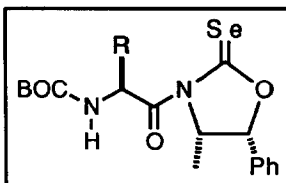


STEREOCHEMISTRY ABSTRACTS

Jie Peng, Jerome D. Odom, R. Bruce Dunlap, and Louis A. Silks III.

Tetrahedron: Asymmetry 1994, 5, 1627

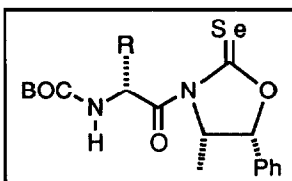


Absolute configuration of parent amino acid can be assessed using ^{77}Se NMR, TLC, UV, and CD.

R= CH_3 -, $(\text{CH}_3)_2\text{CH}$ -, $(\text{CH}_3)_2\text{CHCH}_2$ -, $\text{CH}_3\text{CH}_2(\text{CH}_3)\text{CH}$ -, $\text{CH}_3\text{S}(\text{CH}_2)_2$ -, $\text{C}_6\text{H}_5\text{CH}_2$ -, $\text{CH}_2\text{CH}_2\text{CH}_2$ -

Jie Peng, Jerome D. Odom, R. Bruce Dunlap, and Louis A. Silks III.

Tetrahedron: Asymmetry 1994, 5, 1627

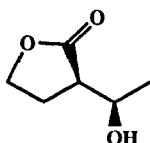


Absolute configuration of parent amino acid can be assessed using ^{77}Se NMR, TLC, UV, and CD.

R= CH_3 -, $(\text{CH}_3)_2\text{CH}$ -, $(\text{CH}_3)_2\text{CHCH}_2$ -, $\text{CH}_3\text{CH}_2(\text{CH}_3)\text{CH}$ -, $\text{CH}_3\text{S}(\text{CH}_2)_2$ -, $\text{C}_6\text{H}_5\text{CH}_2$ -, and $\text{CH}_2\text{CH}_2\text{CH}_2$ -

G.Fantin, M. Fogagnolo, P. Giovannini, A. Medici, E. Pagnotta, P. Pedrini, A. Trincone

Tetrahedron: Asymmetry 1994, 5, 1631



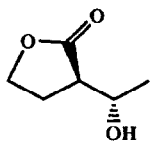
$\text{C}_6\text{H}_9\text{O}_3$

syn- α -(hydroxyethyl)- γ -butyrolactone

ee = 100% [by GLC analysis on a 25 m dimethyl-n-pentyl- β -cyclodextrine in OV 1701]
 $[\alpha]_{\text{D}}^{25} = -40.6$ (c 1.8, CHCl_3)
 Source of chirality: microbial reduction
 Absolute configuration: 3R,1'R

G.Fantin, M. Fogagnolo, P. Giovannini, A. Medici, E. Pagnotta, P. Pedrini, A. Trincone

Tetrahedron: Asymmetry 1994, 5, 1631



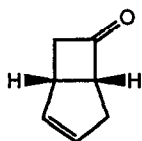
$\text{C}_6\text{H}_9\text{O}_3$

anti- α -(hydroxyethyl)- γ -butyrolactone

ee = 100% [by GLC analysis on a 25 m dimethyl-n-pentyl- β -cyclodextrine in OV 1701]
 $[\alpha]_{\text{D}}^{25} = 16.8$ (c 1.7, CHCl_3)
 Source of chirality: microbial reduction
 Absolute configuration: 3R,1'S

G. Fantin, M. Fogagnolo, A. Medici, P. Pedrini, G. Rosini

Tetrahedron: Asymmetry 1994, 5, 1635



C₇H₈O

bicyclo[3.2.0]hept-2-en-6-one

ee = 99% [by GLC analysis on a 25 m dimethyl-n-pentyl- β -cyclodextrine in OV 1701]

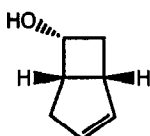
$[\alpha]_D^{25} = -63$ (c 1.2, CHCl₃)

Source of chirality: kinetic resolution *via* oxidation

Absolute configuration: 1S,5R

G. Fantin, M. Fogagnolo, A. Medici, P. Pedrini, G. Rosini

Tetrahedron: Asymmetry 1994, 5, 1635



C₇H₁₀O

6-endo-bicyclo[3.2.0]hept-2-en-6-ol

ee = 100% [by GLC analysis on a 25 m dimethyl-n-pentyl- β -cyclodextrine in OV 1701]

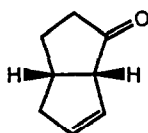
$[\alpha]_D^{25} = -68$ (c 1.1, CHCl₃)

Source of chirality: kinetic resolution *via* oxidation

Absolute configuration: 1R,5S,6R

G. Fantin, M. Fogagnolo, A. Medici, P. Pedrini, G. Rosini

Tetrahedron: Asymmetry 1994, 5, 1635



C₈H₁₀O

bicyclo[3.3.0]oct-7-en-2-one

ee = 100% [by GLC analysis on a 25 m dimethyl-n-pentyl- β -cyclodextrine in OV 1701]

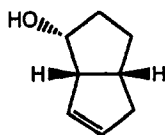
$[\alpha]_D^{25} = -502.1$ (c 1.3, CHCl₃)

Source of chirality: kinetic resolution *via* oxidation

Absolute configuration: 1S,5S

G. Fantin, M. Fogagnolo, A. Medici, P. Pedrini, G. Rosini

Tetrahedron: Asymmetry 1994, 5, 1635



C₈H₁₂O

2-endo-bicyclo[3.3.0]oct-7-en-2-ol

ee = 100% [by GLC analysis on a 25 m dimethyl-n-pentyl- β -cyclodextrine in OV 1701]

