-D-ribo-octadecantriol

Ee = 100%

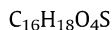
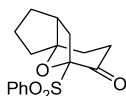
$[\alpha]_D^{22} = +23$ (c 1.0, CHCl₃)

Source of chirality: chiral pool

Absolute configuration: (2*S*,3*S*,4*R*,2'*S*,3'*S*)

David M. Hodgson *, Rebecca Glen, Alison J. Redgrave

Tetrahedron: Asymmetry 20 (2009) 754



7-(Phenylsulfonyl)-11-oxatricyclo[5.3.1.0^{1,5}]undecan-8-one

er = 71.5:28.5 (by chiral HPLC)

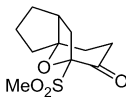
$[\alpha]_D^{25} = +13.6$ (c 1.0, CH₂Cl₂)

Source of chirality: Rh (*S*)-valine-derived catalyst

Absolute configuration: unknown

David M. Hodgson *, Rebecca Glen, Alison J. Redgrave

Tetrahedron: Asymmetry 20 (2009) 754



7-(Methylsulfonyl)-11-oxatricyclo[5.3.1.0^{1,5}]undecan-8-one

er = 66.5:33.5 (by chiral GC)

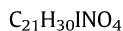
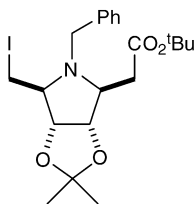
$[\alpha]_D^{25} = +3.1$ (c 1.05, CH₂Cl₂)

Source of chirality: Rh (*S*)-valine-derived catalyst

Absolute configuration: unknown

Stephen G. Davies *, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



(2*S*,3*R*,4*S*,5*S*)-*N*(1)-Benzyl-2-iodomethyl-3,4-*O*-isopropylidene-5-(*tert*-butoxycarbonylmethyl)pyrrolidine

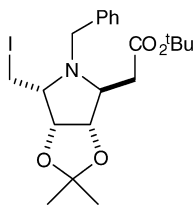
$[\alpha]_D^{24} = +2.1$ (c 0.8 in CHCl₃)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (2*S*,3*R*,4*S*,5*S*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



C₂₁H₃₀INO₄

(2*R*,3*R*,4*S*,5*S*)-*N*(1)-Benzyl-2-iodomethyl-3,4-*O*-isopropylidene-5-(*tert*-butoxycarbonylmethyl)pyrrolidine

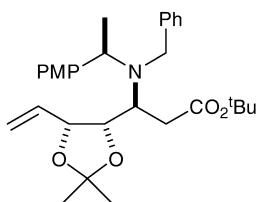
$[\alpha]_D^{25} = +52.8$ (c 0.9 in CHCl₃)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (2*R*,3*R*,4*S*,5*S*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



C₃₀H₄₁NO₅

tert-Butyl (3*S*,4*S*,5*R*, α *R*)-3-[*N*-benzyl-*N*-(α -methyl-4'-methoxybenzyl)amino]-4,5-*O*-isopropylidene-hepta-6-enoate

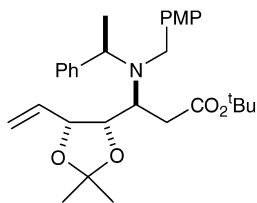
$[\alpha]_D^{24} = +12.1$ (c 0.9 in CHCl₃)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (3*S*,4*S*,5*R*, α *R*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



C₃₀H₄₁NO₅

tert-Butyl (3*S*,4*S*,5*R*, α *R*)-3-[*N*-(4'-methoxybenzyl)-*N*-(α -methylbenzyl)amino]-4,5-*O*-isopropylidene-hept-6-enoate

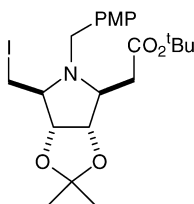
$[\alpha]_D^{25} = +11.4$ (c 1.25 in CHCl₃)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (3*S*,4*S*,5*R*, α *R*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



C₂₂H₃₂INO₅

(2*S*,3*R*,4*S*,5*S*)-*N*(1)-(4'-Methoxybenzyl)-2-iodomethyl-3,4-*O*-isopropylidene-5-(*tert*-butoxycarbonylmethyl)pyrrolidine

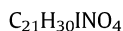
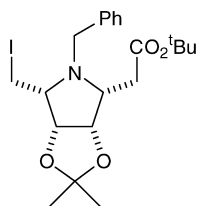
$[\alpha]_D^{25} = -2.9$ (c 1.0 in CHCl₃)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (2*S*,3*R*,4*S*,5*S*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



(2*R*,3*R*,4*S*,5*R*)-*N*(1)-Benzyl-2-iodomethyl-3,4-*O*-isopropylidene-5-(*tert*-butoxycarbonylmethyl)pyrrolidine

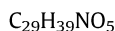
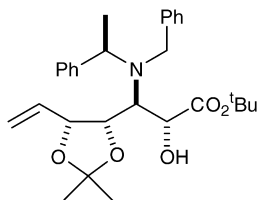
$[\alpha]_D^{25} = +4.5$ (c 0.4 in $CHCl_3$)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (2*R*,3*R*,4*S*,5*R*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



tert-Butyl (2*R*,3*S*,4*S*,5*R*, α *R*)-2-hydroxy-3-[*N*-benzyl-*N*-(α -methylbenzyl)amino]-4,5-*O*-isopropylidene-hept-6-enoate

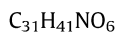
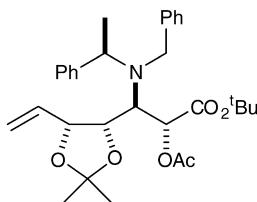
$[\alpha]_D^{24} = +20.7$ (c 0.8 in $CHCl_3$)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (2*R*,3*S*,4*S*,5*R*, α *R*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



tert-Butyl (2*R*,3*R*,4*S*,5*R*, α *R*)-2-acetoxy-3-[*N*-benzyl-*N*-(α -methylbenzyl)amino]-4,5-*O*-isopropylidene-hept-6-enoate

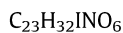
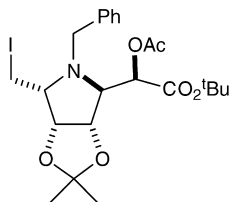
$[\alpha]_D^{27} = +37.9$ (c 1.0 in $CHCl_3$)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (2*R*,3*R*,4*S*,5*R*, α *R*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



tert-Butyl (2*R*,2'*R*,3'*R*,4'*S*,5'*R*)-2-acetoxy-2-(*N*(1')-benzyl-2'-iodomethyl-3',4'-*O*-isopropylidene-pyrrolidin-5'-yl)acetate

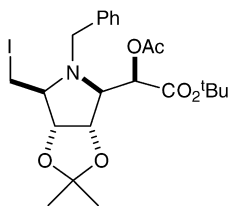
$[\alpha]_D^{24} = +66.6$ (c 0.9 in $CHCl_3$)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (2*R*,2'*R*,3'*R*,4'*S*,5'*R*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



$C_{23}H_{32}INO_6$

tert-Butyl (2*R*,2'*S*,3'*R*,4'*S*,5'*R*)-2-acetoxy-2-(*N*(1')-benzyl-2'-iodomethyl-3',4'-*O*-isopropylidene-pyrrolidin-5'-yl)acetate

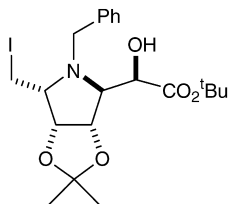
$[\alpha]_D^{21} = -10.4$ (c 0.65 in $CHCl_3$)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (2*R*,2'*S*,3'*R*,4'*S*,5'*R*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



$C_{21}H_{30}INO_5$

tert-Butyl (2*R*,2'*R*,3'*R*,4'*S*,5'*R*)-2-hydroxy-2-(*N*(1')-benzyl-2'-iodomethyl-3',4'-*O*-isopropylidene-pyrrolidin-5'-yl)acetate

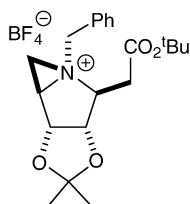
$[\alpha]_D^{22} = +66.8$ (c 1.2 in $CHCl_3$)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (2*R*,2'*R*,3'*R*,4'*S*,5'*S*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



$[C_{21}H_{30}NO_4][BF_4]$

(1*S*,2*S*,3*S*,4*R*,5*R*)-*N*(1)-Benzyl-2-(*tert*-butoxycarbonylmethyl)-3,4-*O*-isopropylidene-1-azoniabicyclo[3.1.0]hexane tetrafluoroborate

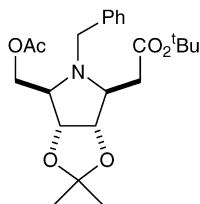
$[\alpha]_D^{26} = -15.1$ (c 1.6 in $CHCl_3$)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (1*S*,2*S*,3*S*,4*R*,5*R*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



$C_{23}H_{33}NO_6$

(2*R*,3*R*,4*S*,5*S*)-*N*(1)-Benzyl-2-acetoxymethyl-3,4-*O*-isopropylidene-5-(*tert*-butoxycarbonylmethyl)pyrrolidine

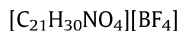
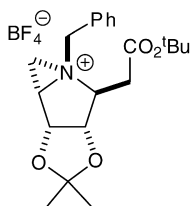
$[\alpha]_D^{26} = +10.3$ (c 0.6 in $CHCl_3$)

Source of chirality: *D*-ribose/asymmetric synthesis

Absolute configuration: (2*R*,3*R*,4*S*,5*S*)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



(1R,2S,3S,4R,5S)-N(1)-Benzyl-2-(tert-butoxycarbonylmethyl)-3,4-O-isopropylidene-1-azoniabicyclo[3.1.0]hexane tetrafluoroborate

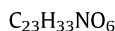
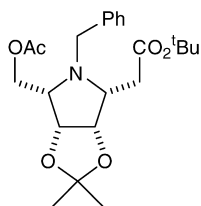
$[\alpha]_D^{22} = -8.4$ (c 1.4 in $CHCl_3$)

Source of chirality: D-ribose/asymmetric synthesis

Absolute configuration: (1R,2S,3S,4R,5S)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



(2S,3R,4S,5R)-N(1)-Benzyl-2-acetoxymethyl-3,4-O-isopropylidene-5-(tert-butoxycarbonylmethyl)pyrrolidine

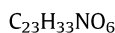
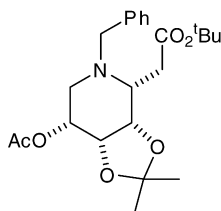
$[\alpha]_D^{25} = +10.1$ (c 0.5 in $CHCl_3$)

Source of chirality: D-ribose/asymmetric synthesis

Absolute configuration: (2S,3R,4S,5R)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



(2R,3S,4R,5R)-N(1)-benzyl-2-(tert-butoxycarbonylmethyl)-3,4-O-isopropylidene-5-acetoxypiperidine

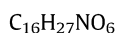
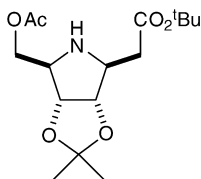
$[\alpha]_D^{24} = -11.1$ (c 0.7 in $CHCl_3$)

Source of chirality: D-ribose/asymmetric synthesis

Absolute configuration: (2R,3S,4R,5R)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

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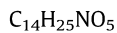
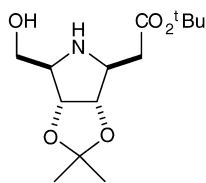
(2R,3R,4S,5S)-2-Acetoxymethyl-3,4-O-isopropylidene-5-(tert-butoxycarbonylmethyl)pyrrolidine

$[\alpha]_D^{24} = -19.2$ (c 1.0 in $CHCl_3$)

Source of chirality: D-ribose/asymmetric synthesis

Absolute configuration: (2R,3R,4S,5S)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson



(2R,3R,4S,5S)-2-Hydroxymethyl-3,4-O-isopropylidene-5-(tert-butoxycarbonylmethyl)pyrrolidine

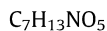
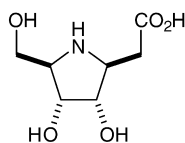
Tetrahedron: Asymmetry 20 (2009) 758

$[\alpha]_D^{22} = -37.2$ (c 1.6 in $CHCl_3$)

Source of chirality: D-ribose/asymmetric synthesis

Absolute configuration: (2R,3R,4S,5S)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson



(2'R,3'R,4'S,5'S)-(2'-Hydroxymethyl-3',4'-dihydroxy-pyrrolidin-5'-yl)ethanoic acid

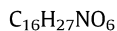
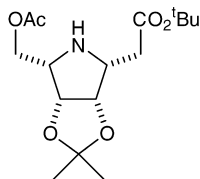
Tetrahedron: Asymmetry 20 (2009) 758

$[\alpha]_D^{24} = +20.3$ (c 0.9 in H_2O)

Source of chirality: D-ribose/asymmetric synthesis

Absolute configuration: (2'R,3'R,4'S,5'S)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson



(2S,3R,4S,5R)-2-Acetoxyethyl-3,4-O-isopropylidene-5-(tert-butoxycarbonylmethyl)pyrrolidine

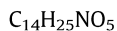
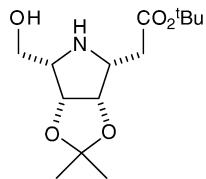
Tetrahedron: Asymmetry 20 (2009) 758

$[\alpha]_D^{25} = +4.0$ (c 1.0 in $CHCl_3$)

Source of chirality: D-ribose/asymmetric synthesis

Absolute configuration: (2S,3R,4S,5R)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson



(2S,3R,4S,5R)-2-Hydroxymethyl-3,4-O-isopropylidene-5-(tert-butoxycarbonylmethyl)pyrrolidine

Tetrahedron: Asymmetry 20 (2009) 758

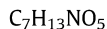
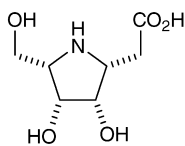
$[\alpha]_D^{25} = -12.8$ (c 1.0 in $CHCl_3$)

Source of chirality: D-ribose/asymmetric synthesis

Absolute configuration: (2S,3R,4S,5R)

Stephen G. Davies*, Rebecca L. Nicholson, Paul D. Price, Paul M. Roberts, Angela J. Russell, Edward D. Savory, Andrew D. Smith, James E. Thomson

Tetrahedron: Asymmetry 20 (2009) 758



(2'S,3'R,4'S,5'R)-(2'-Hydroxymethyl-3',4'-dihydroxy-pyrrolidin-5'-yl)ethanoic acid

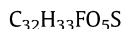
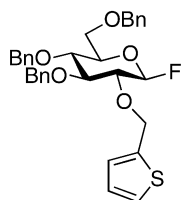
$[\alpha]_D^{23} = -30.3$ (c 0.8 in H₂O)

Source of chirality: D-ribose/asymmetric synthesis

Absolute configuration: (2'S,3'R,4'S,5'R)

Daniel J. Cox, Antony J. Fairbanks*

Tetrahedron: Asymmetry 20 (2009) 773



3,4,6-Tri-O-benzyl-2-O-(thiophen-2-ylmethyl)-β-D-glucopyranosyl fluoride

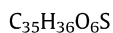
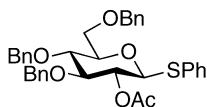
Ee = 100%

$[\alpha]_D^{25} = +9.7$ (c 1.0 in CHCl₃)

Source of chirality: D-glucose

Daniel J. Cox, Antony J. Fairbanks*

Tetrahedron: Asymmetry 20 (2009) 773



Phenyl 2-O-acetyl-3,4,6-tri-O-benzyl-1-thio-β-D-glucopyranoside

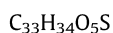
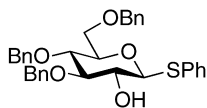
Ee = 100%

$[\alpha]_D^{23} = +9.4$ (c 1.1 in CHCl₃)

Source of chirality: D-glucose

Daniel J. Cox, Antony J. Fairbanks*

Tetrahedron: Asymmetry 20 (2009) 773



Phenyl 3,4,6-tri-O-benzyl-1-thio-β-D-glucopyranoside

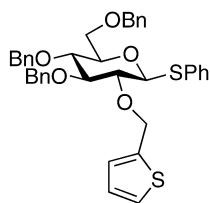
Ee = 100%

$[\alpha]_D^{23} = -9.7$ (c 1.0 in CHCl₃)

Source of chirality: D-glucose

Daniel J. Cox, Antony J. Fairbanks *

Tetrahedron: Asymmetry 20 (2009) 773



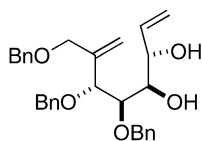
$C_{38}H_{38}O_5S_2$

Phenyl 3,4,6-tri-O-benzyl-2-(thiophen-2-ylmethyl)-thio- β -D-glucopyranoside

Ee = 100%
 $[\alpha]_D^{25} = -2.0$ (c 1.05 in $CHCl_3$)
Source of chirality: D-glucose

Clinton Ramstadius, Omid Hekmat, Lars Eriksson, Henrik Stålbrand, Ian Cumpstey *

Tetrahedron: Asymmetry 20 (2009) 795



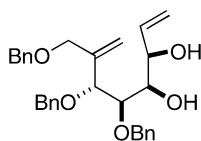
$C_{30}H_{34}O_5$

(3R,4R,5R,6S)-1,3,4-Tri-O-benzyl-1,3,4,5,6-pentahydroxy-2-methylene-oct-7-ene

Ee = 100%
 $[\alpha]_D^{23} = -22.9$ (c 1.0, $CHCl_3$)
Source of chirality: D-mannose

Clinton Ramstadius, Omid Hekmat, Lars Eriksson, Henrik Stålbrand, Ian Cumpstey *

Tetrahedron: Asymmetry 20 (2009) 795



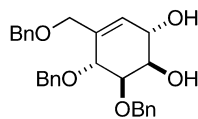
$C_{30}H_{34}O_5$

(3R,4R,5R,6R)-1,3,4-Tri-O-benzyl-1,3,4,5,6-pentahydroxy-2-methylene-oct-7-ene

Ee = 100%
 $[\alpha]_D^{23} = -0.3$ (c 1.0, $CHCl_3$)
Source of chirality: D-mannose

Clinton Ramstadius, Omid Hekmat, Lars Eriksson, Henrik Stålbrand, Ian Cumpstey *

Tetrahedron: Asymmetry 20 (2009) 795



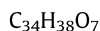
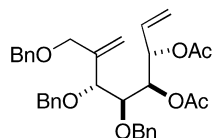
$C_{28}H_{30}O_5$

3,4,6-Tri-O-benzyl-5a-carba- α -D-lyxo-hex-5(5a)-enopyranose

Ee = 100%
 $[\alpha]_D^{23} = -15.3$ (c 1.0, $CHCl_3$)
Source of chirality: D-mannose

Clinton Ramstadius, Omid Hekmat, Lars Eriksson, Henrik Stålbrand, Ian Cumpste^y*

Tetrahedron: Asymmetry 20 (2009) 795



(3*R*,4*S*,5*R*,6*S*)-5,6-Di-*O*-acetyl-1,3,4-tri-*O*-benzyl-pentahydroxy-2-methylene-oct-7-ene

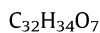
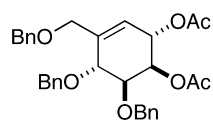
Ee = 100%

[α]_D²³ = -28.3 (c 1.0, CHCl₃)

Source of chirality: *D*-mannose

Clinton Ramstadius, Omid Hekmat, Lars Eriksson, Henrik Stålbrand, Ian Cumpste^y*

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1,2-Di-*O*-acetyl-3,4,6-tri-*O*-benzyl-5a-carba- α -*D*-lyxo-hex-5(5a)-enopyranose

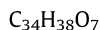
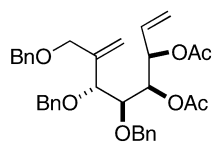
Ee = 100%

[α]_D²³ = +63.9 (c 1.0, CHCl₃)

Source of chirality: *D*-mannose

Clinton Ramstadius, Omid Hekmat, Lars Eriksson, Henrik Stålbrand, Ian Cumpste^y*

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(3*R*,4*S*,5*R*,6*R*)-5,6-Di-*O*-acetyl-1,3,4-tri-*O*-benzyl-pentahydroxy-2-methylene-oct-7-ene

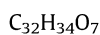
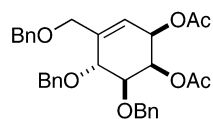
Ee = 100%

[α]_D²² = -12.9 (c 1.0, CHCl₃)