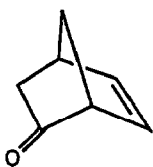
$[\alpha]_D^{25} = 151$ (c 1.5, CHCl₃)

Source of chirality: kinetic resolution *via* oxidation

Absolute configuration: 1R,2R,5R

G. Fantin, M. Fogagnolo, A. Medici, P. Pedrini, G. Rosini

Tetrahedron: Asymmetry **1994**, 5, 1635



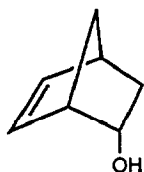
C₇H₈O

norborn-5-en-2-one

ee = 82% [by GLC analysis on a 25 m dimethyl-n-pentyl- β -cyclodextrine in OV 1701]
[α]_D²⁵ = -930 (c 1.1, CHCl₃)
Source of chirality: kinetic resolution *via* oxidation
Absolute configuration: 1S,4S

G. Fantin, M. Fogagnolo, A. Medici, P. Pedrini, G. Rosini

Tetrahedron: Asymmetry **1994**, 5, 1635



C₇H₁₀O

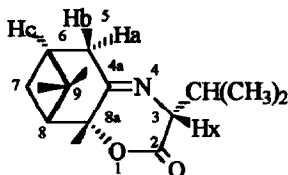
2-endo-norborn-5-en-2-ol

ee = 97% [by GLC analysis on a 25 m dimethyl-n-pentyl- β -cyclodextrine in OV 1701]
[α]_D²⁵ = 160 (c 0.5, CHCl₃)
Source of chirality: kinetic resolution *via* oxidation
Absolute configuration: 1R,2R,4R

Diastereoselective Cyclisation of 2-Hydroxypinan-3-onyl Amino Esters

M. Calmes, J. Daunis, F. Escale, R. Jacquier, M.L. Roumestant

Tetrahedron: Asymmetry **1994**, 5, 1643



de > 98% (using H_x NMR signal)
mp=42-43°C, [α]_D^{20°C} +215 (c=2, CH₂Cl₂)

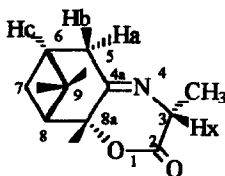
Source of chirality : (+) (1R,2R,5R) 2-hydroxypinan-3-one

Absolute configuration 3R,6R,8R,8aR

Diastereoselective Cyclisation of 2-Hydroxypinan-3-onyl Amino Esters

M. Calmes, J. Daunis, F. Escale, R. Jacquier, M.L. Roumestant

Tetrahedron: Asymmetry **1994**, 5, 1643



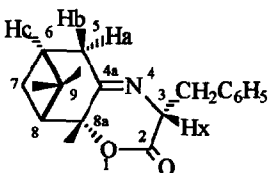
de > 98% (using H_x NMR signal)
mp=67-68°C, [α]_D^{20°C} +214 (c=2, CH₂Cl₂)

Source of chirality : (+) (1R,2R,5R) 2-hydroxypinan-3-one

Absolute configuration 3R,6R,8R,8aR

Diastereoselective Cyclisation of 2-Hydroxypipin-3-onyl Amino Esters

M. Calmes, J. Daunis, F. Escale, R. Jacquier, M.L. Roumestant

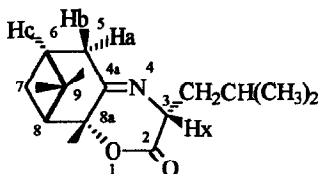
Tetrahedron: Asymmetry 1994, 5, 1643de > 98% (using H_x NMR signal)mp=41-42°C, $[\alpha]_D^{20} +205$ (c=2, CH₂Cl₂)

Source of chirality : (+) (1R,2R,5R) 2-hydroxypipin-3-one

Absolute configuration 3R,6R,8R,8aR

Diastereoselective Cyclisation of 2-Hydroxypipin-3-onyl Amino Esters

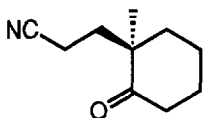
M. Calmes, J. Daunis, F. Escale, R. Jacquier, M.L. Roumestant

Tetrahedron: Asymmetry 1994, 5, 1643de > 98% (using H_x NMR signal)oil, $[\alpha]_D^{20} +175$ (c=2, CH₂Cl₂)

Source of chirality : (+) (1R,2R,5R) 2-hydroxypipin-3-one

Absolute configuration 3R,6R,8R,8aR

Didier Desmaële, Fatima Zouhri, Jean d'Angelo

Tetrahedron: Asymmetry 1994, 5, 1645

E.e. ≥ 95 % (by chemical correlation)

 $[\alpha]_D^{20} = -7.0$ (c = 26, EtOH)

Source of chirality: asymmetric Michael addition

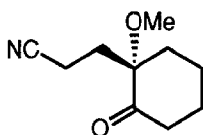
Absolute configuration: (R)

(assigned by chemical correlation)

C₁₀H₁₅NO

(1-Methyl-2-oxo-cyclohexan-1-yl)-propionitrile

Didier Desmaële, Fatima Zouhri, Jean d'Angelo

Tetrahedron: Asymmetry 1994, 5, 1645E.e. = 90 % (by ¹H-NMR with Eu(hfc)₃) $[\alpha]_D^{20} = -29.0$ (c = 42, EtOH)

Source of chirality: asymmetric Michael addition

Absolute configuration: (S)

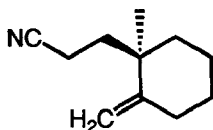
(assignment based on the reaction mechanism)

C₁₀H₁₅NO₂

(1-Methoxy-2-oxo-cyclohexan-1-yl)-propionitrile

Didier Desmaële, Fatima Zouhri, Jean d'Angelo

Tetrahedron: Asymmetry 1994, 5, 1645

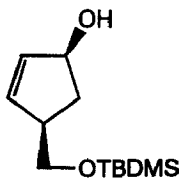


E.e. \geq 95 % (by $^1\text{H-NMR}$ with $\text{Eu}(\text{hfc})_3$)
 $[\alpha]_{\text{D}}^{20} = +80.1$ ($c = 42$, EtOH)
Source of chirality: asymmetric Michael addition
Absolute configuration: (*R*)
(from method of synthesis)

$\text{C}_{10}\text{H}_{15}\text{N}$
(1-Methyl-2-methylene-1-cyclohexanyl)-propionitrile

M. Asami,* J. Takahashi, S. Inoue

Tetrahedron: Asymmetry 1994, 5, 1649



E.e. = 72% (by $^1\text{H-NMR}$ of the MTPA ester)

$[\alpha]_{\text{D}}^{23} +33.2$ (c 0.78, CHCl_3)

Source of chirality: enantioselective deprotonation

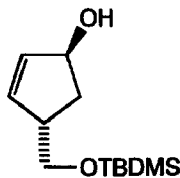
Absolute configuration: unknown

$\text{C}_{12}\text{H}_{24}\text{O}_2\text{Si}$

cis-4-*t*-butyldimethylsiloxymethyl-2-cyclopenten-1-ol

M. Asami,* J. Takahashi, S. Inoue

Tetrahedron: Asymmetry 1994, 5, 1649



E.e. = 83% (by $^1\text{H-NMR}$ of the MTPA ester)

$[\alpha]_{\text{D}}^{25} -134.8$ (c 2.02, CHCl_3)

Source of chirality: enantioselective deprotonation

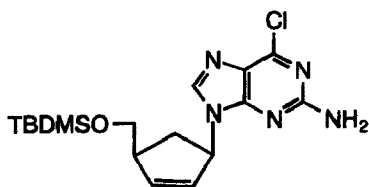
Absolute configuration: 1*S*,4*S*

$\text{C}_{12}\text{H}_{24}\text{O}_2\text{Si}$

trans-4-*t*-butyldimethylsiloxymethyl-2-cyclopenten-1-ol

M. Asami,* J. Takahashi, S. Inoue

Tetrahedron: Asymmetry 1994, 5, 1649



E.e. = 83%

$[\alpha]_{\text{D}}^{25} -77.0$ (c 1.01, CHCl_3)

Source of chirality: from precursor obtained by
enantioselective deprotonation

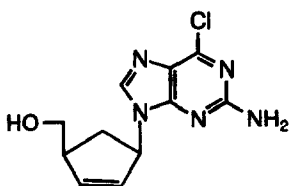
Absolute configuration: 1'*R*,4'*S*

$\text{C}_{17}\text{H}_{26}\text{ClN}_5\text{OSi}$

cis-2-amino-6-chloro-9-[4-(*t*-butyldimethylsiloxymethyl)-2'-cyclopenten-1'-yl]purine

M. Asami,* J. Takahashi, S. Inoue

Tetrahedron: Asymmetry 1994, 5, 1649



E.e. = 83%

$[\alpha]_D^{25} -83.8$ (c 0.41, CH₃OH)

Source of chirality: from precursor obtained by
enantioselective deprotonation

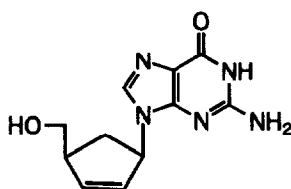
Absolute configuration: 1'R,4'S

C₁₁H₁₂ClN₅O

cis-2-amino-6-chloro-9-[4'-(hydroxymethyl)-2'-cyclopenten-1'-yl]purine

M. Asami,* J. Takahashi, S. Inoue

Tetrahedron: Asymmetry 1994, 5, 1649



E.e. = 83%

$[\alpha]_D^{25} -54.6$ (c 0.22, CH₃OH)

Source of chirality: from precursor obtained by
enantioselective deprotonation

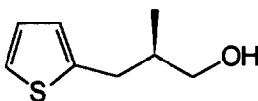
Absolute configuration: 1'R,4'S

C₁₁H₁₃N₅O₂

(-)-Carbovir

F. Bracher, T. Papke

Tetrahedron: Asymmetry 1994, 5, 1653



C₈H₁₂OS

2-Methyl-3-(2-thiophene)-1-propanol

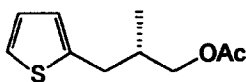
E.e. = 96 % [by glc of (R)- phenyl ethylamide]
 $[\alpha]_D^{20} = + 10.6$ (c 1.2, CHCl₃)

Source of chirality: kinetic resolution via
transesterification with lipase from *Pseudomonas*

Absolute configuration: R (assigned by
correlation to the known (S)-enantiomer)

F. Bracher, T. Papke

Tetrahedron: Asymmetry 1994, 5, 1653



C₁₀H₁₄O₂S

2-Methyl-3-(2-thiophene)-1-propylacetate

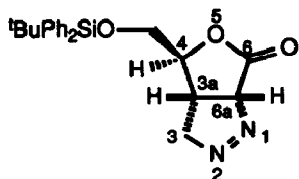
E.e. = 75 % [by glc of (R)- phenyl ethylamide]
 $[\alpha]_D^{20} = + 1.85$ (c 1.2, CHCl₃)

Source of chirality: kinetic resolution via
transesterification with lipase from *Pseudomonas*

Absolute configuration: S
(assigned by comparison of $[\alpha]_D$ with literature)

Neuh Hanafi, Rosa M. Ortuño

Tetrahedron: Asymmetry 1994, 5, 1657



$[\alpha]_D = -182$ (c 1.20, CHCl_3), -202 (c 1.70, acetone)

Source of chirality: D-mannitol, stereoselective 1,3-dipolar cycloaddition

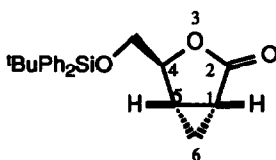
Absolute configuration: 3a*S*, 4*S*, 6a*R*