Source of chirality: *D*-mannose

Clinton Ramstadius, Omid Hekmat, Lars Eriksson, Henrik Stålbrand, Ian Cumpste^y*

Tetrahedron: Asymmetry 20 (2009) 795



1,2-Di-*O*-acetyl-3,4,6-tri-*O*-benzyl-5a-carba- β -*D*-lyxo-hex-5(5a)-enopyranose

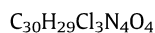
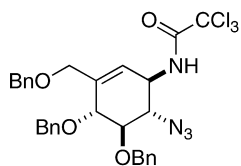
Ee = 100%

[α]_D²³ = -75.1 (c 1.0, CHCl₃)

Source of chirality: *D*-mannose

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Tetrahedron: Asymmetry 20 (2009) 795

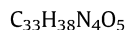
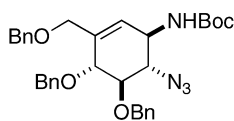


2-Azido-3,4,6-tri-*O*-benzyl-1,2-dideoxy-1-trichloroacetylamido-5a-carba- β -*D*-xylo-hex-5(5a)-enopyranose

Ee = 100%
 $[\alpha]_D^{23} = -97.8$ (c, 1.0 in $CHCl_3$)
Source of chirality: *D*-mannose

Clinton Ramstadius, Omid Hekmat, Lars Eriksson, Henrik Stålbrand, Ian Cumpstey*

Tetrahedron: Asymmetry 20 (2009) 795

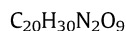
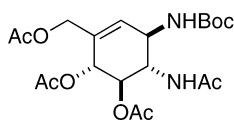


2-Azido-3,4,6-tri-*O*-benzyl-1-(*tert*-butyloxycarbonylamino)-1,2-dideoxy-5a-carba- β -*D*-xylo-hex-5(5a)-enopyranose

Ee = 100%
 $[\alpha]_D^{23} = -98.1$ (c, 1.0 in $CHCl_3$)
Source of chirality: *D*-mannose

Clinton Ramstadius, Omid Hekmat, Lars Eriksson, Henrik Stålbrand, Ian Cumpstey*

Tetrahedron: Asymmetry 20 (2009) 795

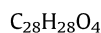
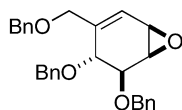


2-Acetamido-3,4,6-tri-*O*-acetyl-1-(*tert*-butyloxycarbonylamino)-1,2-dideoxy-5a-carba- β -*D*-xylo-hex-5(5a)-enopyranose

Ee = 100%
 $[\alpha]_D^{23} = -65.6$ (c 0.7, $CHCl_3$)
Source of chirality: *D*-mannose

Clinton Ramstadius, Omid Hekmat, Lars Eriksson, Henrik Stålbrand, Ian Cumpstey*

Tetrahedron: Asymmetry 20 (2009) 795

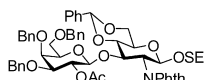


1,2-Anhydro-3,4,6-tri-*O*-benzyl-5a-carba- β -*D*-lyxo-hex-5(5a)-enopyranose **16**

Ee = 100%
 $[\alpha]_D^{23} = +21.5$ (c 1.0, $CHCl_3$)
Source of chirality: *D*-mannose

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
András Lipták*, Sándor Antus

Tetrahedron: Asymmetry 20 (2009) 808



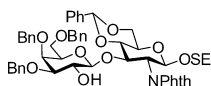
$[\alpha]_D = -6.1$ (c 0.16, CHCl₃)

C₅₅H₆₁NO₁₃Si

(2-Trimethylsilyl)ethyl 2-O-acetyl-3,4,6-tri-O-benzyl-β-D-galactopyranosyl-(1→3)-4,6-O-benzylidene-2-deoxy-2-phthalimido-β-D-glucopyranoside

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
András Lipták*, Sándor Antus

Tetrahedron: Asymmetry 20 (2009) 808



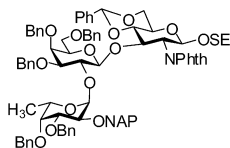
$[\alpha]_D = -48.5$ (c 0.24, CHCl₃)

C₅₃H₅₉NO₁₂Si

(2-Trimethylsilyl)ethyl 3,4,6-tri-O-benzyl-β-D-galactopyranosyl-(1→3)-4,6-O-benzylidene-2-deoxy-2-phthalimido-β-D-glucopyranoside

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
András Lipták*, Sándor Antus

Tetrahedron: Asymmetry 20 (2009) 808



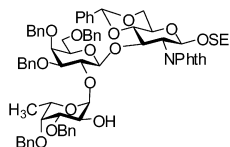
$[\alpha]_D = -37.7$ (c 0.13, CHCl₃)

C₈₄H₈₉NO₁₆Si

(2-Trimethylsilyl)ethyl 3,4-di-O-benzyl-2-O-(2-naphthyl)methyl-α-L-fucopyranosyl-(1→2)-3,4,6-tri-O-benzyl-β-D-galactopyranosyl-(1→3)-4,6-O-benzylidene-2-deoxy-2-phthalimido-β-D-glucopyranoside

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
András Lipták*, Sándor Antus

Tetrahedron: Asymmetry 20 (2009) 808



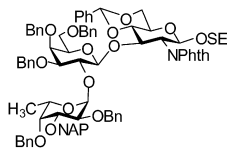
$[\alpha]_D = -47.4$ (c 0.15, CHCl₃)

C₇₃H₈₁NO₁₆Si

(2-Trimethylsilyl)ethyl 3,4-di-O-benzyl-α-L-fucopyranosyl-(1→2)-3,4,6-tri-O-benzyl-β-D-galactopyranosyl-(1→3)-4,6-O-benzylidene-2-deoxy-2-phthalimido-β-D-glucopyranoside

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
András Lipták*, Sándor Antus

Tetrahedron: Asymmetry 20 (2009) 808



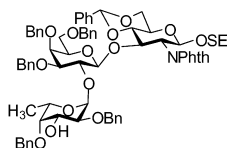
$[\alpha]_D = -33.8$ (c 0.21, CHCl₃)

C₈₄H₈₉NO₁₆Si

(2-Trimethylsilyl)ethyl 2,4-di-O-benzyl-3-O-(2-naphthyl)methyl- α -L-fucopyranosyl-(1→2)-3,4,6-tri-O-benzyl- β -D-galactopyranosyl-(1→3)-4,6-O-benzylidene-2-deoxy-2-phthalimido- β -D-glucopyranoside

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
András Lipták*, Sándor Antus

Tetrahedron: Asymmetry 20 (2009) 808



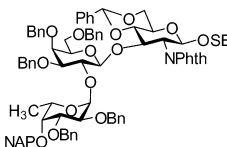
$[\alpha]_D = -61.0$ (c 0.12, CHCl₃)

C₇₃H₈₁NO₁₆Si

(2-Trimethylsilyl)ethyl 2,4-di-O-benzyl- α -L-fucopyranosyl-(1→2)-3,4,6-tri-O-benzyl- β -D-galactopyranosyl-(1→3)-4,6-O-benzylidene-2-deoxy-2-phthalimido- β -D-glucopyranoside

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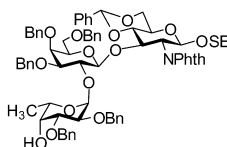
$[\alpha]_D = -40.5$ (c 0.22, CHCl₃)

C₈₄H₈₉NO₁₆Si

(2-Trimethylsilyl)ethyl 2,3-di-O-benzyl-4-O-(2-naphthyl)methyl- α -L-fucopyranosyl-(1→2)-3,4,6-tri-O-benzyl- β -D-galactopyranosyl-(1→3)-4,6-O-benzylidene-2-deoxy-2-phthalimido- β -D-glucopyranoside

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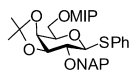
$[\alpha]_D = -34.2$ (c 0.16, CHCl₃)

C₇₃H₈₁NO₁₆Si

(2-Trimethylsilyl)ethyl 2,3-di-O-benzyl- α -L-fucopyranosyl-(1→2)-3,4,6-tri-O-benzyl- β -D-galactopyranosyl-(1→3)-4,6-O-benzylidene-2-deoxy-2-phthalimido- β -D-glucopyranoside

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
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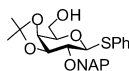
$[\alpha]_D = +2.7$ (c 1.01, CHCl₃)

C₃₀H₃₆O₆S

Phenyl 3,4-O-isopropylidene-6-O-(methoxydimethyl)methyl-2-O-(2-naphthyl)methyl-1-thio-β-D-galactopyranoside

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
András Lipták*, Sándor Antus

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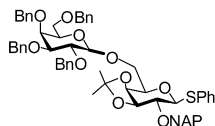
$[\alpha]_D = +12.8$ (c 1.03, CHCl₃)

C₂₆H₂₈O₅S

Phenyl 3,4-O-isopropylidene-2-O-(2-naphthyl)methyl-1-thio-β-D-galactopyranoside

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
András Lipták*, Sándor Antus

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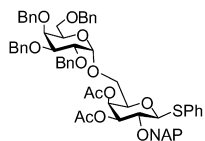
$[\alpha]_D = +26.7$ (c 1.05, CHCl₃)

C₆₀H₆₂O₁₀S

Phenyl 2,3,4,6-tetra-O-benzyl-α/β-D-galactopyranosyl-(1→6)-3,4-O-isopropylidene-2-O-(2-naphthyl)methyl-1-thio-β-D-galactopyranoside

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
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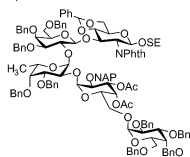
$[\alpha]_D = +28.2$ (c 0.99, CHCl₃)

C₆₁H₆₂O₁₂S

Phenyl 2,3,4,6-tetra-O-benzyl-α-D-galactopyranosyl-(1→6)-3,4-di-O-acetyl-2-O-(2-naphthyl)methyl-1-thio-β-D-galactopyranoside

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
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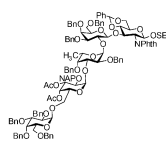
$[\alpha]_D = +64.8$ (c 0.13, CHCl₃)

C₁₂₈H₁₃₇NO₂₈Si

(2-Trimethylsilyl)ethyl 2,3,4,6-tetra-O-benzyl- α -D-galactopyranosyl-(1 \rightarrow 6)-3,4-di-O-acetyl-2-O-(2-naphthyl)methyl- α -D-galactopyranosyl-(1 \rightarrow 2)-3,4-di-O-benzyl- α -L-fucopyranosyl-(1 \rightarrow 2)-3,4,6-tri-O-benzyl- β -D-galactopyranosyl-(1 \rightarrow 3)-4,6-O-benzylidene-2-deoxy-2-phthalimido- β -D-glucopyranoside

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
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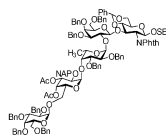
$[\alpha]_D = -23.6$ (c 0.12, CHCl₃)

C₁₂₈H₁₃₇NO₂₈Si

(2-Trimethylsilyl)ethyl 2,3,4,6-tetra-O-benzyl- α -D-galactopyranosyl-(1 \rightarrow 6)-3,4-di-O-acetyl-2-O-(2-naphthyl)methyl- α -D-galactopyranosyl-(1 \rightarrow 3)-2,4-di-O-benzyl- α -L-fucopyranosyl-(1 \rightarrow 2)-3,4,6-tri-O-benzyl- β -D-galactopyranosyl-(1 \rightarrow 3)-4,6-O-benzylidene-2-deoxy-2-phthalimido- β -D-glucopyranoside

Zoltán B. Szabó, Mihály Herczeg, Anikó Fekete, Gyula Batta, Anikó Borbás,
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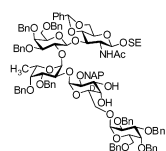
$[\alpha]_D = -4.3$ (c 0.14, CHCl₃)

C₁₂₈H₁₃₇NO₂₈Si

(2-Trimethylsilyl)ethyl 2,3,4,6-tetra-O-benzyl- α -D-galactopyranosyl-(1 \rightarrow 6)-3,4-di-O-acetyl-2-O-(2-naphthyl)methyl- α -D-galactopyranosyl-(1 \rightarrow 4)-2,3-di-O-benzyl- α -L-fucopyranosyl-(1 \rightarrow 2)-3,4,6-tri-O-benzyl- β -D-galactopyranosyl-(1 \rightarrow 3)-4,6-O-benzylidene-2-deoxy-2-phthalimido- β -D-glucopyranoside

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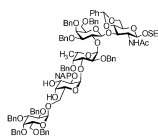
$[\alpha]_D = +6.8$ (c 0.13, CHCl₃)

C₁₁₈H₁₃₃NO₂₅Si

(2-Trimethylsilyl)ethyl 2,3,4,6-tetra-O-benzyl- α -D-galactopyranosyl-(1 \rightarrow 6)-2-O-(2-naphthyl)methyl- α -D-galactopyranosyl-(1 \rightarrow 2)-3,4-di-O-benzyl- α -L-fucopyranosyl-(1 \rightarrow 2)-3,4,6-tri-O-benzyl- β -D-galactopyranosyl-(1 \rightarrow 3)-2-acetamido-4,6-O-benzylidene-2-deoxy- β -D-glucopyranoside

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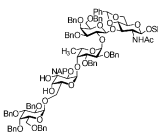
$[\alpha]_D = -11.5$ (c 0.15, CHCl₃)

C₁₁₈H₁₃₃NO₂₅Si

(2-Trimethylsilyl)ethyl 2,3,4,6-tetra-O-benzyl- α -D-galactopyranosyl-(1 \rightarrow 6)-2-O-(2-naphthyl)methyl- α -D-galactopyranosyl-(1 \rightarrow 3)-2,4-di-O-benzyl- α -L-fucopyranosyl-(1 \rightarrow 2)-3,4,6-tri-O-benzyl- β -D-galactopyranosyl-(1 \rightarrow 3)-2-acetamido-4,6-O-benzylidene-2-deoxy- β -D-glucopyranoside

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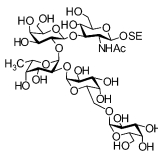
$[\alpha]_D = +5.8$ (c 0.12, CHCl₃)

C₁₁₈H₁₃₃NO₂₅Si

(2-Trimethylsilyl)ethyl 2,3,4,6-tetra-O-benzyl- α -D-galactopyranosyl-(1 \rightarrow 6)-2-O-(2-naphthyl)methyl- α -D-galactopyranosyl-(1 \rightarrow 4)-2,3-di-O-benzyl- α -L-fucopyranosyl-(1 \rightarrow 2)-3,4,6-tri-O-benzyl- β -D-galactopyranosyl-(1 \rightarrow 3)-2-acetamido-4,6-O-benzylidene-2-deoxy- β -D-glucopyranoside

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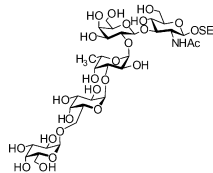
$[\alpha]_D = +29.7$ (c 0.14, MeOH)

C₃₇H₆₇NO₂₅Si

(2-Trimethylsilyl)ethyl α -D-galactopyranosyl-(1 \rightarrow 6)- α -D-galactopyranosyl-(1 \rightarrow 2)- α -L-fucopyranosyl-(1 \rightarrow 2)- β -D-galactopyranosyl-(1 \rightarrow 3)-2-acetamido-2-deoxy- β -D-glucopyranoside

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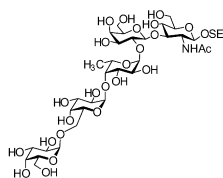
$[\alpha]_D = +21.1$ (c 0.18, MeOH)

C₃₇H₆₇NO₂₅Si

(2-Trimethylsilyl)ethyl α -D-galactopyranosyl-(1 \rightarrow 6)- α -[β -D-galactopyranosyl-(1 \rightarrow 3)- α -L-fucopyranosyl-(1 \rightarrow 2)- β -D-galactopyranosyl-(1 \rightarrow 3)-2-acetamido-2-deoxy- β -D-glucopyranoside

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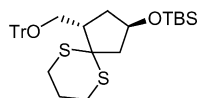
$[\alpha]_D = +22.6$ (c 0.22, MeOH)

$C_{37}H_{67}NO_{25}Si$

(2-Trimethylsilyl)ethyl α -D-galactopyranosyl-(1→6)- α -D-galactopyranosyl-(1→4)- α -L-fucopyranosyl-(1→2)- β -D-galactopyranosyl-(1→3)-2-acetamido-2-deoxy- β -D-glucopyranoside

Leo M.H. Leung, Mark E. Light, Vicky Gibson, Bruno Linclau*

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$C_{34}H_{44}O_2S_2Si$

(2S,4R)-[4-(*tert*-Butyldimethylsilyloxy)-2-trityloxymethyl]cyclopentan-1-one-1,3-propanedithioketal

Ee = 100%

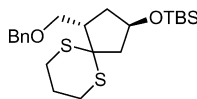
$[\alpha]_D = -16.6$ (c 0.67, CHCl₃)

Source of chirality: chiral starting material

Absolute configuration: (2S,4R)

Leo M.H. Leung, Mark E. Light, Vicky Gibson, Bruno Linclau*

Tetrahedron: Asymmetry 20 (2009) 821



$C_{22}H_{36}O_2S_2Si$

(2S,4R)-[4-(*tert*-Butyldimethylsilyloxy)-2-benzyloxymethyl]cyclopentan-1-one-1,3-propanedithioketal

Ee = 100%

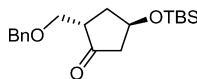
$[\alpha]_D = -10.8$ (c 0.6, CHCl₃)

Source of chirality: chiral starting material

Absolute configuration: (2S,4R)

Leo M.H. Leung, Mark E. Light, Vicky Gibson, Bruno Linclau*

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$C_{19}H_{30}O_3Si$

(2S,4R)-[4-(*tert*-Butyldimethylsilyloxy)-2-benzyloxymethyl]cyclopentanone

Ee = 100%

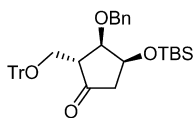
$[\alpha]_D = -72.6$ (c 0.9, CHCl₃)

Source of chirality: chiral starting material

Absolute configuration: (2S,4R)

Leo M.H. Leung, Mark E. Light, Vicky Gibson, Bruno Linclau *

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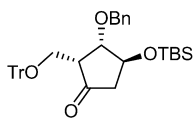
$C_{38}H_{44}O_4Si$

(2R,3R,4S)-[3-Benzyloxy-4-(*tert*-butyldimethylsilyloxy)-2-trityloxymethyl]cyclopentanone

Ee = 100%
[α]_D = -6.3 (c 1.1, CHCl₃)
Source of chirality: chiral starting material
Absolute configuration: (2R,3R,4S)

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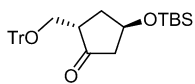
$C_{34}H_{44}O_2S_2Si$

(2R,3S,4S)-[3-Benzyloxy-4-(*tert*-butyldimethylsilyloxy)-2-trityloxymethyl]cyclopentanone

Ee = 100%
[α]_D = -23.7 (c 0.45, CHCl₃)
Source of chirality: chiral starting material
Absolute configuration: (2R,3S,4S)

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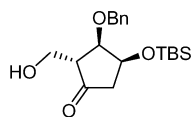
$C_{31}H_{38}O_3Si$

(2S,4R)-[4-(*tert*-Butyldimethylsilyloxy)-2-trityloxymethyl]cyclopentanone

Ee = 100%
[α]_D = -48.7 (c 1.1, CHCl₃)
Source of chirality: chiral starting material
Absolute configuration: (2S,4R)

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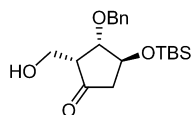
$C_{19}H_{30}O_4Si$

(2R,3R,4S)-[3-Benzyloxy-4-(*tert*-butyldimethylsilyloxy)-2-hydroxymethyl]cyclopentanone

Ee = 100%
[α]_D = +3.8 (c 0.55, CHCl₃)
Source of chirality: chiral starting material
Absolute configuration: (2R,3R,4S)

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$C_{19}H_{30}O_4Si$

(2R,3S,4S)-[3-Benzyloxy-4-(*tert*-butylidimethylsilyloxy)-2-hydroxymethyl]cyclopentanone

Ee = 100%

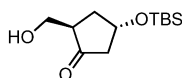
$[\alpha]_D = -88.3$ (c 0.35, $CHCl_3$)

Source of chirality: chiral starting material

Absolute configuration: (2R,3S,4S)