$\text{C}_{22}\text{H}_{26}\text{O}_3\text{N}_2\text{Si}$

4-*tert*-Butyldiphenylsilyloxymethyl-3a,4,6,6a-tetrahydro-3*H*-furo[3,4-*c*]pyrazol-6-one

Neuh Hanafi, Rosa M. Ortuño

Tetrahedron: Asymmetry 1994, 5, 1657



$[\alpha]_D = -163.0$ (c 3.20, CHCl_3)

Source of chirality: D-mannitol, stereoselective 1,3-dipolar cycloaddition

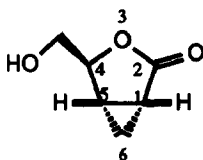
Absolute configuration: 1*R*, 4*S*, 5*S*

$\text{C}_{22}\text{H}_{26}\text{O}_3\text{Si}$

4-*tert*-Butyldiphenylsilyloxymethyl-3-oxabicyclo[3.1.0]hexan-2-one

Neuh Hanafi, Rosa M. Ortuño

Tetrahedron: Asymmetry 1994, 5, 1657



$[\alpha]_D = +63.4$ (c 1.45, CHCl_3)

Source of chirality: D-mannitol, stereoselective 1,3-dipolar cycloaddition

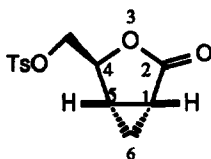
Absolute configuration: 1*R*, 4*S*, 5*S*

$\text{C}_6\text{H}_8\text{O}_3$

4-Hydroxymethyl-3-oxabicyclo[3.1.0]hexan-2-one

Neuh Hanafi, Rosa M. Ortuño

Tetrahedron: Asymmetry 1994, 5, 1657



$[\alpha]_D = +98.2$ (c 2.04, CHCl_3)

Source of chirality: D-mannitol, stereoselective 1,3-dipolar cycloaddition

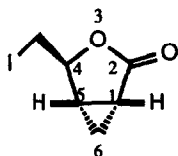
Absolute configuration: 1*R*, 4*S*, 5*S*

$\text{C}_{13}\text{H}_{14}\text{O}_5\text{S}$

4-*p*-Toluenesulfonyloxymethyl-3-oxabicyclo[3.1.0]hexan-2-one

Neuh Hanafi, Rosa M. Ortuño

Tetrahedron: Asymmetry 1994, 5, 1657



$[\alpha]_D = +86.1$ (c 1.80, CHCl_3)

Source of chirality: D-mannitol, stereoselective 1,3-dipolar cycloaddition

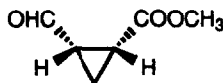
Absolute configuration: 1*R*, 4*S*, 5*S*

$\text{C}_6\text{H}_7\text{O}_2\text{I}$

4-Iodomethyl-3-oxabicyclo[3.1.0]hexan-2-one

Neuh Hanafi, Rosa M. Ortuño

Tetrahedron: Asymmetry 1994, 5, 1657



$[\alpha]_D = +94.2$ (c 2.80, CHCl_3)

Source of chirality: D-mannitol, stereoselective 1,3-dipolar cycloaddition

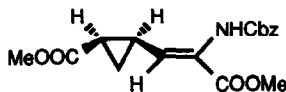
Absolute configuration: 1*R*, 2*S*

$\text{C}_6\text{H}_8\text{O}_3$

2-Formyl-1-methoxycarbonylcyclopropane

Neuh Hanafi, Rosa M. Ortuño

Tetrahedron: Asymmetry 1994, 5, 1657



$[\alpha]_D = -72.9$ (c 3.60, CHCl_3)

Source of chirality: D-mannitol, stereoselective 1,3-dipolar cycloaddition

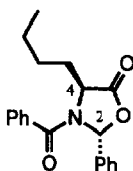
Absolute configuration: 4*S*, 5*R*

$\text{C}_{17}\text{H}_{19}\text{NO}_6$

(*Z*)-2-Benzyloxycarbonylamino-4,5-cyclopropyl-2-hexenodioic acid dimethyl ester

Raymond C F Jones *, Alan K Crockett, David C Rees and Ian H Gilbert

Tetrahedron: Asymmetry 1994, 5, 1661



100 % d.e. from n.m.r. spectroscopy

Source of chirality: *S*-norleucine (commercial)

$[\alpha]_D^{23} +201.4$ (c 1.02, CHCl_3)

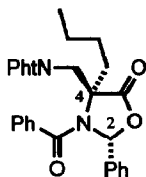
$\text{C}_{20}\text{H}_{21}\text{NO}_3$

3-Benzoyl-4-butyl-2-phenylimidazolidin-5-one

Absolute configuration: 2*R*, 4*S*

Raymond C F Jones *, Alan K Crockett, David C Rees and Ian H Gilbert

Tetrahedron: Asymmetry **1994**, *5*, 1661



(Pht = N-phthaloyl)

$C_{29}H_{26}N_2O_5$
3-Benzoyl-4-butyl-2-phenyl-4-phthalimidomethylimidazolidin-5-one

100 % d.e. from n.m.r. spectroscopy

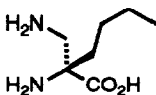
Source of chirality: *S*-norleucine (commercial)

$[\alpha]_D^{25} +174.9$ (c 0.55, $CHCl_3$)

Absolute configuration: 2*R*, 4*S*

Raymond C F Jones *, Alan K Crockett, David C Rees and Ian H Gilbert

Tetrahedron: Asymmetry **1994**, *5*, 1661



$C_7H_{16}N_2O_2$
2-Amino-2-aminomethylhexanoic acid

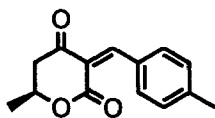
Source of chirality: *R*-norleucine (commercial)