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$C_{12}H_{24}O_3Si$

(2R,4S)-[4-(*tert*-Butylidimethylsilyloxy)-2-hydroxymethyl]cyclopentanone

Ee = 100%

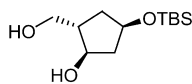
$[\alpha]_D = +99.0$ (c 0.26 $CHCl_3$)

Source of chirality: chiral starting material

Absolute configuration: (2R,4S)

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$C_{12}H_{26}O_3Si$

(1R,2S,4R)-[4-(*tert*-Butylidimethylsilyloxy)-2-hydroxymethyl]cyclopentanol

Ee = 100%

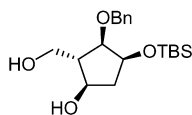
$[\alpha]_D = -7.9$ (c 0.98, $CHCl_3$)

Source of chirality: chiral starting material

Absolute configuration: (1R,2S,4R)

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$C_{19}H_{32}O_4Si$

(1R,2S,3R,4S)-[3-Benzyloxy-4-(*tert*-butylidimethylsilyloxy)-2-hydroxymethyl]cyclopentanol

Ee = 100%

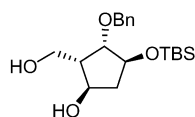
$[\alpha]_D = +82.0$ (c 1.5, $CHCl_3$)

Source of chirality: chiral starting material

Absolute configuration: (1R,2S,3R,4S)

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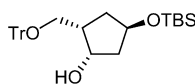
C₁₉H₃₂O₄Si

(1R,2S,3S,4S)-[3-Benzyloxy-4-(*tert*-butyldimethylsilyloxy)-2-hydroxymethyl]cyclopentanol

Ee = 100%
[α]_D = -29.8 (c 1.2, CHCl₃)
Source of chirality: chiral starting material
Absolute configuration: (1R,2S,3S,4S)

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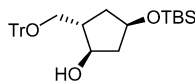
C₃₁H₄₀O₃Si

(1S,2S,4R)-[4-(*tert*-Butyldimethylsilyloxy)-2-trityloxymethyl]cyclopentanol

Ee = 100%
[α]_D = +1.7 (c 1.1, CHCl₃)
Source of chirality: chiral starting material
Absolute configuration: (1S,2S,4R)

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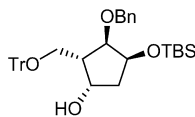
C₃₁H₄₀O₃Si

(1R,2S,4R)-[4-(*tert*-Butyldimethylsilyloxy)-2-trityloxymethyl]cyclopentanol

Ee = 100%
[α]_D = +30.5 (c 0.32, CHCl₃)
Source of chirality: chiral starting material
Absolute configuration: (1R,2S,4R)

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Tetrahedron: Asymmetry 20 (2009) 821



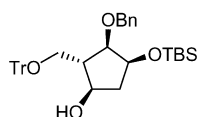
C₃₈H₄₆O₄Si

(1S,2S,3R,4S)-3-Benzyloxy-4-(*tert*-butyldimethylsilyloxy)-2-trityloxymethyl]cyclopentanol

Ee = 100%
[α]_D = +42.6 (c 0.95, CHCl₃)
Source of chirality: chiral starting material
Absolute configuration: (1S,2S,3R,4S)

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C₃₈H₄₆O₄Si

(1R,2S,3R,4S)-[3-Benzyloxy-4-(*tert*-butyldimethylsilyloxy)-2-trityloxymethyl]cyclopentanol

Ee = 100%

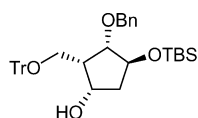
[α]_D = +66.1 (c 0.80, CHCl₃)

Source of chirality: chiral starting material

Absolute configuration: (1R,2S,3R,4S)

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C₃₈H₄₆O₄Si

(1S,2S,3S,4S)-[3-Benzyloxy-4-(*tert*-butyldimethylsilyloxy)-2-trityloxymethyl]cyclopentanol

Ee = 100%

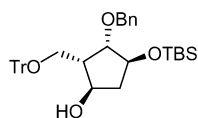
[α]_D = +13.3 (c 0.45, CHCl₃)

Source of chirality: chiral starting material

Absolute configuration: (1S,2S,3S,4S)

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C₃₈H₄₆O₄Si

(1R,2S,3S,4S)-[3-Benzyloxy-4-(*tert*-butyldimethylsilyloxy)-2-trityloxymethyl]cyclopentanol

Ee = 100%

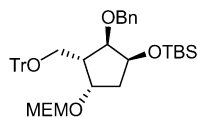
[α]_D = +23.6 (c 0.35, CHCl₃)

Source of chirality: chiral starting material

Absolute configuration: (1R,2S,3S,4S)

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C₄₂H₅₄O₆Si

(1S,2R,3S,4S)-[(2-Benzyloxy-4-(2-(methoxy)ethoxymethoxy)-3-trityloxymethyl)cyclopentyl]oxytert-butyldimethylsilane

Ee = 100%

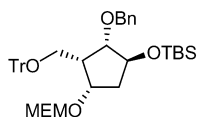
[α]_D = +23.7 (c 0.35, CHCl₃)

Source of chirality: chiral starting material

Absolute configuration: (1S,2R,3S,4S)

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C₄₂H₅₄O₆Si

(1S,2S,3S,4S)-[(2-Benzyloxy-4-(2-(methoxy)ethoxymethoxy)-3-trityloxymethyl)cyclopentyloxy]tert-butyldimethylsilane

Ee = 100%

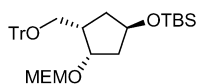
[α]_D = +28.1 (c 0.26, CHCl₃)

Source of chirality: chiral starting material

Absolute configuration: (1S,2S,3S,4S)

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C₃₅H₄₈O₅Si

(1R,3S,4S)-[(4-(2-(Methoxy)ethoxymethoxy)-3-trityloxymethyl)cyclopentyloxy]tert-butyldimethylsilane

Ee = 100%

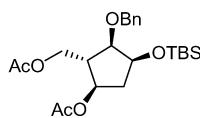
[α]_D = -6.7 (c 0.90, CHCl₃)

Source of chirality: chiral starting material

Absolute configuration: (1R,3S,4S)

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C₂₆H₃₆O₆Si

(1R,2S,3R,4S)-[2-Acetoxyethyl-3-benzyloxy-4-(tert-butyldimethylsilyloxy)cyclopent-1-yl acetate

Ee = 100%

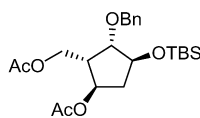
[α]_D = +61.6 (c 0.45, CHCl₃)

Source of chirality: chiral starting material

Absolute configuration: (1R,2S,3R,4S)

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C₂₆H₃₆O₆Si

(1R,2S,3S,4S)-[2-Acetoxyethyl-3-benzyloxy-4-(tert-butyldimethylsilyloxy)cyclopent-1-yl acetate

Ee = 100%

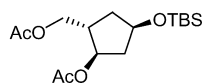
[α]_D = -41.3 (c 0.6, CHCl₃)

Source of chirality: chiral starting material

Absolute configuration: (1R,2S,3S,4S)

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$C_{16}H_{30}O_5Si$

(1R,2S,4R)-[2-Acetoxyethyl-4-(*tert*-butyldimethylsilyloxy)]cyclopent-1-yl acetate

Ee = 100%

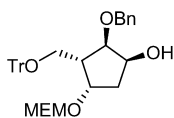
$[\alpha]_D = -42.6$ (c 0.46, $CHCl_3$)

Source of chirality: chiral starting material

Absolute configuration: (1R,2S,4R)

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$C_{36}H_{40}O_6$

(1S,2R,3S,4S)-[2-Benzyloxy-4-(2-(methoxy)ethoxymethoxy)-3-trityloxymethyl]cyclopentanol

Ee = 100%

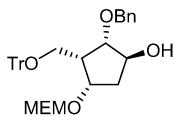
$[\alpha]_D = +16.5$ (c 0.65, $CHCl_3$)

Source of chirality: chiral starting material

Absolute configuration: (1S,2R,3S,4S)

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$C_{36}H_{40}O_6$

(1S,2S,3S,4S)-[2-Benzyloxy-4-(2-(methoxy)ethoxymethoxy)-3-trityloxymethyl]cyclopentanol

Ee = 100%

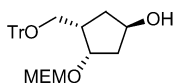
$[\alpha]_D = +16.9$ (c 0.54, $CHCl_3$)

Source of chirality: chiral starting material

Absolute configuration: (1S,2S,3S,4S)

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$C_{29}H_{34}O_5$

(1R,3S,4S)-[4-(2-(Methoxy)ethoxymethoxy)-3-trityloxymethyl]cyclopentanol

Ee = 100%

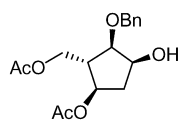
$[\alpha]_D = +2.9$ (c 0.60, $CHCl_3$)

Source of chirality: chiral starting material

Absolute configuration: (1R,3S,4S)

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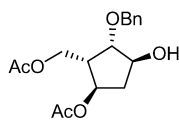
$C_{17}H_{22}O_6$

(1R,2S,3R,4S)-[2-Acetoxyethyl-3-benzyloxy-4-hydroxy]cyclopent-1-yl acetate

Ee = 100%
[α]_D = +23.6 (c 0.55, CHCl₃)
Source of chirality: chiral starting material
Absolute configuration: (1R,2S,3R,4S)

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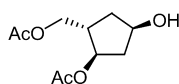
$C_{17}H_{22}O_6$

(1R,2S,3S,4S)-[2-Acetoxyethyl-3-benzyloxy-4-hydroxy]cyclopent-1-yl acetate

Ee = 100%
[α]_D = -55.7 (c 0.45, CHCl₃)
Source of chirality: chiral starting material
Absolute configuration: (1R,2S,3S,4S)

Leo M.H. Leung, Mark E. Light, Vicky Gibson, Bruno Linclau *

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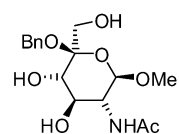
$C_{10}H_{16}O_5$

(1R,2S,4R)-[2-Acetoxyethyl-4-hydroxy]cyclopent-1-yl acetate

Ee = 100%
[α]_D = -40.0 (c 0.34, CHCl₃)
Source of chirality: chiral starting material
Absolute configuration: (1R,2S,4R)

Andreas J. Steiner, Georg Schitter, Arnold E. Stütz *, Tanja M. Wrodnigg, Chris A. Tarling, Stephen G. Withers, Don J. Mahuran, Michael B. Tropak

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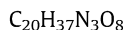
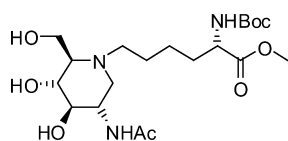
$C_{16}H_{23}NO_7$

Methyl (5S)-2-acetamino-5-C-benzyloxy-2-deoxy- β -D-xylo-hexopyranoside

Ee = 100%
[α]_D²⁰ = -19.8 (c 1.1, MeOH)
Source of chirality: 2-acetamino-2-deoxy-D-glucose

Andreas J. Steiner, Georg Schitter, Arnold E. Stütz*, Tanja M. Wrodnigg,
Chris A. Tarling, Stephen G. Withers, Don J. Mahuran, Michael B. Tropak

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Methyl-*N*⁶-(2-acetamino-1,2,5-trideoxy-*D*-glucitol-1,5-diyl)-*N*²-*tert*-butyloxycarbonyl-*L*-lysinate

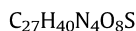
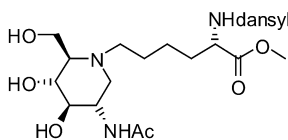
Ee = 100%

$[\alpha]_D^{20} = +1.2$ (c 1.1, MeOH)

Source of chirality: 2-acetamino-2-deoxy-*D*-glucose

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Chris A. Tarling, Stephen G. Withers, Don J. Mahuran, Michael B. Tropak

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Methyl-*N*⁶-(2-acetamino-1,2,5-trideoxy-*D*-glucitol-1,5-diyl)-*N*²-dansyl-*L*-lysinate

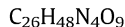
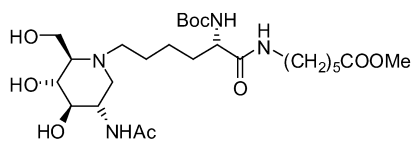
Ee = 100%

$[\alpha]_D^{20} = +16.6$ (c 1.3, MeOH)

Source of chirality: 2-acetamino-2-deoxy-*D*-glucose

Andreas J. Steiner, Georg Schitter, Arnold E. Stütz*, Tanja M. Wrodnigg,
Chris A. Tarling, Stephen G. Withers, Don J. Mahuran, Michael B. Tropak

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Methyl 6-[*N*⁶-(2-acetamino-1,2,5-trideoxy-*D*-glucitol-1,5-diyl)-*N*²-*tert*-butyloxycarbonyl-*L*-lysiny]aminohexanoate

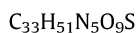
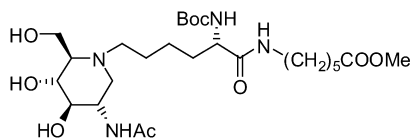
Ee = 100%

$[\alpha]_D^{20} = +3.0$ (c 1.8, MeOH)

Source of chirality: 2-acetamino-2-deoxy-*D*-glucose

Andreas J. Steiner, Georg Schitter, Arnold E. Stütz*, Tanja M. Wrodnigg,
Chris A. Tarling, Stephen G. Withers, Don J. Mahuran, Michael B. Tropak

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Methyl 6-[*N*⁶-(2-acetamino-1,2,5-trideoxy-*D*-glucitol-1,5-diyl)-*N*²-dansyl-*L*-lysiny]aminohexanoate

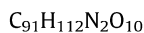
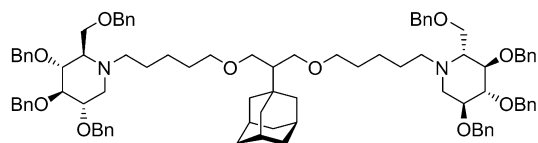
Ee = 100%

$[\alpha]_D^{20} = +1.9$ (c 0.9, MeOH)

Source of chirality: 2-acetamino-2-deoxy-*D*-glucose

Tom Wennekes, Richard J. B. H. N. van den Berg, Kimberly M. Bongers, Wilma E. Donker-Koopman, Amar Ghisaidoobe, Gijsbert A. van der Marel, Anneke Strijland, Johannes M. F. G. Aerts*, Herman S. Overkleef*

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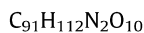
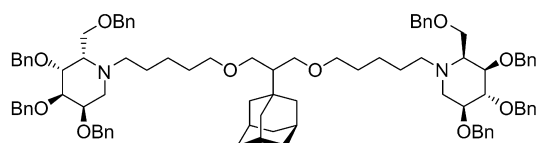


N,N'-[5,5'-[2-(Adamantan-1-yl)propane-1,3-diyl]bis(oxy)bis(pentane-5,1-diyl)]-bis(2,3,4,6-tetra-O-benzyl-1-deoxynojirimycin)

$[\alpha]_D^{20} = -2.4$ (c 3.7 $CHCl_3$)
Source of chirality: D-glucose
Absolute configuration: (2*S*,3*R*,4*R*,5*R*)

Tom Wennekes, Richard J. B. H. N. van den Berg, Kimberly M. Bongers, Wilma E. Donker-Koopman, Amar Ghisaidoobe, Gijsbert A. van der Marel, Anneke Strijland, Johannes M. F. G. Aerts*, Herman S. Overkleef*

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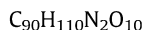
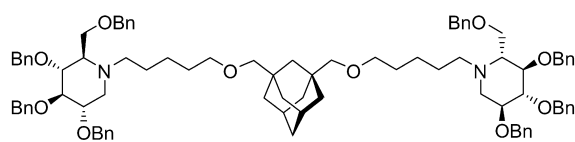


N,N'-[5,5'-[2-(Adamantan-1-yl)propane-1,3-diyl]bis(oxy)bis(pentane-5,1-diyl)]-bis(2,3,4,6-tetra-O-benzyl-L-ido-1-deoxynojirimycin)

$[\alpha]_D^{20} = -21.8$ (c 1.8 $CHCl_3$)
Source of chirality: D-glucose
Absolute configuration: (2*S*,3*R*,4*R*,5*S*)

Tom Wennekes, Richard J. B. H. N. van den Berg, Kimberly M. Bongers, Wilma E. Donker-Koopman, Amar Ghisaidoobe, Gijsbert A. van der Marel, Anneke Strijland, Johannes M. F. G. Aerts*, Herman S. Overkleef*

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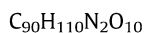
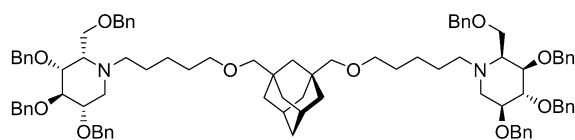


N,N'-[5,5'-[Adamantan-1,3-diylbis(methylene)]bis(oxy)bis(pentane-5,1-diyl)]-bis(2,3,4,6-tetra-O-benzyl-1-deoxynojirimycin)

$[\alpha]_D^{20} = -3.0$ (c 2.4 $CHCl_3$)
Source of chirality: D-glucose
Absolute configuration: (2*S*,3*R*,4*R*,5*R*)

Tom Wennekes, Richard J. B. H. N. van den Berg, Kimberly M. Bongers, Wilma E. Donker-Koopman, Amar Ghisaidoobe, Gijsbert A. van der Marel, Anneke Strijland, Johannes M. F. G. Aerts*, Herman S. Overkleef*

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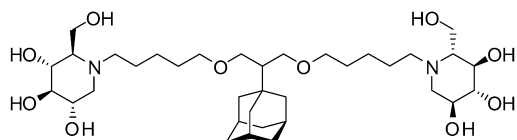


N,N'-[5,5'-[Adamantan-1,3-diylbis(methylene)]bis(oxy)bis(pentane-5,1-diyl)]-bis(2,3,4,6-tetra-O-benzyl-L-ido-1-deoxynojirimycin)

$[\alpha]_D^{20} = -25.9$ (c 2.1 $CHCl_3$)
Source of chirality: D-glucose
Absolute configuration: (2*S*,3*R*,4*R*,5*S*)

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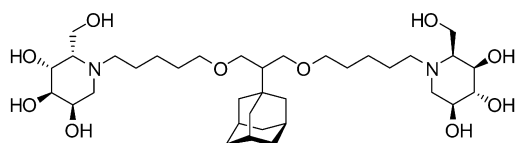
$C_{35}H_{64}N_2O_{10}$

N,N'-[5,5'-[2-(adamantan-1-yl)propane-1,3-diyl]bis(oxy)bis(pentane-5,1-diyl)]-bis(1-deoxynojirimycin)

$[\alpha]_D^{20} = -8.8$ (c 1.9 MeOH)
Source of chirality: D-glucose
Absolute configuration: (2*S*,3*R*,4*R*,5*R*)

Tom Wennekes, Richard J. B. H. N. van den Berg, Kimberly M. Bongers, Wilma E. Donker-Koopman, Amar Ghisaidoobe, Gijsbert A. van der Marel, Anneke Strijland, Johannes M. F. G. Aerts*, Herman S. Overkleef*

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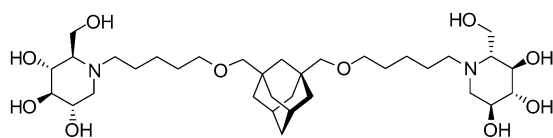
$C_{35}H_{62}N_2O_{10}$

N,N'-[5,5'-[2-(adamantan-1-yl)propane-1,3-diyl]bis(oxy)bis(pentane-5,1-diyl)]-bis(L-ido-1-deoxynojirimycin)

$[\alpha]_D^{20} = +11.4$ (c 2.6 MeOH)
Source of chirality: D-glucose
Absolute configuration: (2*S*,3*R*,4*R*,5*S*)

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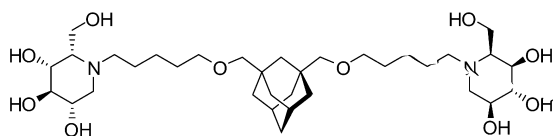
$C_{34}H_{62}N_2O_{10}$

N,N'-[5,5'-[adamantan-1,3-diylbis(methylene)]bis(oxy)bis(pentane-5,1-diyl)]-bis(1-deoxynojirimycin)

$[\alpha]_D^{20} = -3.6$ (c 3.6 MeOH)
Source of chirality: D-glucose
Absolute configuration: (2*S*,3*R*,4*R*,5*R*)