$[\alpha]_D^{25} +5.9$ (c 1.01, H_2O)

Absolute configuration: 2*R*

M. Sato, S. Sunami, C. Kaneko, S. Satoh and T. Furuya

Tetrahedron: Asymmetry **1994**, *5*, 1665



$C_{14}H_{14}O_3$
(*S*)-(Z)-3-(4-Methylbenzylidene)-5,6-dihydropyran-2,4-dione

E.e.=100%

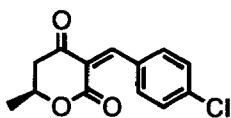
$[\alpha]_D^{25} = -68.0$ (c 1.23, $CHCl_3$)

Source of chirality: asymmetric reduction with baker's yeast

Absolute configuration: *S*

M. Sato, S. Sunami, C. Kaneko, S. Satoh and T. Furuya

Tetrahedron: Asymmetry **1994**, *5*, 1665



$C_{13}H_{11}ClO_3$
(*S*)-(Z)-3-(4-Chlorobenzylidene)-5,6-dihydropyran-2,4-dione

E.e.=100%

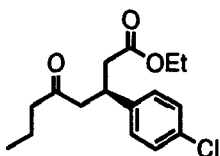
$[\alpha]_D^{19} = -151.5$ (c 1.03, $CHCl_3$)

Source of chirality: asymmetric reduction with baker's yeast

Absolute configuration: *S*

M. Sato, S. Sunami, C. Kaneko, S. Satoh and T. Furuya

Tetrahedron: Asymmetry 1994, 5, 1665



$C_{16}H_{21}ClO_3$

Ethyl (*S*)-3-(4-chlorophenyl)-5-oxooctanoate

E.e. = >90%

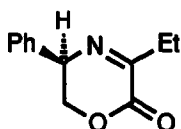
$[\alpha]_D^{23} = -7.5$ (c 0.51, $CHCl_3$)

Source of chirality: diastereoselective hetero Diels-Alder reaction

Absolute configuration: *S*

Geoffrey G. Cox and Laurence M. Harwood

Tetrahedron: Asymmetry 1994, 5, 1669



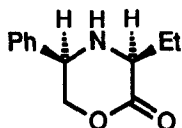
$[\alpha]_D^{23} = -32.4$ (c 1.82, $CHCl_3$)

(*5R*)-3-ethyl-5-phenyl-3,4-dehydromorpholin-2-one

[*ent.* +29.5 (c 1.12, $CHCl_3$)]

Geoffrey G. Cox and Laurence M. Harwood

Tetrahedron: Asymmetry 1994, 5, 1669



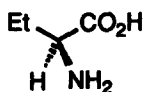
$[\alpha]_D^{23} = -243$ (c 1.04, $CHCl_3$)

(*3S,5R*)-3-ethyl-5-phenylmorpholin-2-one

[*ent.* +233 (c 1.07, $CHCl_3$)]

Geoffrey G. Cox and Laurence M. Harwood

Tetrahedron: Asymmetry 1994, 5, 1669

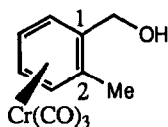


$[\alpha]_D^{23} = +7.82$ (c 1.10, H_2O)

(*2S*)-2-aminobutanoic acid

[*ent.* -7.84 (c 1.11, D_2O)]

M. Uemura, H. Nishimura, S. Yamada, Y. Hayashi,
K. Nakamura, K. Ishihara, and A. Ohno



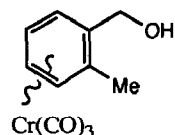
(1*R*,2*S*)-Tricarbonyl(2-methylbenzyl alcohol)chromium

E.e. = >99 % ($^1\text{H-NMR}$ with $\text{Pr}(\text{hfc})_3$)

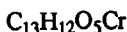
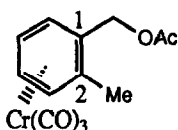
$[\alpha]_{\text{D}}^{25} -5.2$ (c 0.56, chloroform)

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

Source of chirality: resolution of racemic
compound by lipase



M. Uemura, H. Nishimura, S. Yamada, Y. Hayashi,
K. Nakamura, K. Ishihara, and A. Ohno



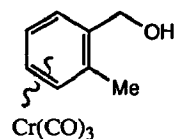
(1*S*,2*R*)-Tricarbonyl(2-methylbenzyl acetate)chromium

E.e. = 98 % ($^1\text{H-NMR}$ with $\text{Pr}(\text{hfc})_3$)

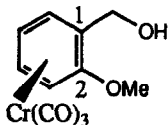
$[\alpha]_{\text{D}}^{25} +38.9$ (c 0.61, chloroform)

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

Source of chirality: resolution of racemic
compound by lipase



M. Uemura, H. Nishimura, S. Yamada, Y. Hayashi,
K. Nakamura, K. Ishihara, and A. Ohno



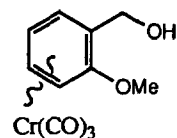
(1*R*,2*S*)-Tricarbonyl(2-methoxybenzyl alcohol)chromium

E.e. = 93 % (HPLC with Chiralcel OF)

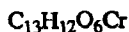
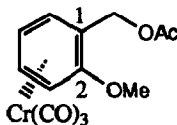
$[\alpha]_{\text{D}}^{25} -137$ (c 1.08, chloroform)

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

Source of chirality: resolution of racemic
compound by lipase



M. Uemura, H. Nishimura, S. Yamada, Y. Hayashi,
K. Nakamura, K. Ishihara, and A. Ohno



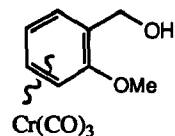
(1*S*,2*R*)-Tricarbonyl(2-methoxybenzyl acetate)chromium

E.e. = 96 % (HPLC with Chiralcel OF)