Tom Wennekes, Richard J. B. H. N. van den Berg, Kimberly M. Bongers, Wilma E. Donker-Koopman, Amar Ghisaidoobe, Gijsbert A. van der Marel, Anneke Strijland, Johannes M. F. G. Aerts*, Herman S. Overkleef*

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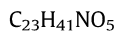
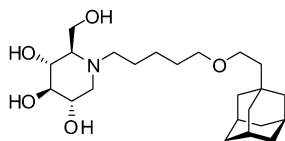
$C_{34}H_{62}N_2O_{10}$

N,N'-[5,5'-[adamantan-1,3-diylbis(methylene)]bis(oxy)bis(pentane-5,1-diyl)]-bis(L-ido-1-deoxynojirimycin)

$[\alpha]_D^{20} = +13.2$ (c 3.1 MeOH)
Source of chirality: D-glucose
Absolute configuration: (2*S*,3*R*,4*R*,5*S*)

Tom Wennekes, Richard J. B. H. N. van den Berg, Kimberly M. Bongers, Wilma E. Donker-Koopman, Amar Ghisaidoobe, Gijsbert A. van der Marel, Anneke Strijland, Johannes M. F. G. Aerts*, Herman S. Overkleef*

Tetrahedron: Asymmetry 20 (2009) 836

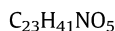
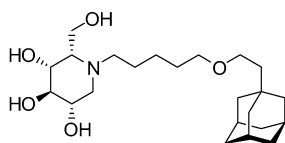


N-[5-(Adamantan-1-yl-ethoxy)-pentyl]-1-deoxyojirimycin

$[\alpha]_D^{20} = -16.6$ (c 0.8 MeOH)
Source of chirality: D-glucose
Absolute configuration: (2*S*,3*R*,4*R*,5*R*)

Tom Wennekes, Richard J. B. H. N. van den Berg, Kimberly M. Bongers, Wilma E. Donker-Koopman, Amar Ghisaidoobe, Gijsbert A. van der Marel, Anneke Strijland, Johannes M. F. G. Aerts*, Herman S. Overkleef*

Tetrahedron: Asymmetry 20 (2009) 836

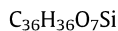
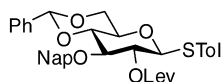


N-[5-(Adamantan-1-yl-ethoxy)-pentyl]-*L*-ido-1-deoxyojirimycin

$[\alpha]_D^{20} = +11.9$ (c 0.8 MeOH)
Source of chirality: D-glucose
Absolute configuration: (2*S*,3*R*,4*R*,5*S*)

Sonia Serna, Bharat Kardak, Niels-Christian Reichardt, Manuel Martin-Lomas*

Tetrahedron: Asymmetry 20 (2009) 851

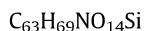
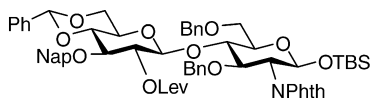


p-Toluenyl 4,6-*O*-benzylidene-2-*O*-levulinoyl-3-*O*-(2-naphthylmethyl)-*L*-thio-β-D-glucopyranoside

Ee = 100%
 $[\alpha]_D^{20} = +7.3$ (c 0.76, CHCl₃)
Source of chirality: D-glucose

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Tetrahedron: Asymmetry 20 (2009) 851

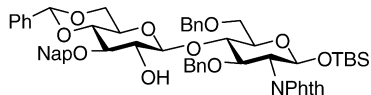


tert-Butyldimethylsilyl 4,6-*O*-benzylidene-2-*O*-levulinoyl-3-*O*-(2-naphthylmethyl)-β-D-glucopyranosyl-(1→4)-3,6-di-*O*-benzyl-2-deoxy-2-phthalamido-β-D-glucopyranoside

Ee = 100%
 $[\alpha]_D^{20} = +5.7$ (c 0.5, CHCl₃)
Source of chirality: D-glucose, D-glucosamine

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Tetrahedron: Asymmetry 20 (2009) 851



$C_{58}H_{63}NO_{12}Si$

tert-Butyldimethylsilyl 4,6-*O*-benzylidene-3-*O*-(2-naphthylmethyl)-β-*D*-glucopyranosyl-(1→4)-3,6-di-*O*-benzyl-2-deoxy-2-phthalamido-β-*D*-glucopyranoside

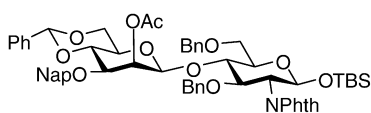
Ee = 100%

$[\alpha]_D^{20} = +22.1$ (c 0.95, $CHCl_3$)

Source of chirality: *D*-glucose, *D*-glucosamine

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Tetrahedron: Asymmetry 20 (2009) 851



$C_{60}H_{65}NO_{13}Si$

tert-Butyldimethylsilyl 2-*O*-acetyl-4,6-*O*-benzylidene-3-*O*-(2-naphthylmethyl)-β-*D*-mannopyranosyl-(1→4)-3,6-di-*O*-benzyl-2-deoxy-2-phthalamido-β-*D*-glucopyranoside

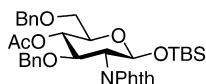
Ee = 100%

$[\alpha]_D^{20} = +3.0$ (c 0.20, $CHCl_3$)

Source of chirality: *D*-mannose, *D*-glucosamine

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Tetrahedron: Asymmetry 20 (2009) 851



$C_{36}H_{43}NO_8Si$

tert-Butyldimethylsilyl 4-*O*-acetyl-3,6-di-*O*-benzyl-2-deoxy-2-phthalamido-β-*D*-glucopyranoside

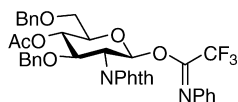
Ee = 100%

$[\alpha]_D^{20} = +47.2$ (c 1.06, $CHCl_3$)

Source of chirality: *D*-glucosamine

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Tetrahedron: Asymmetry 20 (2009) 851



$C_{38}H_{33}F_3N_2O_8$

4-*O*-Acetyl-3,6-di-*O*-benzyl-2-deoxy-2-phthalamido-β-*D*-glucopyranoside *N*-phenyl trifluoroacetimidate

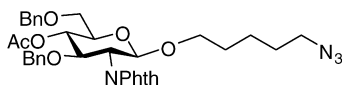
Ee = 100%

$[\alpha]_D^{20} = +246.0$ (c 2.90, $CHCl_3$)

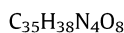
Source of chirality: *D*-glucosamine

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Tetrahedron: Asymmetry 20 (2009) 851



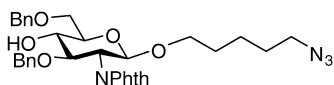
Ee = 100%
[α]_D²⁰ = +122.6 (c 2.70, CHCl₃)
Source of chirality: D-glucosamine



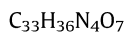
5-Azidopentyl 4-O-acetyl-3,6-di-O-benzyl-2-deoxy-2-phthalamido- β -D-glucopyranoside

Sonia Serna, Bharat Kardak, Niels-Christian Reichardt, Manuel Martin-Lomas *

Tetrahedron: Asymmetry 20 (2009) 851



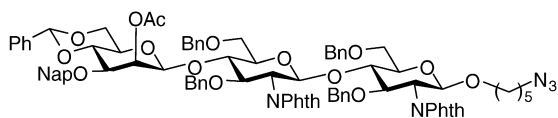
Ee = 100%
[α]_D²⁰ = +36.0 (c 0.9, CHCl₃)
Source of chirality: D-glucosamine



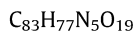
5-Azidopentyl 3,6-di-O-benzyl-2-deoxy-2-phthalimido- β -D-glucopyranoside

Sonia Serna, Bharat Kardak, Niels-Christian Reichardt, Manuel Martin-Lomas *

Tetrahedron: Asymmetry 20 (2009) 851



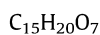
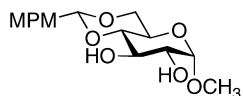
Ee = 100%
[α]_D²⁰ = +3.9 (c 0.15, CHCl₃)
Source of chirality: D-mannose, D-glucosamine



5-Azidopentyl 2-O-acetyl-4,6-O-benzylidene-3-O-(2-naphthylmethyl)- β -D-mannopyranosyl-(1 \rightarrow 4)-3,6-di-O-benzyl-2-deoxy-2-phthalamido- β -D-glucopyranosyl-(1 \rightarrow 4)-3,6-di-O-benzyl-2-deoxy-2-phthalamido- β -D-glucopyranoside

Neil S. Keddie, Geert Bultynck, Tomas Luyten, Alexandra M.Z. Slawin, Stuart J. Conway *

Tetrahedron: Asymmetry 20 (2009) 857

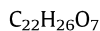
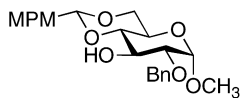


Methyl 4,6-O-anisylidene- α -D-glucopyranoside

Ee = 100%
[α]_D²⁰ = +104.8 (c 1.00, CHCl₃)
Source of chirality: D-glucose

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Stuart J. Conway*

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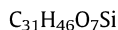
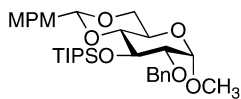


Methyl 2-O-benzyl-4,6-O-anisylidene- α -D-glucopyranoside

Ee = 100%
 $[\alpha]_D^{20} = +32.0$ (c 1.00, $CHCl_3$)
Source of chirality: D-glucose

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Stuart J. Conway*

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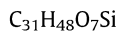
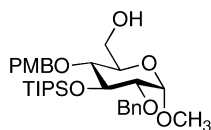


2-O-Benzyl-3-O-triisopropylsilyl-4,6-O-anisylidene- α -D-glucopyranoside

Ee = 100%
 $[\alpha]_D^{20} = -13.5$ (c 0.97, $CHCl_3$)
Source of chirality: D-glucose

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Stuart J. Conway*

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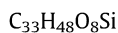
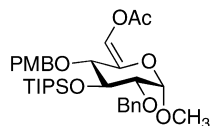


Methyl 2-O-benzyl-4-O-(4-methoxybenzyl)-3-O-triisopropylsilyl- α -D-glucopyranoside

Ee = 100%
 $[\alpha]_D^{20} = +64.6$ (c 1.56, $CHCl_3$)
Source of chirality: D-glucose

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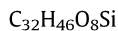
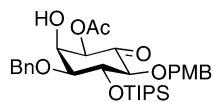


Methyl 6-O-acetyl-2-O-benzyl-4-O-(4-methoxybenzyl)-3-O-triisopropylsilyl- α -D-glucohex-5-enopyranoside

Ee = 100%
 $[\alpha]_D^{20} = -8.6$ (c 1.32, $CHCl_3$)
Source of chirality: D-glucose

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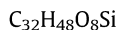
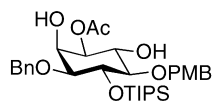
3-O-Benzyl-2-hydroxy-5-O-(4-methoxybenzyl)-4-O-triisopropylsilyl-6-oxocyclohexyl acetate

$$[\alpha]_D^{20} = -28.9 \text{ (c 3.02, CHCl}_3\text{)}$$

Source of chirality: Ferrier rearrangement from D-glucose

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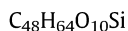
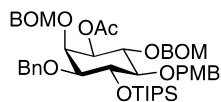
D-1-O-Acetyl-3-O-benzyl-5-O-(4-methoxybenzyl)-4-O-triisopropylsilyl-myoinositol

$$[\alpha]_D^{20} = +17.1 \text{ (c 1.00, CHCl}_3\text{)}$$

Source of chirality: Ferrier rearrangement from D-glucose

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Stuart J. Conway*

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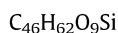
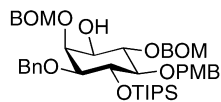
D-1-O-Acetyl-3-O-benzyl-2,6-O-bisbenzyloxymethyl-5-O-(4-methoxybenzyl)-4-O-triisopropylsilyl-myoinositol

$$[\alpha]_D^{20} = -40.7 \text{ (c 0.75, CHCl}_3\text{)}$$

Source of chirality: Ferrier rearrangement from D-glucose

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Stuart J. Conway*

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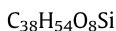
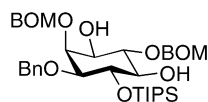
D-3-O-Benzyl-2,6-O-bisbenzyloxymethyl-5-O-(4-methoxybenzyl)-4-O-triisopropylsilyl-myoinositol

$$[\alpha]_D^{20} = -17.9 \text{ (c 1.47, CHCl}_3\text{)}$$

Source of chirality: Ferrier rearrangement from D-glucose

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Stuart J. Conway*

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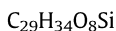
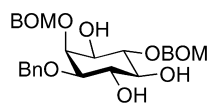
D-3-O-Benzyl-2,6-O-bisbenzyloxymethyl-4-O-triisopropylsilyl-myoinositol

$$[\alpha]_D^{20} = +3.6 \text{ (c 2.45, CHCl}_3\text{)}$$

Source of chirality: Ferrier rearrangement from D-glucose

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Stuart J. Conway*

Tetrahedron: Asymmetry 20 (2009) 857



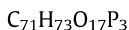
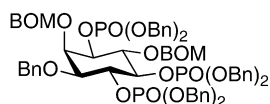
D-3-O-Benzyl-2,6-O-bisbenzyloxymethyl-myoinositol

$$[\alpha]_D^{20} = +27.3 \text{ (c 0.11, CHCl}_3\text{)}$$

Source of chirality: Ferrier rearrangement from D-glucose

Neil S. Keddie, Geert Bultynck, Tomas Luyten, Alexandra M.Z. Slawin,
Stuart J. Conway*

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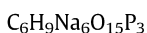
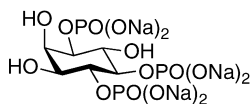
D-3-O-Benzyl-2,6-O-bisbenzyloxymethyl-myoinositol 1,4,5-tris(dibenzyl phosphate)

$$[\alpha]_D^{20} = -18.1 \text{ (c 1.00, CHCl}_3\text{)}$$

Source of chirality: Ferrier rearrangement from D-glucose

Neil S. Keddie, Geert Bultynck, Tomas Luyten, Alexandra M.Z. Slawin,
Stuart J. Conway*

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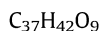
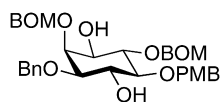
D-myoinositol 1,4,5-trisphosphate hexakis sodium salt

$$[\alpha]_D^{20} = -19.2 \text{ (c 0.25, H}_2\text{O)}$$

Source of chirality: Ferrier rearrangement from D-glucose

Neil S. Keddie, Geert Bultynck, Tomas Luyten, Alexandra M.Z. Slawin,
Stuart J. Conway*

Tetrahedron: Asymmetry 20 (2009) 857



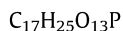
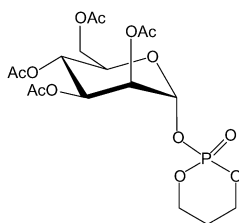
D-3-O-Benzyl-2,6-O-bisbenzyloxymethyl-5-O-(4-methoxybenzyl)-*myo*-inositol

$$[\alpha]_D^{20} = -16.9 \text{ (c 0.54, CHCl}_3\text{)}$$

Source of chirality: Ferrier rearrangement from D-glucose

Nigel Kevin Jalsa, Gurdial Singh*

Tetrahedron: Asymmetry 20 (2009) 867



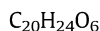
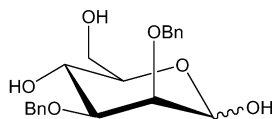
2,3,4,6-Tetra-O-acetyl- α -D-mannopyranosyl-1-O-propane-1,3-diyl phosphate

$$[\alpha]_D^{24} = +33.5 \text{ (c 1.0, CHCl}_3\text{)}$$

Source of chirality: D-mannose

Nigel Kevin Jalsa, Gurdial Singh*

Tetrahedron: Asymmetry 20 (2009) 867



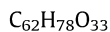
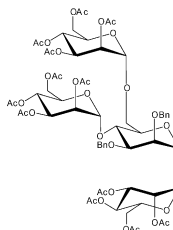
2,3-Di-O-benzyl- α,β -D-mannopyranose

$$[\alpha]_D^{24} = -27.2 \text{ (c 1.03, CHCl}_3\text{)}$$

Source of chirality: methyl- α -D-mannopyranoside

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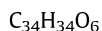
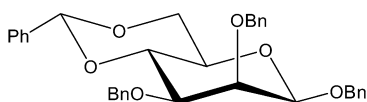
2',3',4',6'-Tetra-O-acetyl- α -D-mannopyranosyl-(1'→6)-(2'',3'',4'',6''-tetra-O- α -D-acetyl-mannopyranosyl-(1''→4))-(2''',3''',4''',6'''-tetra-O-acetyl- α -D-mannopyranosyl-(1'''→1))-2,3-di-O-benzyl- α -D-mannopyranoside

$$[\alpha]_D^{24} = +42.2 \text{ (c 10.6, CHCl}_3\text{)}$$

Source of chirality: D-mannose

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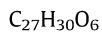
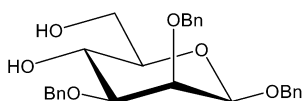


4,6-O-Benzylidene-1,2,3-tri-O-benzyl- β -D-mannopyranoside

$[\alpha]_D^{24} = -14.3$ (c 0.5, $CHCl_3$)
Source of Chirality: D-mannose

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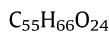
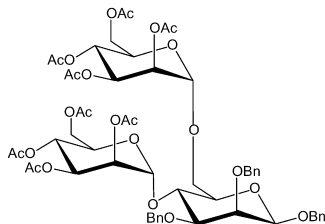


1,2,3-Tri-O-benzyl- β -D-mannopyranoside

$[\alpha]_D^{24} = -29.9$ (c 0.34, $CHCl_3$)
Source of chirality: D-mannose

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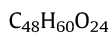
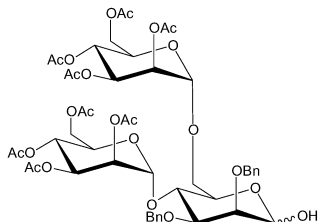


2',3',4',6'-Tetra-O-acetyl- α -D-mannopyranosyl-(1' \rightarrow 6)-(2'',3'',4'',6'')-tetra-O- α -D-acetyl-mannopyranosyl-(1'' \rightarrow 4'')-1,2,3-tri-O-benzyl- α -D-mannopyranoside

$[\alpha]_D^{24} = +8.9$ (c 2.1, $CHCl_3$)
Source of chirality: D-mannose

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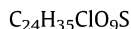
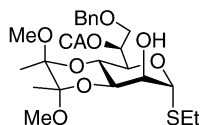


2',3',4',6'-Tetra-O-acetyl- α -D-mannopyranosyl-(1' \rightarrow 6)-(2'',3'',4'',6'')-tetra-O- α -D-acetyl-mannopyranosyl-(1'' \rightarrow 4'')-2,3-tri-O-benzyl- α -D-mannopyranose

$[\alpha]_D^{24} = +95.2$ (c, 0.01, $CHCl_3$)
Source of chirality: D-mannose

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(2'S,3'S) Ethyl 7-O-benzyl-6-O-chloroacetyl-3,4-O-(2',3'-dimethoxybutane-2',3'-diyl)-1-thio-L-glycero- α -D-manno-heptopyranoside

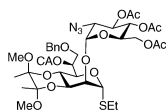
$[\alpha]_D = +17$ (c 1.0, $CHCl_3$)

Source of chirality: D-mannose

Absolute configuration: (1R,2S,3R,4R,5R,6S,2'S,3'S)

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(2'S,3'S) Ethyl 3,4,6-tri-O-acetyl-2-azido-2-deoxy- α -D-glucopyranosyl-(1→2)-7-O-benzyl-6-O-chloroacetyl-3,4-O-(2',3'-dimethoxybutane-2',3'-diyl)-1-thio-L-glycero- α -D-manno-heptopyranoside

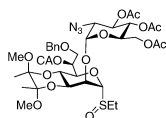
$[\alpha]_D = +16$ (c 1.0, $CHCl_3$)

Source of chirality: D-glucosamine and D-mannose

Absolute configuration: (1R,2S,3S,4R,5R,6S,2'S,3'S,1''R,2''R,3''S,4''R,5''R)

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(2'S,3'S) Ethyl 3,4,6-tri-O-acetyl-2-azido-2-deoxy- α -D-glucopyranosyl-(1→2)-7-O-benzyl-6-O-chloroacetyl-3,4-O-(2',3'-dimethoxybutane-2',3'-diyl)-1-thio-L-glycero- α -D-manno-heptopyranoside S-oxide

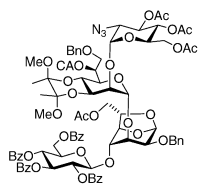
$[\alpha]_D = +22$ (c 1.0, $CHCl_3$)

Source of chirality: D-glucosamine and D-mannose

Absolute configuration: (1R,2S,3S,4R,5R,6S,2'S,3'S,1''R,2''R,3''S,4''R,5''R)

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(2'S,3'S) 3,4,6-tri-O-acetyl-2-azido-2-deoxy- α -D-glucopyranosyl-(1→2)-7-O-benzyl-6-O-chloroacetyl-3,4-O-(2',3'-dimethoxybutane-2',3'-diyl)-L-glycero- α -D-manno-heptopyranosyl-(1→3)-[2,3,4,6-tetra-O-benzoyl- β -D-glucopyranosyl-(1→4)]-7-O-acetyl-1,6-anhydro-2-O-benzoyl-L-glycero- α -D-manno-heptopyranose

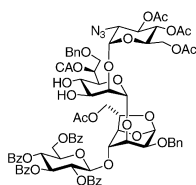
$[\alpha]_D = +58$ (c 1.0, $CHCl_3$)

Source of chirality: D-glucosamine, D-glucose and D-mannose

Absolute configuration: (1R,2S,3S,4R,5R,6S,1'S,2'R,3'S,4'R,5'R,1''R,2''S,3''S,4''R,5''-R,6''S,2'''S,3'''S,1''''R,2''''R,3''''R,4''''S,5''''R)

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3,4,6-Tri-O-acetyl-2-azido-2-deoxy- α -D-glucopyranosyl-(1 \rightarrow 2)-7-O-benzyl-6-O-chloroacetyl-L-glycero- α -D-manno-heptopyranosyl-(1 \rightarrow 3)-[2,3,4,6-tetra-O-benzoyl- β -D-glucopyranosyl-(1 \rightarrow 4)]-7-O-acetyl-1,6-anhydro-2-O-benzyl-L-glycero- α -D-manno-heptopyranose

$[\alpha]_D = +12$ (c 1.0, CHCl₃)

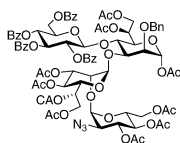
Source of chirality: D-glucosamine, D-glucose and D-mannose

Absolute configuration:

(1R,2S,3S,4R,5R,6S,1'S,2'R,3'S,4'R,5'R,1''R,2''S,3''S,4''S,5''S,6''S,1''''R,2''''R,3''''R,4''''S,5''''R)

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3,4,6-Tri-O-acetyl-2-azido-2-deoxy- α -D-glucopyranosyl-(1 \rightarrow 2)-3,4,7-tri-O-acetyl-6-O-chloroacetyl-L-glycero- α -D-manno-heptopyranosyl-(1 \rightarrow 3)-[2,3,4,6-tetra-O-benzoyl- β -D-glucopyranosyl-(1 \rightarrow 4)]-1,6,7-tri-O-acetyl-2-O-benzyl-L-glycero- α -D-manno-heptopyranoside

$[\alpha]_D = +40$ (c 1.0, CHCl₃)

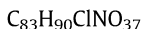
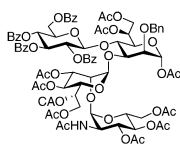
Source of chirality: D-glucosamine, D-glucose and D-mannose

Absolute configuration:

(1R,2S,3S,4R,5R,6S,1'S,2'R,3'S,4'R,5'R,1''R,2''S,3''S,4''R,5''R,6''S,1''''R,2''''R,3''''R,4''''S,5''''R)

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2-acetamido-3,4,6-tri-O-acetyl-2-deoxy- α -D-glucopyranosyl-(1 \rightarrow 2)-3,4,7-tri-O-acetyl-6-O-chloroacetyl-L-glycero- α -D-manno-heptopyranosyl-(1 \rightarrow 3)-[2,3,4,6-tetra-O-benzoyl- β -D-glucopyranosyl-(1 \rightarrow 4)]-1,6,7-tri-O-acetyl-2-O-benzyl-L-glycero- α -D-manno-heptopyranoside

$[\alpha]_D = +20$ (c 1.0, CHCl₃)

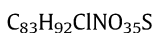
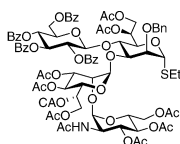
Source of chirality: D-glucosamine, D-glucose and D-mannose

Absolute configuration:

(1R,2S,3S,4R,5R,6S,1'S,2'R,3'S,4'R,5'R,1''R,2''S,3''S,4''R,5''R,6''S,1''''R,2''''R,3''''R,4''''S,5''''R)

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Ethyl 2-acetamido-3,4,6-tri-O-acetyl-2-deoxy- α -D-glucopyranosyl-(1 \rightarrow 2)-3,4,7-tri-O-acetyl-6-O-chloroacetyl-L-glycero- α -D-manno-heptopyranosyl-(1 \rightarrow 3)-[2,3,4,6-tetra-O-benzoyl- β -D-glucopyranosyl-(1 \rightarrow 4)]-6,7-di-O-acetyl-2-O-benzyl-1-thio-L-glycero- α -D-manno-heptopyranoside

$[\alpha]_D = +28$ (c 1.0, CHCl₃)

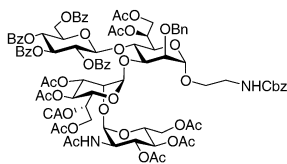
Source of chirality: D-glucosamine, D-glucose and D-mannose

Absolute configuration:

(1R,2S,3S,4R,5R,6S,1'S,2'R,3'S,4'R,5'R,1''R,2''S,3''S,4''R,5''R,6''S,1''''R,2''''R,3''''R,4''''S,5''''R)

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C₉₁H₉₉ClN₂O₃₈

2-(*N*-Benzyloxycarbonyl) aminoethyl 2-acetamido-3,4,6-tri-*O*-acetyl-2-deoxy- α -D-glucopyranosyl-(1 \rightarrow 2)-3,4,7-tri-*O*-acetyl-6-*O*-chloro-acetyl-L-glycero- α -D-manno-heptopyranosyl-(1 \rightarrow 3)-[2,3,4,6-tetra-*O*-benzoyl- β -D-glucopyranosyl-(1 \rightarrow 4)]-6,7-di-*O*-acetyl-2-*O*-benzyl-L-glycero- α -D-manno-heptopyranoside

$[\alpha]_D^{20} = +18$ (c 1.0, CHCl₃)

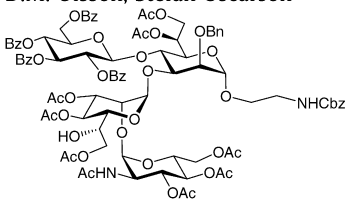
Source of chirality: D-glucosamine, D-glucose and D-mannose

Absolute configuration:

(1*S*,2*S*,3*S*,4*R*,5*R*,6*S*,1'*S*,2'*R*,3'*S*,4'*R*,5'*R*,1''*R*,2''*S*,3''*S*,4''*R*,5''*R*,6''*S*,1''''*R*,2''''*R*,3''''*R*,4''''*S*,5''''*R*)

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C₈₉H₉₈N₂O₃₇

2-(*N*-Benzyloxycarbonyl) aminoethyl 2-acetamido-3,4,6-tri-*O*-acetyl-2-deoxy- α -D-glucopyranosyl-(1 \rightarrow 2)-3,4,7-tri-*O*-acetyl-L-glycero- α -D-manno-heptopyranosyl-(1 \rightarrow 3)-[2,3,4,6-tetra-*O*-benzoyl- β -D-glucopyranosyl-(1 \rightarrow 4)]-6,7-di-*O*-acetyl-2-*O*-benzyl-L-glycero- α -D-manno-heptopyranoside-(1 \rightarrow 3)-[2,3,4,6-tetra-*O*-benzoyl- β -D-glucopyranosyl-(1 \rightarrow 4)]-6,7-di-*O*-acetyl-2-*O*-benzyl-L-glycero- α -D-manno-heptopyranoside

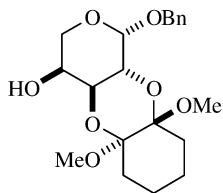
$[\alpha]_D^{20} = +17$ (c 1.0, CHCl₃)

Source of chirality: D-glucosamine, D-mannose and D-glucose

Absolute configuration: (1*S*,2*S*,3*S*,4*R*,5*R*,6*S*,1'*S*,2'*R*,3'*S*,4'*R*,5'*R*,1''*R*,2''*S*,3''*S*,4''*R*,5''*R*,6''*S*,1''''*R*,2''''*R*,3''''*R*,4''''*S*,5''''*R*)

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C₂₀H₂₈O₇

Benzyl 2,3-*O*-[(1*R*,2*R*)-dimethoxy-cyclohexane-1,2-dione diacetal]- β -L-arabinopyranoside

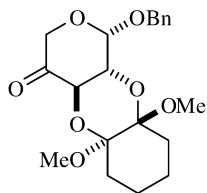
Ee = 100%

$[\alpha]_D^{20} = +38.7$ (c 0.83, CHCl₃)

Source of chirality: L-arabinose as starting material

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Tetrahedron: Asymmetry 20 (2009) 883



C₂₀H₂₆O₇

Benzyl 2,3-*O*-[(1*R*,2*R*)-dimethoxy-cyclohexane-1,2-dione diacetal]- β -L-arabinopyran-3-uloside

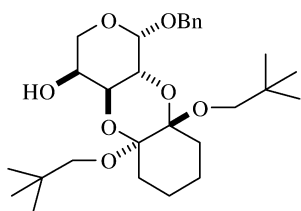
Ee = 100%

$[\alpha]_D^{20} = +34.2$ (c 1.42, CHCl₃)

Source of chirality: L-arabinose as starting material

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Tetrahedron: Asymmetry 20 (2009) 883



C₂₈H₄₄O₇

Benzyl 2,3-O-[(1'R,2'R)-dineopentoxy-cyclohexane-1,2-dione diacetal]-β-L-arabinopyranoside

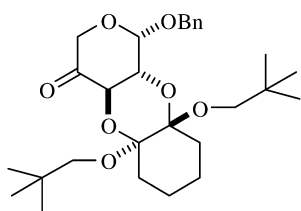
Ee = 100%

$[\alpha]_D^{20} = +36.4$ (c 0.66, CHCl₃)

Source of chirality: L-arabinose as starting material

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C₂₈H₄₂O₇

Benzyl 2,3-O-[(1'R,2'R)-dineopentoxy-cyclohexane-1,2-dione diacetal]-β-L-arabinopyran-3-uloside

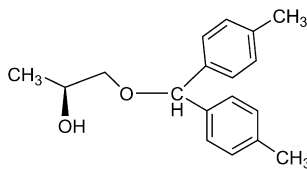
Ee = 100%

$[\alpha]_D^{20} = +18.8$ (c 1.03, CHCl₃)

Source of chirality: L-arabinose as starting material

Sigthor Petursson*

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C₁₈H₂₂O₂

(S)-1-[Bis(4-methoxyphenyl)]methoxypropan-2-ol

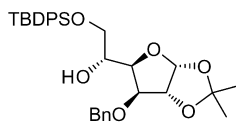
$[\alpha]_D^{20} = +29$ (c 1.1, CHCl₃)

Source of chirality: enzymatic reaction

Absolute configuration: (S)

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C₃₂H₄₀O₆Si

3-O-Benzyl-6-O-(*tert*-butylidiphenylsilyl)-1,2-O-isopropylidene-α-D-glucofuranose

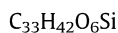
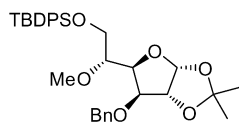
$[\alpha]_D^{24} = -25.0$ (c 2.2, CHCl₃)

Source of asymmetry: D-glucose

Absolute configuration: (1R,2R,3S,4R,5R)

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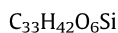
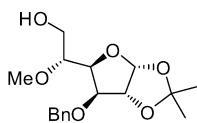


3-O-Benzyl-6-O-(*tert*-butylidiphenylsilyl)-1,2-O-isopropylidene-5-O-methyl- α -D-glucofuranose

$[\alpha]_D^{24} = -18.7$ (c 1.9, $CHCl_3$)
Source of asymmetry: D-glucose
Absolute configuration: (1R,2R,3S,4R,5R)

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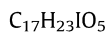
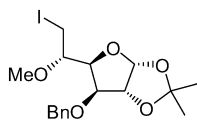


3-O-Benzyl-1,2-O-isopropylidene-5-O-methyl- α -D-glucofuranose

$[\alpha]_D^{24} = -28.5$ (c 1.3, $CHCl_3$)
Source of asymmetry: D-glucose
Absolute configuration: (1R,2R,3S,4R,5R)

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Tetrahedron: Asymmetry 20 (2009) 892

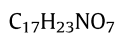
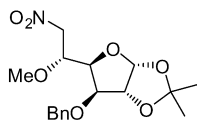


3-O-Benzyl-6-deoxy-6-iodo-1,2-O-isopropylidene-5-O-methyl- α -D-glucofuranose

$[\alpha]_D^{25} = -55.6$ (c 2.2, $CHCl_3$)
Source of asymmetry: D-glucose
Absolute configuration: (1R,2R,3S,4S,5S)

Fernando Fernández, Amalia M. Estévez, Juan C. Estévez *, Ramón J. Estévez *

Tetrahedron: Asymmetry 20 (2009) 892

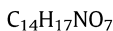
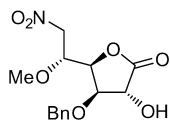


3-O-Benzyl-6-deoxy-1,2-O-isopropylidene-5-O-methyl-6-nitro- α -D-glucofuranose

$[\alpha]_D^{25} = -46.4$ (c 1.1, $CHCl_3$)
Source of asymmetry: D-glucose
Absolute configuration: (1R,2R,3S,4R,5R)

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Tetrahedron: Asymmetry 20 (2009) 892

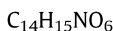
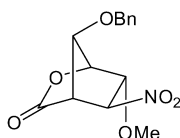


3-O-Benzyl-6-deoxy-5-O-methyl-6-nitro-D-glucono-1,4-lactone

$[\alpha]_D^{25} = +25.3$ (c 1.8, $CHCl_3$)
Source of asymmetry: D-glucose
Absolute configuration: (2R,3R,4R,5R)

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Tetrahedron: Asymmetry 20 (2009) 892

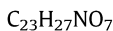
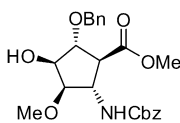


(1S,4S,5S,6R,7R)-7-Benzyloxy-6-methoxy-5-nitro-2-oxabicyclo[2.2.1]heptan-3-one

$[\alpha]_D^{27} = -63.7$ (c 1.4, $CHCl_3$)
Source of asymmetry: D-glucose
Absolute configuration: (1S,4S,5S,6R,7R)

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Tetrahedron: Asymmetry 20 (2009) 892

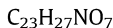
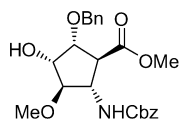


Methyl (1S,2R,3S,4R,5S)-2-benzyloxy-5-benzyloxycarbonylamino-3-hydroxy-4-methoxycyclopentanecarboxylate

$[\alpha]_D^{26} = -33.5$ (c 2.0, $CHCl_3$)
Source of asymmetry: D-glucose
Absolute configuration: (1S,2R,3S,4R,5S)

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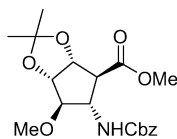


Methyl (1S,2R,3R,4R,5S)-2-benzyloxy-5-benzyloxycarbonylamino-3-hydroxy-4-methoxycyclopentanecarboxylate

$[\alpha]_D^{22} = -44.9$ (c 1.1, $CHCl_3$)
Source of asymmetry: D-glucose
Absolute configuration: (1S,2R,3R,4R,5S)

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Tetrahedron: Asymmetry 20 (2009) 892



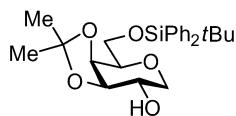
C₁₉H₂₅NO₇

Methyl (1*S*,2*R*,3*R*,4*R*,5*S*)-5-benzyloxycarbonylamino-2,3-isopropylidenedioxy-4-methoxycyclopentanecarboxylate

$[\alpha]_D^{17} = -74.6$ (c 1.2, CHCl₃)
Source of asymmetry: D-glucose
Absolute configuration: (1*S*,2*R*,3*R*,4*R*,5*S*)

Andreas Schäfer, Dirk Henkensmeier, Lars Kröger, Joachim Thiem*

Tetrahedron: Asymmetry 20 (2009) 902

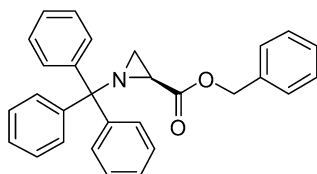


1,5-Anhydro-6-*O*-*tert*-butyldiphenylsilyl-3,4-*O*-isopropylidene-*D*-galactitol

Ee = 100%
 $[\alpha]_D^{20} = +26.1$ (c 1, CH₂Cl₂)
Source of chirality: synthesis from D-galactose
Absolute configuration (D-galacto)

Andreas Schäfer, Dirk Henkensmeier, Lars Kröger, Joachim Thiem*

Tetrahedron: Asymmetry 20 (2009) 902

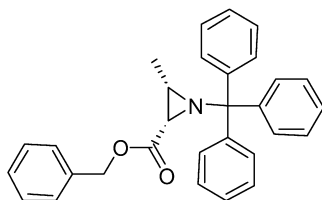


(2*S*)-Benzyl-1-trityl-aziridine-2-carboxylate

Ee = 100%
 $[\alpha]_D^{20} = -92.3$ (c 1, THF)
Source of chirality: from L-serine
Absolute configuration (2*S*)

Andreas Schäfer, Dirk Henkensmeier, Lars Kröger, Joachim Thiem*

Tetrahedron: Asymmetry 20 (2009) 902

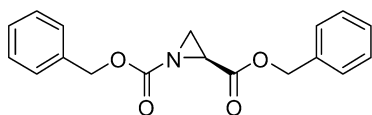


(2*S*,3*S*)-Benzyl-3-methyl-1-trityl-aziridine-2-carboxylate

Ee = 100%
 $[\alpha]_D^{20} = -74.5$ (c 1, CHCl₃)
Source of chirality: from L-threonine
Absolute configuration (2*S*,3*S*)

Andreas Schäfer, Dirk Henkensmeier, Lars Kröger, Joachim Thiem *

Tetrahedron: Asymmetry 20 (2009) 902

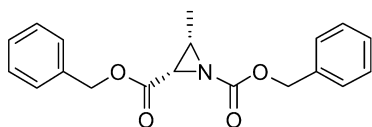


(2S)-Benzyl-1-benzoyloxycarbonyl-aziridine-2-carboxylate

Ee = 100%
 $[\alpha]_D^{20} = -18.6$ (c 1, CH₂Cl₂)
Source of chirality: from L-serine
Absolute configuration (2S)

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Tetrahedron: Asymmetry 20 (2009) 902

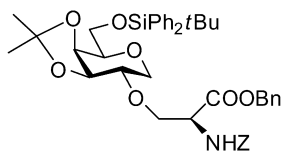


(2S,3S)-Benzyl-1-benzoyloxycarbonyl-3-methyl-aziridine-2-carboxylate

Ee = 100%
 $[\alpha]_D^{20} = -67.1$ (c 1, MeOH)
Source of chirality: from L-threonine
Absolute configuration (2S,3S)

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Tetrahedron: Asymmetry 20 (2009) 902

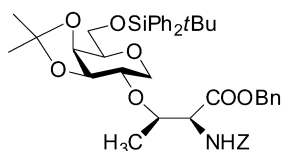


N^α-Benzoyloxycarbonyl-3-O-[1,5-anhydro-6-O-*tert*-butyldiphenylsilyl-3,4-O-isopropylidene-D-galactitol-2]-L-serine benzylester

Ee = 100%
 $[\alpha]_D^{20} = +9.7$ (c 1, CH₂Cl₂)
Source of chirality: from D-galactose and L-serine
Absolute configuration (D-galacto and L-serine)

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Tetrahedron: Asymmetry 20 (2009) 902

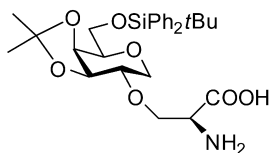


N^α-Benzoyloxycarbonyl-3-O-[1,5-anhydro-6-O-*tert*-butyldiphenylsilyl-3,4-O-isopropylidene-D-galactitol-2]-L-threonine benzylester