$[\alpha]_{\text{D}}^{25} +241$ (c 0.86, chloroform)

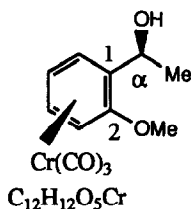
Absolute Configuration: (1*S*,2*R*)

Source of chirality: resolution of racemic
compound by lipase

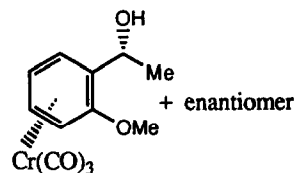


M. Uemura, H. Nishimura, S. Yamada, Y. Hayashi,
K. Nakamura, K. Ishihara, and A. Ohno

Tetrahedron: Asymmetry **1994**, *5*, 1673



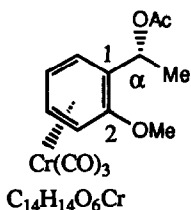
E.e. = 99 % (HPLC with Chiralcel OF)
 $[\alpha]_D^{25} +117.5$ (*c* 0.59, ethanol)
Absolute Configuration: (1*R*,2*S*, α *S*)
mp 68 °C
Source of chirality: resolution of racemic
compound by lipase



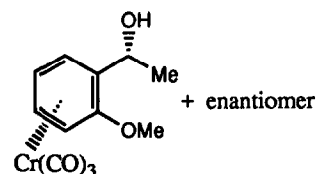
(1*R*,2*S*, α *S*)-Tricarbonyl[α -(2-methoxyphenyl)ethylalcohol]chromium

M. Uemura, H. Nishimura, S. Yamada, Y. Hayashi,
K. Nakamura, K. Ishihara, and A. Ohno

Tetrahedron: Asymmetry **1994**, *5*, 1673



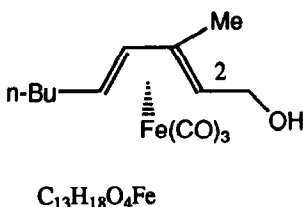
E.e. = 99 % (HPLC with Chiralcel OF)
 $[\alpha]_D^{25} -104.5$ (*c* 0.53, ethanol)
Absolute Configuration: (1*S*,2*R*, α *R*)
mp 75 °C
Source of chirality: resolution of racemic
compound by lipase



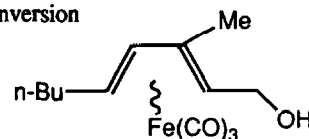
(1*S*,2*R*, α *R*)-Tricarbonyl[α -(2-methoxyphenyl)-ethylacetate]chromium

M. Uemura, H. Nishimura, S. Yamada, Y. Hayashi,
K. Nakamura, K. Ishihara, and A. Ohno

Tetrahedron: Asymmetry **1994**, *5*, 1673



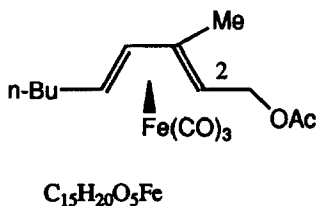
E.e. = 92 % (HPLC with Chiralcel OJ after conversion
to the corresponding benzoate complex)
 $[\alpha]_D^{19} -2.0$ (*c* 0.59, Methanol)
Absolute Configuration: (1*R*,2*S*)
Source of chirality: resolution of racemic
compound by lipase



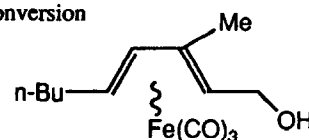
(2*S*)-Tricarbonyl(3-methyl-2,4-nonadiene-1-ol)iron

M. Uemura, H. Nishimura, S. Yamada, Y. Hayashi,
K. Nakamura, K. Ishihara, and A. Ohno

Tetrahedron: Asymmetry **1994**, *5*, 1673



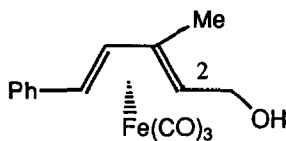
E.e. = 90 % (HPLC with Chiralcel OJ after conversion
to the corresponding benzoate complex)
 $[\alpha]_D^{19} +2.7$ (*c* 1.0, Methanol)
Absolute Configuration: (1*S*,2*R*)
Source of chirality: resolution of racemic
compound by lipase



(2*R*)-Tricarbonyl(3-methyl-2,4-nonadienyl-1-acetate)iron

M. Uemura, H. Nishimura, S. Yamada, Y. Hayashi,
K. Nakamura, K. Ishihara, and A. Ohno

Tetrahedron: Asymmetry 1994, 5, 1673

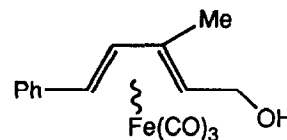


E.e. = 99 % (HPLC with Chiralcel OJ)

$[\alpha]_D^{23} -268.6$ (c 0.73, ethanol)

Absolute Configuration: (2*S*)

Source of chirality: resolution of racemic
compound by lipase

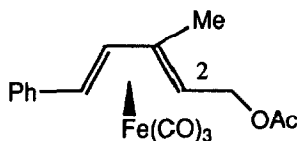


$C_{15}H_{14}O_4Fe$

(2*S*)-Tricarbonyl(3-methyl-5-phenyl-2,4-pentadiene-1-ol)iron

M. Uemura, H. Nishimura, S. Yamada, Y. Hayashi,
K. Nakamura, K. Ishihara, and A. Ohno

Tetrahedron: Asymmetry 1994, 5, 1673

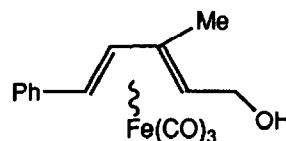


E.e. = 93 % (HPLC with Chiralcel OJ)

$[\alpha]_D^{19} +196.9$ (c 1.0, Ethanol)

Absolute Configuration: (2*R*)

Source of chirality: resolution of racemic
compound by lipase

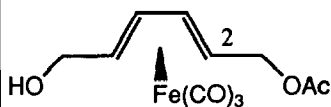


$C_{17}H_{16}O_5Fe$

(2*R*)-Tricarbonyl(3-methyl-5-phenyl-2,4-pentadienyl-1-acetate)iron

M. Uemura, H. Nishimura, S. Yamada, Y. Hayashi,
K. Nakamura, K. Ishihara, and A. Ohno

Tetrahedron: Asymmetry 1994, 5, 1673

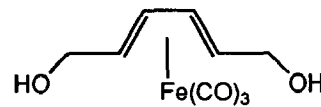


E.e. = 91 % (HPLC with Chiralcel OD after conversion
of hydroxyl to the corresponding benzoate)

$[\alpha]_D^{22} +5.2$ (c 0.59, MeCN)

Absolute Configuration: (2*R*)

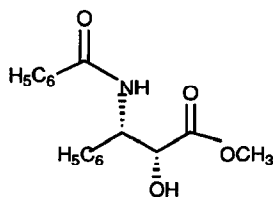
Source of chirality: asymmetric acylation of *meso*
compound by lipase



(2*R*)-Tricarbonyl(6-hydroxy-2,4-hexadienyl-1-acetate)iron

Ranjan P. Srivastava, Jordan K. Zjawiony, John R. Peterson and
James D. McChesney

Tetrahedron: Asymmetry 1994, 5, 1683



$C_{17}H_{17}NO_4$

N-Benzoyl-(2*R*,3*S*)-3-phenylisoserine methyl ester

E.e. >95% [by 300 MHz 1H NMR with $Eu(hfc)_3$]

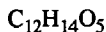
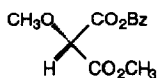
$[\alpha]_D^{25} = -49.1$ (c 0.92, CH_3OH)

Source of Chirality: Resolution by Entrainment

Absolute Configuration: 2*R*,3*S*

Michal Shapira and Arie L. Gutman

Tetrahedron: Asymmetry 1994, 5, 1689



benzyl, methyl 2-methoxymalonate

ee = 98% (by HPLC with chiral column)

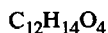
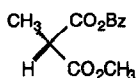
$[\alpha]_D^{28} = -17.4$ (c 1.43, $CHCl_3$)

Source of chirality: enzymatic transesterification

Absolute configuration: S

Michal Shapira and Arie L. Gutman

Tetrahedron: Asymmetry 1994, 5, 1689



benzyl, methyl 2-methylmalonate

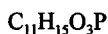
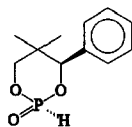
$[\alpha]_D^{28} = -6.1$ (c 1.08, $CHCl_3$)

Source of chirality: enzymatic transesterification

Absolute configuration: S

R. Hulst, R.W.J. Zijlstra, N.K. de Vries and B.L. Feringa*

Tetrahedron: Asymmetry 1994, 5, 1701



(S)-2H-2-Oxo-5,5-dimethyl-4(R)-phenyl-1,3,2-dioxaphosphorinane

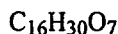
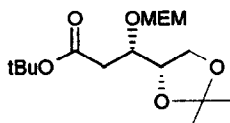
e.e. > 99 % by 1H and ^{31}P NMR.

Source of chirality, (R)-1-Phenyl-2,2-dimethyl-1,3-propanediol.

Absolute configuration 2S, 4R.

Guy Solladié*, Antonio Almarío

Tetrahedron: Asymmetry 1994, 5, 1717



t-butyl 3-(2-methoxyethoxymethoxy)-4.5-(isopropylidenedioxy) pentanoate.

$[\alpha]_D +6$ (c=0.8, $CHCl_3$).

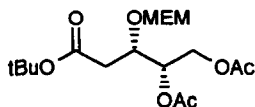
ee > 95%

Source of chirality: asymmetric synthesis

Absolute configuration: [3(S), 4(S)]

Guy Solladié*, Antonio Almario

Tetrahedron: Asymmetry 1994, 5, 1717



$[\alpha]_D + 3$ (c=1, CHCl₃).

ee>95%

Source of chirality: asymmetric synthesis

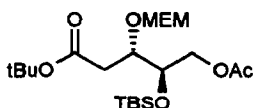
Absolute configuration: [3(S), 4(S)]

C₁₇H₃₀O₉

t-butyl 3-(2-methoxyethoxymethoxy)-4,5-diacetoxypentanoate.

Guy Solladié*, Antonio Almario

Tetrahedron: Asymmetry 1994, 5, 1717



$[\alpha]_D = -6$ (c=1, CHCl₃).

ee>95%

Source of chirality: asymmetric synthesis

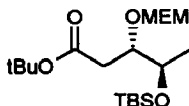
Absolute configuration: [3(S), 4(R)]

C₂₁H₄₂O₈Si

t-butyl 3-(2-methoxyethoxymethoxy)-4-(t-butyldimethylsilyloxy)-5-acetoxypentanoate.

Guy Solladié*, Antonio Almario

Tetrahedron: Asymmetry 1994, 5, 1717



$[\alpha]_D - 24$ (c=1.5, CHCl₃).

ee>95%

Source of chirality: asymmetric synthesis

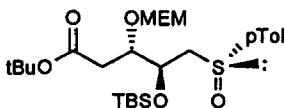
Absolute configuration: [3(S), 4(R)]

C₁₉H₄₀O₆Si

t-butyl 3-(2-methoxyethoxymethoxy)-4-(t-butyldimethylsilyloxy)pentanoate.