Ee = 100%
 $[\alpha]_D^{20} = +0.4$ (c 1, CH₂Cl₂)
Source of chirality: from D-galactose and L-threonine
Absolute configuration (D-galacto and L-threonine)

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Tetrahedron: Asymmetry 20 (2009) 902

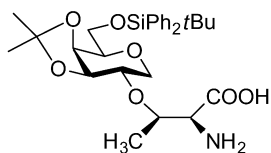


Ee = 100%
[α]_D²⁰ = +3.7 (c 0.5, MeOH)
Source of chirality: from D-galactose and L-serine
Absolute configuration (D-galacto and L-serine)

3-O-[1,5-Anhydro-6-O-*tert*-butyldiphenylsilyl-3,4-O-isopropylidene-D-galactitol-2]-L-serine

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Tetrahedron: Asymmetry 20 (2009) 902

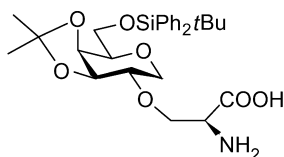


Ee = 100%
[α]_D²⁰ = -0.7 (c 0.5, MeOH)
Source of chirality: from D-galactose and L-threonine
Absolute configuration (D-galacto and L-threonine)

3-O-[1,5-Anhydro-6-O-*tert*-butyldiphenylsilyl-3,4-O-isopropylidene-D-galactitol-2]-L-threonine

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Tetrahedron: Asymmetry 20 (2009) 902

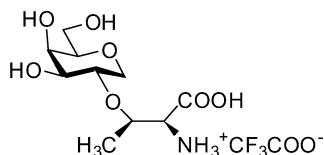


Ee = 100%
[α]_D²⁰ = +17.4 (c 1, H₂O)
Source of chirality: from D-galactose and L-serine
Absolute configuration (D-galacto and L-serine)

3'-O-[1,5-Anhydro-D-galactitol-2]-L-serine trifluoroacetate

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Tetrahedron: Asymmetry 20 (2009) 902

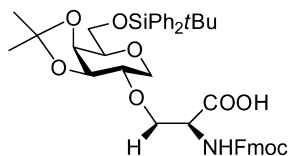


Ee = 100%
[α]_D²⁰ = +18.6 (c 1, H₂O)
Source of chirality: from D-galactose and L-threonine
Absolute configuration (D-galacto and L-threonine)

3'-O-[1,5-Anhydro-D-galactitol-2]-L-threonine trifluoroacetate

Andreas Schäfer, Dirk Henkensmeier, Lars Kröger, Joachim Thiem *

Tetrahedron: Asymmetry 20 (2009) 902

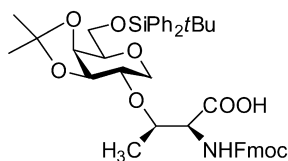


Ee = 100%
 $[\alpha]_D^{20} = +19.7$ (c 1.0, MeOH)
Source of chirality: from D-galactose and L-serine
Absolute configuration (D-galacto and L-serine)

N^α-Fluorenylmethoxycarbonyl-3-O-[1,5-anhydro-6-O-*tert*-butyldiphenylsilyl-3,4-O-isopropylidene-galactitol-2]-L-serine

Andreas Schäfer, Dirk Henkensmeier, Lars Kröger, Joachim Thiem *

Tetrahedron: Asymmetry 20 (2009) 902

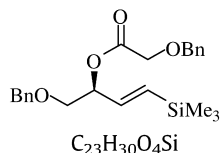


Ee = 100%
 $[\alpha]_D^{20} = +22.9$ (c 1, MeOH)
Mp 75 °C
Source of chirality: from D-galactose and L-threonine
Absolute configuration (D-galacto and L-threonine)

N^α-Fluorenylmethoxycarbonyl-3-O-[1,5-anhydro-6-O-*tert*-butyldiphenylsilyl-3,4-O-isopropylidene-galactitol-2]-L-threonine

Guy T. Giuffredi, Sophie Purser, Marcin Sawicki, Amber L. Thompson, Véronique Gouverneur *

Tetrahedron: Asymmetry 20 (2009) 910

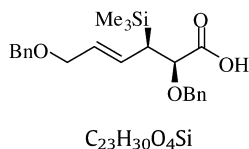


Ee = 93%
 $[\alpha]_D^{21} = +21.3$ (c 1.1, CH₂Cl₂)
Source of chirality: asymmetric synthesis
Absolute configuration: (S)

(2S,3E)-1-(Benzyloxy)-4-(trimethylsilyl)but-3-en-2-yl (benzyloxy)acetate

Guy T. Giuffredi, Sophie Purser, Marcin Sawicki, Amber L. Thompson, Véronique Gouverneur *

Tetrahedron: Asymmetry 20 (2009) 910

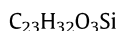
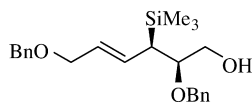


Ee = 93%
 $[\alpha]_D^{21} = +15.0$ (c 1.0, CH₂Cl₂)
Source of chirality: asymmetric synthesis
Absolute configuration: (2R,3R)

(2R,3R,4E)-2,6-Bis(benzyloxy)-3-(trimethylsilyl)hex-4-enoic acid

Guy T. Giuffredi, Sophie Purser, Marcin Sawicki, Amber L. Thompson,
Véronique Gouverneur*

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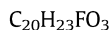
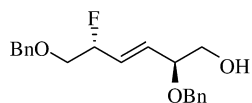


(2R,3R,4E)-2,6-Bis(benzyloxy)-3-(trimethylsilyl)hex-4-en-1-ol

Ee = 93%
 $[\alpha]_D^{21} = -12.6$ (c 1.0, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2R,3R)

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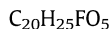
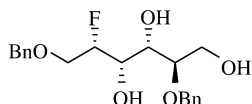


(2S,3E,5R)-2,6-Bis(benzyloxy)-5-fluorohex-3-en-1-ol

Ee = 93%
 $[\alpha]_D^{21} = -32.2$ (c 1.0, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2S,5R)

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Véronique Gouverneur*

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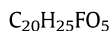
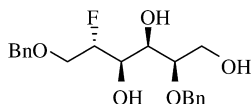


1,5-di-O-Benzyl-2-deoxy-2-fluoro-D-glucitol

Ee = 93%
 $[\alpha]_D^{25} = +2.6$ (c 0.4, MeOH)
Source of chirality: asymmetric synthesis
Absolute configuration: (2S,3S,4S,5R)

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Véronique Gouverneur*

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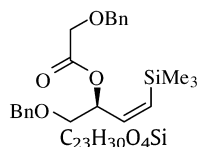


2,6-Di-O-benzyl-5-deoxy-5-fluoro-L-glucitol

Ee = 93%
 $[\alpha]_D^{25} = -2.0$ (c 1.3, MeOH)
Source of chirality: asymmetric synthesis
Absolute configuration: (2R,3R,4R,5S)

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Tetrahedron: Asymmetry 20 (2009) 910

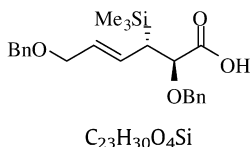


(2S,3Z)-1-(Benzyloxy)-4-(trimethylsilyl)but-3-en-2-yl (benzyloxy)acetate

Ee = 93%
 $[\alpha]_D^{21} = +21.3$ (c 1.1, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (S)

Guy T. Giuffredi, Sophie Purser, Marcin Sawicki, Amber L. Thompson, Véronique Gouverneur*

Tetrahedron: Asymmetry 20 (2009) 910

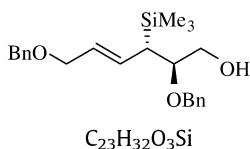


(2R,3S,4E)-2,6-Bis(benzyloxy)-3-(trimethylsilyl)hex-4-enoic acid

Ee = 93%
 $[\alpha]_D^{21} = -11.3$ (c 1.0, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2R,3S)

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Tetrahedron: Asymmetry 20 (2009) 910

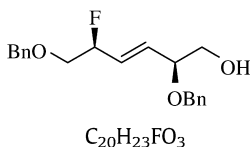


(2R,3S,4E)-2,6-Bis(benzyloxy)-3-(trimethylsilyl)hex-4-en-1-ol

Ee = 93%
 $[\alpha]_D^{21} = -22.0$ (c 1.0, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2R,3S)

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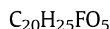
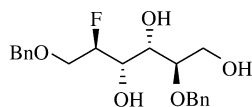


(2S,3E,5S)-2,6-Bis(benzyloxy)-5-fluorohex-3-en-1-ol

Ee = 93%
 $[\alpha]_D^{21} = -38.4$ (c 1.1, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2S,5S)

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Tetrahedron: Asymmetry 20 (2009) 910



1,5-di-O-Benzyl-2-deoxy-2-fluoro-D-mannitol

Ee = 93%

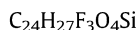
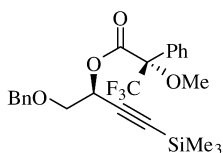
$[\alpha]_D^{21} = +20.4$ (c 0.5, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (2S,3S,4S,5R)

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Véronique Gouverneur*

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(2S)-1-(Benzyloxy)-4-(trimethylsilyl)but-3-yn-2-yl (2S)-3,3,3-trifluoro-2-methoxy-2-phenylpropanoate

Ee = 93%

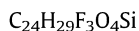
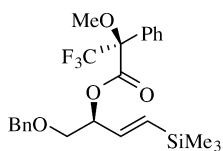
$[\alpha]_D^{25} = +40.2$ (c 1.0, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (2S,2'S)

Guy T. Giuffredi, Sophie Purser, Marcin Sawicki, Amber L. Thompson,
Véronique Gouverneur*

Tetrahedron: Asymmetry 20 (2009) 910



(2S,3E)-1-(Benzyloxy)-4-(trimethylsilyl)but-3-en-2-yl (2S)-3,3,3-trifluoro-2-methoxy-2-phenylpropanoate

Ee = 93%

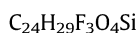
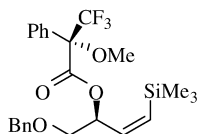
$[\alpha]_D^{25} = +46.3$ (c 1.0, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (2S,2'S)

Guy T. Giuffredi, Sophie Purser, Marcin Sawicki, Amber L. Thompson,
Véronique Gouverneur*

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(2S,3Z)-1-(Benzyloxy)-4-(trimethylsilyl)but-3-en-2-yl (2S)-3,3,3-trifluoro-2-methoxy-2-phenylpropanoate

Ee = 93%

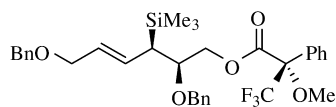
$[\alpha]_D^{25} = +45.8$ (c 1.1, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: (2S,2'S)

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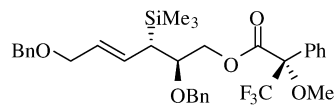
$C_{33}H_{39}F_3O_5Si$

(2*R*,3*R*,4*E*)-2,6-Bis(benzyloxy)-3-(trimethylsilyl)hex-4-en-1-yl (2*S*)-3,3,3-trifluoro-2-methoxy-2-phenylpropanoate

Ee = 93%
 $[\alpha]_D^{25} = +24.3$ (c 1.0, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,3*R*,2'*S*)

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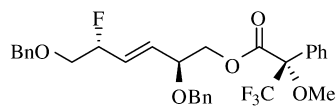
$C_{33}H_{39}F_3O_5Si$

(2*R*,3*S*,4*E*)-2,6-Bis(benzyloxy)-3-(trimethylsilyl)hex-4-en-1-yl (2*S*)-3,3,3-trifluoro-2-methoxy-2-phenylpropanoate

Ee = 93%
 $[\alpha]_D^{25} = +11.0$ (c 0.7, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*R*,3*S*,2'*S*)

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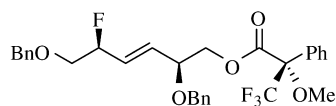
$C_{30}H_{30}F_4O_5$

(2*S*,3*E*,5*R*)-2,6-Bis(benzyloxy)-5-fluorohex-3-en-1-yl (2*S*)-3,3,3-trifluoro-2-methoxy-2-phenylpropanoate

Ee = 93%
 $[\alpha]_D^{25} = +16.0$ (c 0.7, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*S*,5*R*,2'*S*)

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Véronique Gouverneur*

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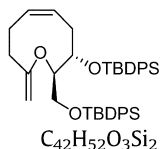
$C_{30}H_{30}F_4O_5$

(2*S*,3*E*,5*S*)-2,6-Bis(benzyloxy)-5-fluorohex-3-en-1-yl (2*S*)-3,3,3-trifluoro-2-methoxy-2-phenylpropanoate

Ee = 93%
 $[\alpha]_D^{25} = +12.9$ (c 0.9, CH_2Cl_2)
Source of chirality: asymmetric synthesis
Absolute configuration: (2*S*,5*S*,2'*S*)

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(5Z,8S,9R)-8-(*tert*-Butylidiphenylsilyloxy)-9-(*tert*-butylidiphenylsilyloxymethyl)-2-methylene-2,3,4,7,8,9-hexahydro-2-oxonine

Ee = 100%

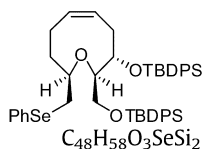
$[\alpha]_D^{25} = -30.0$ (c 0.43, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (8S,9R)

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(2R,5Z,8S,9R)-8-*tert*-Butylidiphenylsilyloxy)-9-(*tert*-butylidiphenylsilyloxymethyl)-2-phenylselanyl-2,3,4,7,8,9-hexahydrooxonine-2-carbaldehyde

Ee = 100%

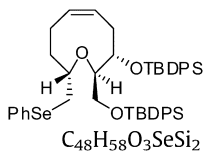
$[\alpha]_D^{25} = +14.6$ (c 0.43, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2S,5Z,8S,9R)-8-*tert*-Butylidiphenylsilyloxy)-9-(*tert*-butylidiphenylsilyloxymethyl)-2-phenylselanyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

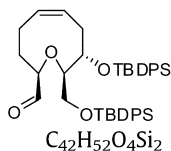
$[\alpha]_D^{21} = +0.5$ (c 0.89, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2S,8S,9R)

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(2R,5Z,8S,9R)-8-*tert*-Butylidiphenylsilyloxy)-9-(*tert*-butylidiphenylsilyloxymethyl)-2,3,4,7,8,9-hexahydrooxonine-2-carbaldehyde

Ee = 100%

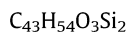
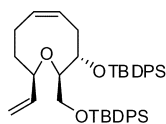
$[\alpha]_D^{25} = +62.7$ (c 1.21, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,5Z,8S,9R)-8-(*tert*-Butyldiphenylsilyloxy)-9-(*tert*-butylidiphenylsilyloxymethyl)-2-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

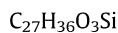
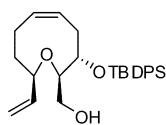
$[\alpha]_D^{25} = +19.5$ (c 0.95, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,5Z,8S,9R)-8-(*tert*-Butyldiphenylsilyloxy)-9-hydroxymethyl-2-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

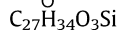
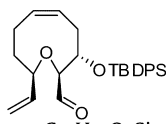
$[\alpha]_D^{25} = +48.8$ (c 1.135, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,5Z,8S,9S)-8-(*tert*-Butyldiphenylsilyloxy)-2-vinyl-2,3,4,7,8,9-hexahydrooxonine-9-carbaldehyde

Ee = 100%

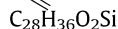
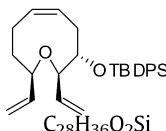
$[\alpha]_D^{25} = +30.3$ (c 0.37, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9S)

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(2R,5Z,8S,9R)-8-(*tert*-Butyldiphenylsilyloxy)-2,9-divinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

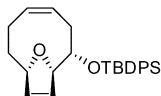
$[\alpha]_D^{25} = +66.5$ (c 1.8, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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C₂₆H₃₂O₂Si

(1R,2S,4Z,8R,9Z)-2-*tert*-(Butyldiphenylsilyloxy)-11-oxabicyclo[6.2.1]-undeca-4,9-diene

Ee = 100%

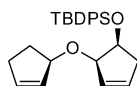
$[\alpha]_D^{22} = +18.0$ (c 0.51, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1R,2S,8R)

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C₂₆H₃₂O₂Si

[(1S,2R)-(*tert*-Butyldiphenylsilyloxy)-2-[(*R*)-cyclopent-2-enyloxy]-1-cyclopent-3-ene

Ee = 100%

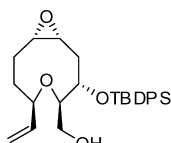
$[\alpha]_D^{22} = -6.0$ (c 0.52, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1S,2R,*R*)

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C₂₇H₃₆O₄Si

(1R,3S,4R,6R,9S)-3-(*tert*-Butyldiphenylsilyloxy)-4-hydroxymethyl-6-vinyl-5,10-dioxabicyclo[7.1.0]-decane

Ee = 100%

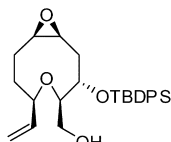
$[\alpha]_D^{25} = +56$ (c 0.3, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1R,3S,4R,6R,9S)

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Andrew Ayscough, Gilles Pain, Jonathan W. Burton*, Andrew B. Holmes*

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C₂₇H₃₆O₄Si

(1S,3S,4R,6R,9R)-3-(*tert*-Butyldiphenylsilyloxy)-4-hydroxymethyl-6-vinyl-5,10-dioxabicyclo[7.1.0]-decane

Ee = 100%

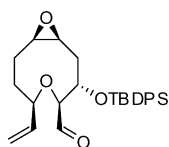
$[\alpha]_D^{25} = +27.3$ (c 0.52, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1S,3S,4R,6R,9R)

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$C_{27}H_{34}O_4Si$

(1S,3S,4R,6R,9R)-3-(*tert*-Butyldiphenylsilyloxy)-4-hydroxymethyl-6-vinyl-5,10-dioxabicyclo[7.1.0]-decane-4-carbaldehyde

Ee = 100%

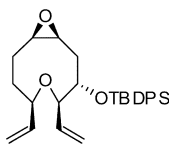
$[\alpha]_D^{25} = +21.3$ (c 0.56, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1S,3S,4R,6R,9R)

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$C_{28}H_{36}O_3Si$

(1S,3S,4R,6R,9R)-3-(*tert*-Butyldiphenylsilyloxy)-4,6-divinyl-5,10-dioxabicyclo-[7.1.0]-decane

Ee = 100%

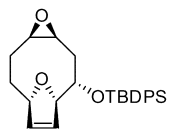
$[\alpha]_D^{25} = +21.6$ (c 0.31, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1S,3S,4R,6R,9R)

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$C_{26}H_{32}O_3Si$

(1R,2S,4S,6R,9R,10Z)-2-(*tert*-Butyldiphenylsilyloxy)-(5,12-dioxatricyclo-[7.2.1.0^{4,6}])dodecane

Ee = 100%

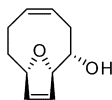
$[\alpha]_D^{25} = -37$ (c 0.2, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1R,2S,4S,6R,9R)

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$C_{10}H_{14}O_2$

(1R,2S,8R,Z)-2-Hydroxy-11-oxabicyclo[6.2.1]-undeca-4,9-diene

Ee = 100%

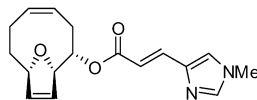
$[\alpha]_D^{25} = -1.0$ (c 0.42, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1R,2S,8R)

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C₁₇H₂₀N₂O₃

(1R,2S,4Z,8R,9Z)-2-(N(τ)-Methyl urocanic acid)-11-oxabicyclo[6.2.1]undeca-4,9-dien-2-yl ester

Ee = 100%

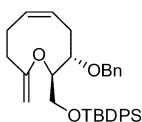
[α]_D²⁵ = +36.5 (c 0.2, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1R,2S,8R)

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C₃₃H₄₀O₃Si

(5Z,8S,9R)-8-Benzyloxy-9-(tert-butylidiphenylsilyloxymethyl)-2-methylene-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

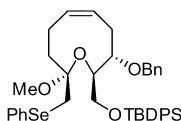
[α]_D²⁰ = -22.6 (c 1.75, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (8S,9R)

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C₄₀H₄₈O₄SeSi

(2R,5Z,8S,9R)-8-Benzyloxy-9-(tert-butylidiphenylsilyloxy-methyl)-2-methoxy-2-phenylsilylmethyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

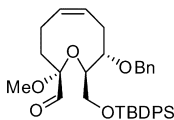
[α]_D²⁵ = +63.3 (c 0.35, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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C₃₄H₄₂O₅Si

(2R,5Z,8S,9R)-8-Benzyloxy-9-(tert-butylidiphenylsilyloxymethyl)-2-methoxy-2,3,4,7,8,9-hexahydrooxonine-2-carbaldehyde

Ee = 100%

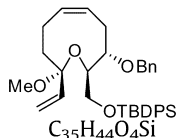
[α]_D²⁵ = +63.3 (c 1.26, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,5Z,8S,9R)-8-Benzyloxy-9-(*tert*-butyldiphenylsilyloxy-methyl)-2-methoxy-2-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

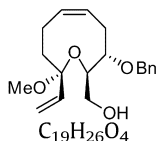
$[\alpha]_D^{25} = +110.4$ (c 0.58, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,5Z,8S,9R)-8-Benzyloxy-9-hydroxymethyl-2-methoxy-2-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

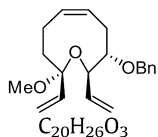
$[\alpha]_D^{25} = +224$ (c 0.36, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,5Z,8S,9R)-8-Benzyloxy-2-methoxy-2,9-divinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

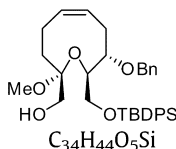
$[\alpha]_D^{25} = +231.5$ (c 0.4, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,8S,9R,5Z)-2-Methoxy-2-hydroxymethyl-8-benzyloxy-9-(*tert*-butyldiphenylsilyloxy-methyl)-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

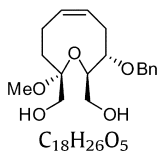
$[\alpha]_D^{25} = +5.5$ (c 0.13, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,8S,9R,5Z)-2-Methoxy-2,9-dihydroxymethyl-8-benzyloxy-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

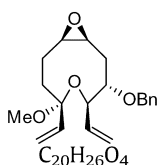
$[\alpha]_D^{25} = +162.1$ (c 0.68, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(1S,3S,4R,6R,9R)-3-Benzyloxy-6-methoxy-4,6-divinyl-5,10-dioxabicyclo[7.1.0]decane

Ee = 100%

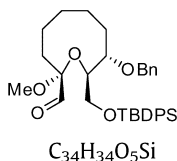
$[\alpha]_D^{25} = +129.4$ (c 0.48, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1S,3S,4R,6R,9R)

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(2R,8S,9R)-8-Benzyloxy-9-(*tert*-butyldiphenylsilyloxy-methyl)-2-methoxy-2,3,4,5,6,7,8,9-octahydrooxonine-2-carbaldehyde

Ee = 100%

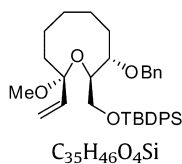
$[\alpha]_D^{25} = +15.5$ (c 0.85, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,8S,9R)-8-Benzyloxy-9-(*tert*-butyldiphenylsilyloxy-methyl)-2-methoxy-2-vinyl-2,3,4,5,6,7,8,9-octahydrooxonine

Ee = 100%

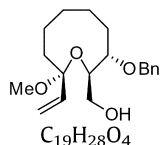
$[\alpha]_D^{25} = +35.2$ (c 1.9, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,8S,9R)-8-Benzyloxy-9-hydroxymethyl-2-methoxy-2-vinyl-2,3,4,5,6,7,8,9-octahydrooxonine

Ee = 100%

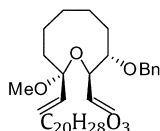
$[\alpha]_D^{25} = +95.4$ (c 0.89, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,8S,9R)-8-Benzyloxy-2-methoxy-2,9-divinyl-2,3,4,5,6,7,8,9-octahydrooxonine

Ee = 100%

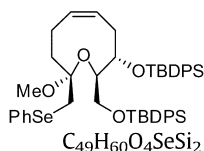
$[\alpha]_D^{23} = +32.6$ (c 0.39, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,5Z,8S,9R)-8-(*tert*-Butyldiphenylsilyloxy)-9-(*tert*-butyl-diphenylsilyloxymethyl)-2-methoxy-2-phenylselanylmethyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

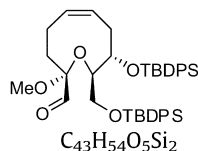
$[\alpha]_D^{22} = +68.2$ (c 0.20, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,5Z,8S,9R)-8-(*tert*-Butyldiphenylsilyloxy)-9-(*tert*-butyldiphenylsilyloxymethyl)-2-methoxy-2,3,4,7,8,9-hexahydrooxonine-2-carbaldehyde

Ee = 100%

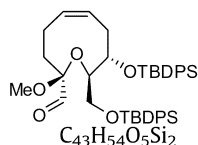
$[\alpha]_D^{22} = +66.7$ (c 0.6, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2*S*,5*Z*,8*S*,9*R*)-8-(*tert*-Butylidiphenylsilyloxy)-9-(*tert*-butylidiphenylsilyloxymethyl)-2-methoxy-2,3,4,7,8,9-hexahydrooxonine-2-carbaldehyde

Ee = 100%

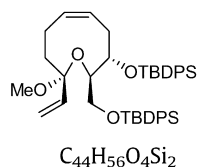
$[\alpha]_D^{22} = +40.8$ (c 0.73, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2*S*,8*S*,9*R*)

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(2*R*,5*Z*,8*S*,9*R*)-8-(*tert*-Butylidiphenylsilyloxy)-9-(*tert*-butylidiphenylsilyloxymethyl)-2-methoxy-2-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

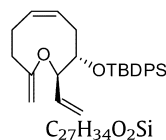
$[\alpha]_D^{25} = +89.5$ (c 1.0, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2*R*,8*S*,9*R*)

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(5*Z*,8*S*,9*R*)-8-(*tert*-Butylidiphenylsilyloxy)-2-methylene-9-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

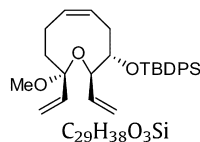
$[\alpha]_D^{25} = -50.0$ (c 0.47, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (8*S*,9*R*)

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(2*R*,5*Z*,8*S*,9*R*)-8-(*tert*-Butylidiphenylsilyloxy)-2,9-divinyl-2-methoxy-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

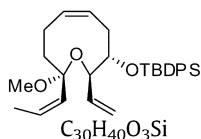
$[\alpha]_D^{25} = +197.8$ (c 0.64, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2*R*,8*S*,9*R*)

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(2R,8S,9R,5Z)-2-Methoxy-2-[(Z)-prop-1-enyl]-8-(*tert*-butylidiphenylsilyloxy)-9-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

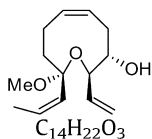
$[\alpha]_D^{25} = +143.4$ (c 0.37, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(2R,8S,9R,5Z)-2-Methoxy-2-[(Z)-prop-1-enyl]-9-vinyl-2,3,4,7,8,9-hexahydrooxonin-3-ol

Ee = 100%

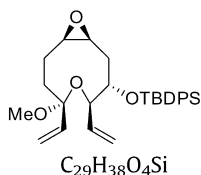
$[\alpha]_D^{25} = +121.8$ (c 0.45, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,8S,9R)

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(1S,3S,4R,6R,9R)-3-(*tert*-Butyldiphenylsilyloxy)-4,6-divinyl-6-methoxy-5,10-dioxabicyclo[7.1.0]-decane

Ee = 100%

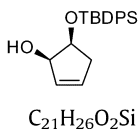
$[\alpha]_D^{25} = +89$ (c 0.3, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1S,3S,4R,6R,9R)

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(1R,2Z,5S)-5-(*tert*-Butyldiphenylsilyloxy)-cyclopent-2-en-1-ol

Ee = 100%

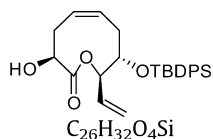
$[\alpha]_D^{25} = +198$ (c 0.64, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1R,5S)

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(3S,8S,9R,5Z)-3-Hydroxy-8-(*tert*-butylidiphenylsilyloxy)-9-vinyl-2,3,4,7,8,9-hexahydrooxonin-2(7H)-one

Ee = 100%

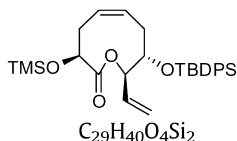
$[\alpha]_D^{25} = +27.4$ (c 0.12, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (3S,8S,9R)

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(3S,8S,9R,5Z)-3-Trimethylsilyloxy-8-(*tert*-butylidiphenylsilyloxy)-9-vinyl-2,3,4,7,8,9-hexahydrooxonin-2(7H)-one

Ee = 100%

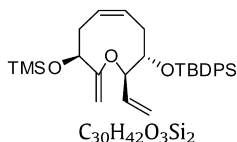
$[\alpha]_D^{25} = +33.7$ (c 0.27, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (3S,8S,9R)

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(3S,8S,9R,5Z)-2-Methylene-3-trimethylsilyloxy-8-(*tert*-butylidiphenylsilyloxy)-9-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

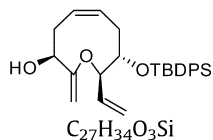
$[\alpha]_D^{25} = +10.9$ (c 0.32, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (3S,8S,9R)

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(3S,8S,9R,5Z)-2-Methylene-3-hydroxy-8-(*tert*-butylidiphenylsilyloxy)-9-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

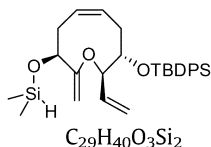
$[\alpha]_D^{25} = +17.0$ (c 0.10, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (3S,8S,9R)

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(3S,8S,9R,5Z)-2-Methylene-3-dimethylsilyloxy-8-(*tert*-butyldiphenylsilyloxy)-9-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

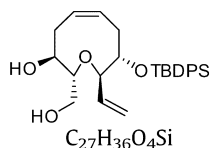
$[\alpha]_D^{25} = +16.8$ (c 0.22, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (3S,8S,9R)

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(2R,3S,8S,9R,5Z)-2-Hydroxymethyl-3-hydroxy-8-(*tert*-butyldiphenylsilyloxy)-9-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

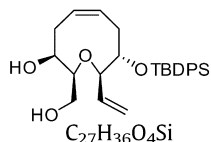
$[\alpha]_D^{25} = +27.3$ (c 0.17, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,3S,8S,9R)

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(2S,3S,8S,9R,5Z)-2-Hydroxymethyl-3-hydroxy-8-(*tert*-butyldiphenylsilyloxy)-9-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

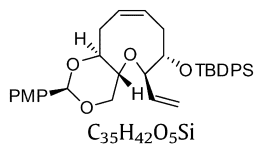
$[\alpha]_D^{24} = +63.6$ (c 0.06, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2S,3S,8S,9R)

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(2R,4aR,6R,7S,11aS,Z)-7-*tert*-Butyldiphenylsilyloxy-2-(4-methoxyphenyl)-6-vinyl-4a,6,7,8,11,11a-hexahydro-4H-[1,3]dioxino[5,4-*b*]oxonine

Ee = 100%

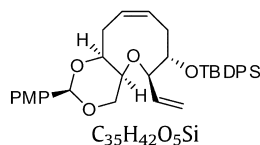
$[\alpha]_D^{24} = +36.3$ (c 0.34, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,4aR,6R,7S,11aS)

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(2*R*,4*aS*,6*R*,7*S*,11*aS*,*Z*)-7-*tert*-Butyldiphenylsilyloxy-2-(4-methoxyphenyl)-6-vinyl-4*a*,6,7,8,11,11*a*-hexahydro-4*H*-[1,3]dioxino[5,4-*b*]oxonine

Ee = 100%

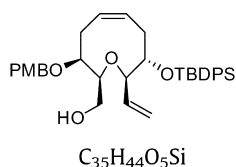
$[\alpha]_D^{24} = +115.6$ (c 0.30, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2*R*,4*aS*,6*R*,7*S*,11*aS*)

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Tetrahedron: Asymmetry 20 (2009) 921



(2*S*,3*S*,8*S*,9*R*,5*Z*)-2-Hydroxymethyl-3-(4-methoxybenzyloxy)-8-(*tert*-butyldiphenylsilyloxy)-9-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

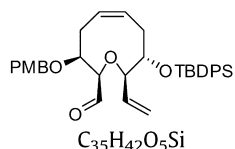
$[\alpha]_D^{24} = +88.2$ (c 0.38, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2*S*,3*S*,8*S*,9*R*)

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(2*R*,3*S*,8*S*,9*R*,5*Z*)-3-(4-Methoxybenzyloxy)-8-(*tert*-butyldiphenylsilyloxy)-9-vinyl-2,3,4,7,8,9-hexahydrooxonin-2-carbaldehyde

Ee = 100%

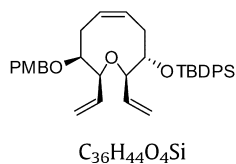
$[\alpha]_D^{24} = +19.2$ (c 0.18, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2*R*,3*S*,8*S*,9*R*)

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(2*S*,3*S*,8*S*,9*R*,5*Z*)-3-(4-Methoxybenzyloxy)-8-(*tert*-butyldiphenylsilyloxy)-2,9-divinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

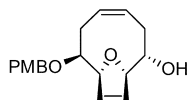
$[\alpha]_D^{24} = +70.7$ (c 0.60, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2*S*,3*S*,8*S*,9*R*)

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C₁₈H₂₂O₄

(1R,2S,7S,8R,4Z,9Z)-7-(4-Methoxybenzyloxy)-11-oxa-bicyclo[6.2.1]undeca-4,9-dien-2-ol

Ee = 100%

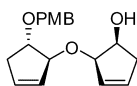
[α]_D²⁴ = -27.8 (c 0.11, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1R,2S,7S,8R)

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C₁₈H₂₂O₄

(1S,2R)-2-((1S,5S)-5-(4-methoxybenzyloxy)cyclopent-2-enyloxy)cyclopent-3-enol

Ee = 100%

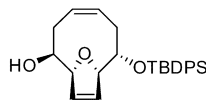
[α]_D²⁴ = +25.7 (c 0.14, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1S,2R,1'S,5'S)

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C₂₆H₃₂O₃Si

(1S,2S,7S,8R,4Z,9Z)-2-Hydroxy-7-(*tert*-butyldiphenylsilyloxy)-11-oxa-bicyclo[6.2.1]undeca-4,9-diene

Ee = 100%

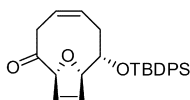
[α]_D²⁴ = +7.2 (c 0.19, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1S,2S,7S,8R)

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C₂₆H₃₀O₃Si

(1S,7S,8R,4Z,9Z)-7-(*tert*-Butyldiphenylsilyloxy)-11-oxabicyclo[6.2.1]undeca-4,9-dien-2-one

Ee = 100%

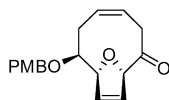
[α]_D²⁴ = +126.4 (c 0.22, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1S,7S,8R)

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C₁₈H₂₀O₄

(1R,7S,8S,4Z,9Z)-7-(4-Methoxybenzyloxy)-11-oxa-bicyclo[6.2.1]undeca-4,9-dien-2-one

Ee = 100%

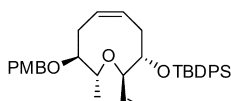
[α]_D²⁴ = +82.7 (c 0.15, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1R,7S,8S)

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C₃₅H₄₄O₅Si

(2R,3S,8S,9R,5Z)-2-Hydroxymethyl-8-(*tert*-butylidiphenylsilyloxy)-3-(4-methoxybenzyloxy)-9-vinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

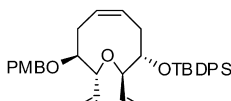
[α]_D²⁴ = +71.0 (c 0.46, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,3S,8S,9R)

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C₃₅H₄₂O₅Si

(2S,3S,8S,9R,5Z)-3-(4-Methoxybenzyloxy)-8-(*tert*-butylidiphenylsilyloxy)-9-vinyl-2,3,4,7,8,9-hexahydrooxonin-2-carbaldehyde

Ee = 100%

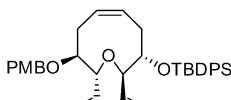
[α]_D²⁴ = +21.6 (c 0.49, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2S,3S,8S,9R)

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C₃₆H₄₄O₄Si

(2R,3S,8S,9R,5Z)-3-(4-Methoxybenzyloxy)-8-(*tert*-butylidiphenylsilyloxy)-2,9-divinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

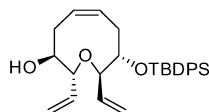
[α]_D²⁴ = +36.6 (c 0.25, CHCl₃)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,3S,8S,9R)

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$C_{28}H_{36}O_3Si$

(2R,3S,8S,9R,5Z)-3-Hydroxy-8-(*tert*-butylidiphenylsilyloxy)-2,9-divinyl-2,3,4,7,8,9-hexahydrooxonine

Ee = 100%

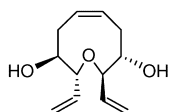
$[\alpha]_D^{24} = +30.1$ (c 0.17, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,3S,8S,9R)

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$C_{12}H_{18}O_3$

(2R,3S,8S,9R,5Z)-2,9-Divinyl-2,3,4,7,8,9-hexahydrooxonine-3,8-diol

Ee = 100%

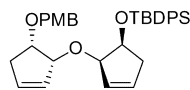
$[\alpha]_D^{24} = +155.0$ (c 0.20, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,3S,8S,9R)

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$C_{34}H_{40}O_4Si$

((1S,2R)-3-*tert*-Butylidiphenylsilyloxy-2-((1R,5S)-5-(4-methoxybenzyloxy)cyclopent-2-enyloxy)cyclopent-3-ene

Ee = 100%

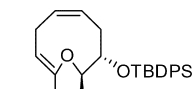
$[\alpha]_D^{24} = +76.7$ (c 0.06, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1S,2R,1'R,5'S)

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$C_{29}H_{36}O_2Si$

(2R,3S,5Z,8Z)-3-(*tert*-Butylidiphenylsilyloxy)-9-[(Z)-prop-1-enyl]-2-vinyl-2,3,4,7-tetrahydrooxonine

Ee = 100%

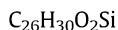
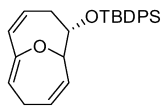
$[\alpha]_D^{24} = +36.6$ (c 0.25, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (2R,3S)

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(1R,2S,4Z,6Z,9Z)-2-(*tert*-Butyldiphenylsilyloxy)-11-oxa-bicyclo[4.4.1]undeca-4,6,9-triene

Ee = 100%

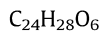
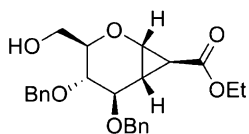
$[\alpha]_D^{24} = +17.0$ (c 0.27, $CHCl_3$)

Source of chirality: synthesis from 2-deoxy-D-ribose

Absolute configuration: (1R,2S)

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(1S,3R,4S,5R,6S,7S)-Ethyl 4,5-bis(benzyloxy)-3-hydroxymethyl-2-oxabicyclo[4.1.0]heptane-7-carboxylate

Ee = 100%

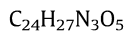
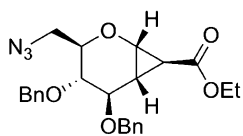
$[\alpha]_D^{20} = +20$ (c 1.0, $CHCl_3$)

Source of chirality: D-glucal

Absolute configuration: (1S,3R,4S,5R,6S,7S)

Martijn D.P. Risseeuw, Gijs A. van der Marel, Herman S. Overkleef, Mark Overhand*

Tetrahedron: Asymmetry 20 (2009) 945



(1S,3R,4S,5R,6S,7S)-Ethyl 3-(azidomethyl)-4,5-bis(benzyloxy)-2-oxabicyclo[4.1.0]heptane-7-carboxylate

Ee = 100%

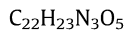
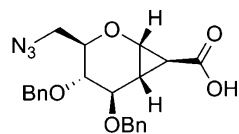
$[\alpha]_D^{20} = +43.4$ (c 1.0, $CHCl_3$)

Source of chirality: D-glucal

Absolute configuration: (1S,3R,4S,5R,6S,7S)

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(1S,3R,4S,5R,6S,7S)-3-(Azidomethyl)-4,5-bis(benzyloxy)-2-oxabicyclo[4.1.0]heptane-7-carboxylic acid

Ee = 100%

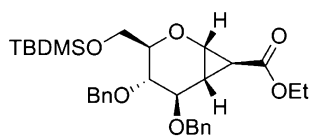
$[\alpha]_D^{20} = +54.8$ (c 1.0, $CHCl_3$)

Source of chirality: D-glucal

Absolute configuration: (1S,3R,4S,5R,6S,7S)

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C₃₀H₄₂O₆Si

(1*S*,3*R*,4*S*,5*R*,6*S*,7*S*)-Ethyl 4,5-bis(benzyloxy)-3-((*tert*-butyldimethylsilyloxy)methyl)-2-oxabicyclo[4.1.0]heptane-7-carboxylate

Ee = 100%

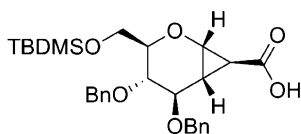
[α]_D²⁰ = +25.4 (c 1.0, CHCl₃)

Source of chirality: D-glucal

Absolute configuration: (1*S*,3*R*,4*S*,5*R*,6*S*,7*S*)

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C₂₈H₃₈O₆Si

(1*S*,3*R*,4*S*,5*R*,6*S*,7*S*)-4,5-Bis(benzyloxy)-3-((*tert*-butyldimethylsilyloxy) methyl)-2-oxabicyclo[4.1.0]heptane-7-carboxylic acid

Ee = 100%

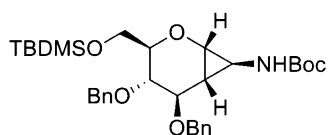
[α]_D²⁰ = +21.8 (c 1.0, CHCl₃)

Source of chirality: D-glucal

Absolute configuration: (1*S*,3*R*,4*S*,5*R*,6*S*,7*S*)

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C₃₂H₄₇NO₆Si

tert-Butyl(1*S*,3*R*,4*S*,5*R*,6*S*,7*S*)-4,5-Bis(benzyloxy)-3-((*tert*-butyldimethylsilyloxy)methyl)-2-oxabicyclo[4.1.0]heptane-7-ylcarbamate

Ee = 100%

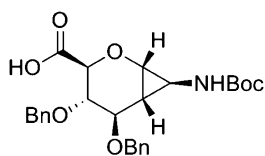
[α]_D²⁰ = +39 (c 1.0, CHCl₃)

Source of chirality: D-glucal

Absolute configuration: (1*S*,3*R*,4*S*,5*R*,6*S*,7*S*)

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C₂₆H₃₁NO₇

(1*S*,3*R*,4*S*,5*R*,6*S*,7*S*)-4,5-Bis(benzyloxy)-7-((*tert*-butyloxycarbonylamino)-2-oxabicyclo[4.1.0]heptane-3-carboxylic acid

Ee = 100%

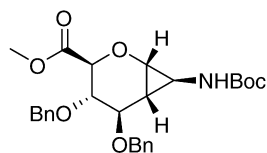
[α]_D²⁰ = +43 (c 1.0, CHCl₃)

Source of chirality: D-glucal

Absolute configuration: (1*S*,3*R*,4*S*,5*R*,6*S*,7*S*)

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$C_{27}H_{33}NO_7$

(1S,3R,4S,5R,6S,7S)-Methyl-4,5-bis(benzyloxy)-7-((*tert*-butylloxycarbonylamino)-2-oxabicyclo[4.1.0]heptane-3-carboxylate

Ee = 100%

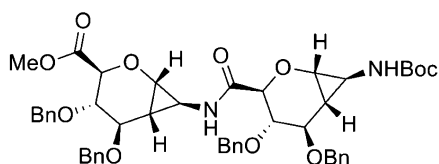
$[\alpha]_D^{20} = +73.4$ (c 1.0, $CHCl_3$)

Source of chirality: *D*-glucal

Absolute configuration: (1S,3R,4S,5R,6S,7S)

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$C_{48}H_{54}N_2O_{11}$

(1S,3R,4S,5R,6S,7S)-Methyl 4,5-bis(benzyloxy)-7-((1S,3R,4S,5R,6S,7S)-4,5-bis(benzyloxy)-7-(*tert*-butoxy-carbonylamino)-2-oxabicyclo[4.1.0]heptane-3-carboxamido)-2-oxabicyclo[4.1.0]heptane-7-carboxylate

Ee = 100%

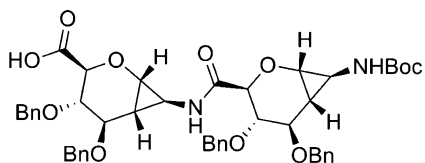
$[\alpha]_D^{20} = +36$ (c 1.0, $CHCl_3$)

Source of chirality: *D*-glucal

Absolute configuration: (1S,3R,4S,5R,6S,7S) for each unit

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Tetrahedron: Asymmetry 20 (2009) 945



$C_{47}H_{52}N_2O_{11}$

(1S,3S,4S,5R,6S,7S)-4,5-bis(benzyloxy)-7-((1S,3S,4S,5R,6S,7S)-4,5-bis(benzyloxy)-7-(*tert*-butoxy-carbonylamino)-2-oxabicyclo[4.1.0]heptane-3-carbox-amido)-2-oxabicyclo[4.1.0]heptane-3-carboxylic acid

Ee = 100%

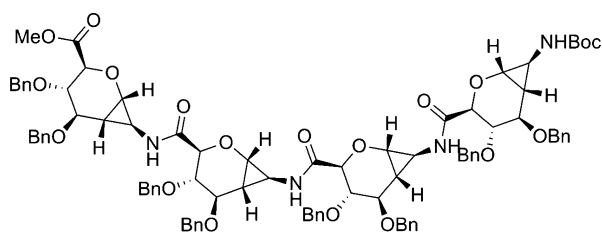
$[\alpha]_D^{20} = +46$ (c 0.1, $CHCl_3$)

Source of chirality: *D*-glucal

Absolute configuration: (1S,3R,4S,5R,6S,7S) for each unit

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Tetrahedron: Asymmetry 20 (2009) 945



$C_{90}H_{96}N_4O_{19}$

(1S,3S,4S,5R,6S,7S)-Methyl 4,5-bis(benzyloxy)-7-((1S,3S,4S,5R,6S,7S)-4,5-bis(benzyloxy)-7-((1S,3S,4S,5R,6S,7S)-4,5-bis(benzyloxy)-7-((1S,3S,4S,5R,6S,7S)-4,5-bis(benzyloxy)-7-(*tert*-butoxy-carbonylamino)-2-oxabicyclo[4.1.0]heptane-3-carbox-amido)-2-oxabicyclo[4.1.0]heptane-3-carboxamido)-2-oxabicyclo[4.1.0]heptane-3-carboxamido)-2-oxabicyclo[4.1.0]heptane-3-carboxylate

Ee = 100%

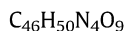
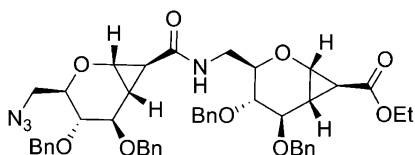
$[\alpha]_D^{20} = +24$ (c 0.1, $CHCl_3$)

Source of chirality: *D*-glucal

Absolute configuration: (1S,3R,4S,5R,6S,7S) for each unit

Martijn D.P. Risseeuw, Gijs A. van der Marel, Herman S. Overkleef, Mark Overhand *

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(1S,3R,4S,5R,6S,7S)-Ethyl 3-(((1S,3R,4S,5R,6S,7S)-3-(azidomethyl)-4,5-bis(benzyloxy)-2-oxabicyclo[4.1.0]heptane-7-carboxamido)methyl)-4,5-bis(benzyloxy)-2-oxabicyclo[4.1.0]heptane-7-carboxylate

Ee = 100%

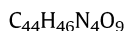
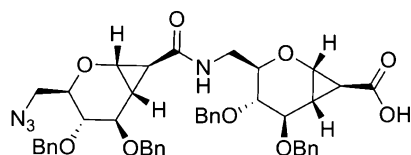
$[\alpha]_D^{20} = +18$ (c 1.0, $CHCl_3$)

Source of chirality: D-glucal

Absolute configuration: (1S,3R,4S,5R,6S,7S) for each unit

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(1S,3R,4S,5R,6S,7S)-3-(((1S,3R,4S,5R,6S,7S)-3-(Azidomethyl)-4,5-bis(benzyloxy)-2-oxabicyclo[4.1.0]heptane-7-carboxamido)methyl)-4,5-bis(benzyloxy)-2-oxabicyclo[4.1.0]heptane-7-carboxylic acid

Ee = 100%

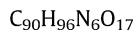
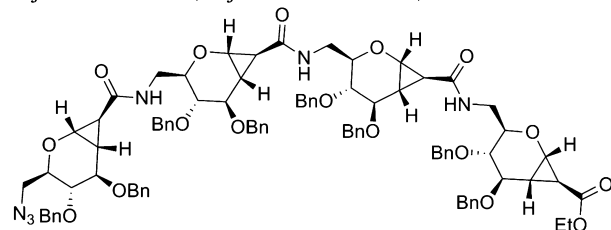
$[\alpha]_D^{20} = +41$ (c 2.0, $CHCl_3$)

Source of chirality: D-glucal

Absolute configuration: (1S,3R,4S,5R,6S,7S) for each unit

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(1S,3R,4S,5R,6S,7S)-Ethyl 3-(((1S,3R,4S,5R,6S,7S)-3-(((1S,3R,4S,5R,6S,7S)-3-(((1S,3R,4S,5R,6S,7S)-3-(azidomethyl)-4,5-bis(benzyloxy)-2-oxabicyclo[4.1.0]heptane-7-carboxamido)methyl)-4,5-bis(benzyloxy)-2-oxabicyclo[4.1.0]heptane-7-carboxamido)methyl)-4,5-bis(benzyloxy)-2-oxabicyclo[4.1.0]heptane-7-carboxamido)methyl)-4,5-bis(benzyloxy)-2-oxabicyclo[4.1.0]heptane-7-carboxylate

Ee = 100%

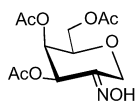
$[\alpha]_D^{20} = +36$ (c 0.1, $CHCl_3$)

Source of chirality: D-glucal

Absolute configuration: (1S,3R,4S,5R,6S,7S) for each unit

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Tetrahedron: Asymmetry 20 (2009) 952



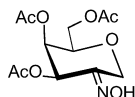
3,4,6-Tri-O-acetyl-1,5-anhydro-D-tagatose E-oxime

$[\alpha]_D^{23} = -44.3$ (c 0.5, $CHCl_3$)

Source of chirality: D-galactose

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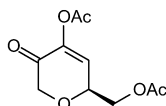


3,4,6-Tri-O-acetyl-1,5-anhydro-D-tagatose *E*-oxime

$[\alpha]_D^{23} = -44.3$ (c 0.5, CHCl₃)
Source of chirality: D-galactose

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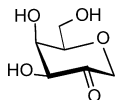


(6*S*)-4-Acetoxy-6-acetoxymethyl-2*H*-pyran-3(6*H*)-one

$[\alpha]_D^{20} = -42.7$ (c 1.2, CHCl₃)
Source of chirality: D-galactose
Absolute configuration: (6*S*)

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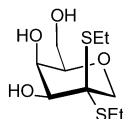


1,5-Anhydro-D-tagatose

$[\alpha]_D^{21} = -7.9$ (c 0.9, H₂O)
Source of chirality: D-galactose

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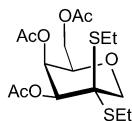


1,5-Anhydro-D-tagatose diethyldithioacetal

$[\alpha]_D^{20} = -57$ (c 1.1, MeOH)
Source of chirality: D-galactose

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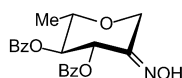


$[\alpha]_D^{23} = +15.7$ (c 1, CHCl₃)
Source of chirality: D-galactose

3,4,6-Tri-O-acetyl-1,5-anhydro-D-tagatose diethyldithioacetal

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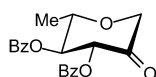


$[\alpha]_D^{21} = +123$ (c 0.5, CHCl₃)
Source of chirality: L-rhamnose

3,4-Di-O-benzoyl-1,5-anhydro-L-rhamnulose *E*-oxime

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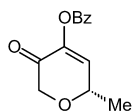


$[\alpha]_D^{21} = +109.9$ (c 1.1, CHCl₃)
Source of chirality: L-rhamnose

3,4-Di-O-benzoyl-1,5-anhydro-L-rhamnulose

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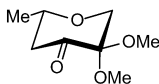


$[\alpha]_D^{21} = -10.5$ (c 1.2, CHCl₃)
Source of chirality: L-rhamnose

(6*S*)-4-Benzoyloxy-6-methyl-2*H*-pyran-3(6*H*)-one

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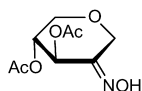


(2S)-5,5-Dimethoxy-2-methyl-tetrahydropyran-4-one

$[\alpha]_D^{20} = +154.6$ (c 1.3, CHCl₃)
Source of chirality: L-rhamnose

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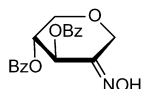


3,4-Di-O-acetyl-1,5-anhydro-D-threo-pent-2-ulose *E*-oxime

$[\alpha]_D^{22} = -58.3$ (c 0.3, CHCl₃)
Source of chirality: D-xylose

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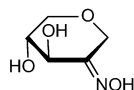


3,4-Di-O-benzoyl-1,5-anhydro-D-threo-pent-2-ulose *E*-oxime

$[\alpha]_D^{23} = -111$ (c 0.6, CHCl₃)
Source of chirality: D-xylose

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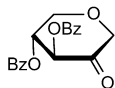


1,5-Anhydro-D-threo-pent-2-ulose *E*-oxime

$[\alpha]_D^{20} = +14.8$ (c 1, H₂O)
Source of chirality: D-xylose

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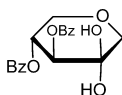


3,4-Di-O-benzoyl-1,5-anhydro-D-pentulose

$[\alpha]_D^{20} = -117$ (c 0.6, CHCl₃)
Source of chirality: D-xylose

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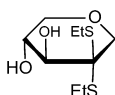


3,4-Di-O-benzoyl-1,5-anhydro-D-pentulose monohydrate

$[\alpha]_D^{20} = -131$ (c 0.7, CHCl₃)
Source of chirality: D-xylose

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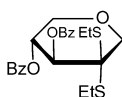


1,5-Anhydro-D-*threo*-pentulose diethyldithioacetal

$[\alpha]_D^{20} = -79.3$ (c 1.1, MeOH)
Source of chirality: D-xylose

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Tetrahedron: Asymmetry 20 (2009) 952

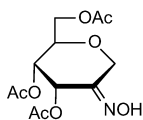


3,4-Di-O-benzoyl-1,5-anhydro-D-*threo*-pentulose diethyldithioacetal

$[\alpha]_D^{20} = -121.4$ (c 0.8, CHCl₃)
Source of chirality: D-xylose

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Tetrahedron: Asymmetry 20 (2009) 952

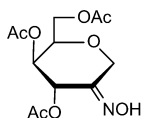


3,4,6-Tri-O-acetyl-1,5-anhydro-D-psicose *E*-oxime

$[\alpha]_D^{20} = +27.2$ (c 0.84, CHCl₃)
Source of chirality: D-allose

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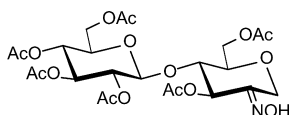


3,4,6-Tri-O-acetyl-1,5-anhydro-D-sorbose *E*-oxime

$[\alpha]_D^{20} = -15.1$ (c 0.6, CHCl₃)
Source of chirality: D-glucose

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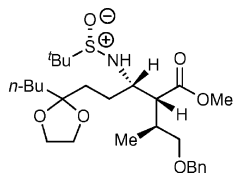


3,6-Di-O-acetyl-4-O-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)-1,5-anhydro-D-fructose *E*-oxime

$[\alpha]_D^{21} = -22.3$ (c 0.3, CHCl₃)
Source of chirality: cellobiose

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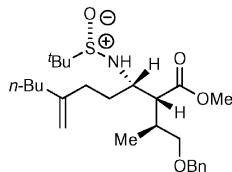
C₂₇H₄₅NO₆S

Methyl (2*R*,3*S*)-2-[(*S*)-2-benzyloxy-1-methylethyl]-3-[(*S*)-*tert*-butylsulfanylamino]-6-oxodecanoate ethylene acetal

Ee ca. 100%
 $[\alpha]_D^{26} = +7.2$ (c 8.3, CHCl₃)
Source of chirality: synthesis from (*S*)-*tert*-butylsulfanylamine and methyl (*R*)-3-benzyloxy-2-methylpropanoate

Eric J. Thomas *, Clare F. Vickers *

Tetrahedron: Asymmetry 20 (2009) 970



C₂₆H₄₃NO₄S

Methyl (2*R*,3*S*)-2-[(*S*)-2-benzyloxy-1-methylethyl]-3-[(*S*)-*tert*-butylsulfinylamino]-6-methylenedecanoate

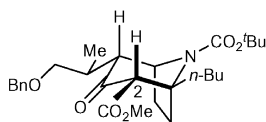
Ee ca. 100%

$[\alpha]_D^{23} = +6.8$ (c 4.7, CHCl₃)

Source of chirality: synthesis from (*S*)-*tert*-butylsulfinamine and methyl (*R*)-3-benzyloxy-2-methylpropanoate

Eric J. Thomas *, Clare F. Vickers *

Tetrahedron: Asymmetry 20 (2009) 970



C₂₈H₄₁NO₆

(1*R*,2*S*,4*R*,5*S*)-4-[(*S*)-2-benzyloxy-1-methylethyl]-1-butyl-2-methoxycarbonyl-8-*tert*-butoxycarbonyl-8-azabicyclo[3.2.1]octan-3-one

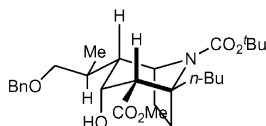
Ee ca. 100%

$[\alpha]_D^{22} = -16.5$ (c 17, CHCl₃)

Source of chirality: synthesis from (*S*)-*tert*-butylsulfinamine and methyl (*R*)-3-benzyloxy-2-methylpropanoate

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C₂₈H₄₃NO₆

(1*R*,2*S*,3*R*,4*R*,5*S*)-4-[(*S*)-2-benzyloxy-1-methyl-ethyl]-1-butyl-2-methoxycarbonyl-8-*tert*-butoxycarbonyl-8-azabicyclo[3.2.1]octan-3-ol

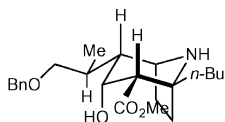
Ee ca. 100%

$[\alpha]_D^{22} = -48.05$ (c 35.3, CHCl₃)

Source of chirality: synthesis from (*S*)-*tert*-butylsulfinamine and methyl (*R*)-3-benzyloxy-2-methylpropanoate

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C₂₃H₃₅O₄N

(1*R*,2*S*,3*R*,4*R*,5*S*)-4-[(*S*)-2-benzyloxy-1-methyl-ethyl]-1-butyl-2-methoxycarbonyl-8-azabicyclo[3.2.1]octan-3-ol

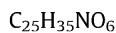
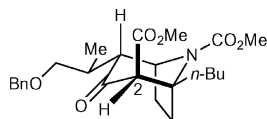
Ee ca. 100%

$[\alpha]_D^{26} = -48$ (c 0.5, CHCl₃)

Source of chirality: synthesis from (*S*)-*tert*-butylsulfinamine and methyl (*R*)-3-benzyloxy-2-methylpropanoate

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(1R,2R,4R,5S)-4-[(S)-2-Benzyloxy-1-methylethyl]-1-butyl-2,8-dimethoxycarbonyl-8-azabicyclo[3.2.1]octan-3-one

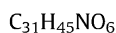
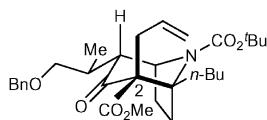
Ee ca. 100%

$[\alpha]_D^{29} = -37.7$ (c 5.1, $CHCl_3$)

Source of chirality: synthesis from (S)-tert-butylsulfinimine and methyl (R)-3-benzyloxy-2-methylpropanoate

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(1R,2S,4R,5S)-4-[(S)-2-Benzyloxy-1-methylethyl]-1-butyl-2-methoxycarbonyl-8-tert-butoxycarbonyl-2-prop-2-enyl-8-azabicyclo[3.2.1]octan-3-one

Ee ca. 100%

$[\alpha]_D^{26} = -56$ (c 75.1, $CHCl_3$)

Source of chirality: synthesis from (S)-tert-butylsulfinimine and methyl (R)-3-benzyloxy-2-methylpropanoate