Guy Solladié*, Antonio Almario

Tetrahedron: Asymmetry 1994, 5, 1717



$[\alpha]_D + 98$ (c=1.1, CHCl₃).

ee>95%

Source of chirality: asymmetric synthesis

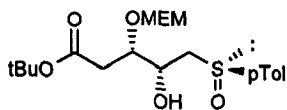
Absolute configuration: [3(S), 4(S), S(R)]

C₂₆H₄₆O₇SSi

t-butyl 3-(2-methoxyethoxymethoxy)-4-(t-butyldimethylsilyloxy)-5-(p-tolyl sulfinyl)pentanoate.

Guy Solladié*, Antonio Almario

Tetrahedron: Asymmetry **1994**, *5*, 1717



$[\alpha]_D -132$ ($c=1.8$, CHCl_3).

$ee > 95\%$

Source of chirality: asymmetric synthesis

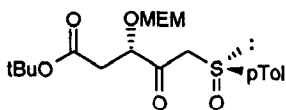
Absolute configuration: [3(S), 4(R), 5(S)]

$\text{C}_{20}\text{H}_{32}\text{O}_7\text{S}$

t-butyl 3-(2-methoxyethoxymethoxy)-4-hydroxy-5-(p-tolylsulfinyl) pentanoate.

Guy Solladié*, Antonio Almario

Tetrahedron: Asymmetry **1994**, *5*, 1717



$[\alpha]_D -149$ ($c=1.5$, CHCl_3).

$ee > 95\%$

Source of chirality: asymmetric synthesis

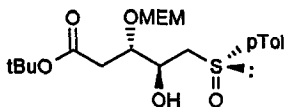
Absolute configuration: [3(S), 5(S)]

$\text{C}_{20}\text{H}_{30}\text{O}_7\text{S}$

t-butyl 3-(2-methoxyethoxymethoxy)-4-oxo-5-(p-tolylsulfinyl)pentanoate

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Tetrahedron: Asymmetry **1994**, *5*, 1717



$[\alpha]_D +150$ ($C=0.6$, CHCl_3).

$ee > 95\%$

Source of chirality: asymmetric synthesis

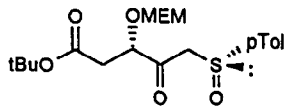
Absolute configuration: [3(S), 4(S), 5(R)]

$\text{C}_{20}\text{H}_{32}\text{O}_7\text{S}$

t-butyl 3-(2-methoxyethoxymethoxy)-4-hydroxy-5-(p-tolylsulfinyl) pentanoate.

Guy Solladié*, Antonio Almario

Tetrahedron: Asymmetry **1994**, *5*, 1717



$[\alpha]_D +91$ ($c=0.7$, CHCl_3).

$ee > 95\%$

Source of chirality: asymmetric synthesis

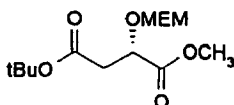
Absolute configuration: [3(S), 5(R)]

$\text{C}_{20}\text{H}_{30}\text{O}_7\text{S}$

t-butyl 3-(2-methoxyethoxymethoxy)-4-oxo-5-(p-tolylsulfinyl) pentanoate.

Guy Solladié*, Antonio Almario

Tetrahedron: Asymmetry 1994, 5, 1717

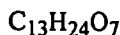


$[\alpha]_D -35$ (c=1.2, CHCl₃).

ee>95%

Source of chirality: asymmetric synthesis

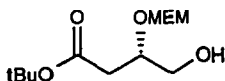
Absolute configuration: 2(S)



Methyl 2-(2-methoxyethoxymethoxy) 3-(t-butoxycarbonyl) propanoate

Guy Solladié*, Antonio Almario

Tetrahedron: Asymmetry 1994, 5, 1717

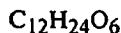


$[\alpha]_D +50$ (c=1.5, CHCl₃).

ee>95%

Source of chirality: asymmetric synthesis

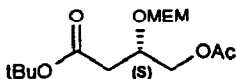
Absolute configuration: 3(S)



t-butyl 3-(2-methoxyethoxymethoxy)-4-hydroxybutyrate.

Guy Solladié*, Antonio Almario

Tetrahedron: Asymmetry 1994, 5, 1717

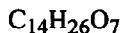


$[\alpha]_D +10$ (c=2, CHCl₃).

ee>95%

Source of chirality: asymmetric synthesis

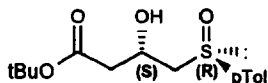
Absolute configuration: 3(S)



t-butyl 3-(2-methoxyethoxymethoxy)-4-acetoxybutyrate.

Guy Solladié*, Antonio Almario

Tetrahedron: Asymmetry 1994, 5, 1717

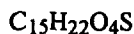


$[\alpha]_D +191$ (c=0.8, CHCl₃)

ee>95%

Source of chirality: asymmetric synthesis

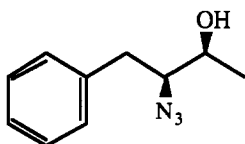
Absolute configuration: [3(S), S(R)].



t-butyl 3-hydroxy-4-(p-tolylsulfinyl)butyrate.

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry **1994**, *5*, 1727



$C_{10}H_{13}N_3O$
(2S,3S)-3-azido-4-phenyl-2-butanol

E.e. $\geq 98\%$ (by GC analysis of esters obtained with (-)-(S)-O-acetylacetic acid chloride)

$[\alpha]_D^{25} = +4$ ($c = 0.02$, $CHCl_3$)

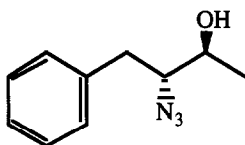
Source of chirality : Microbiological reduction

Absolute configuration : 2S, 3S

(assigned by chemical correlation)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry **1994**, *5*, 1727



$C_{10}H_{13}N_3O$
(2S,3R)-3-azido-4-phenyl-2-butanol

E.e. $\geq 98\%$ (by GC analysis of esters obtained with (-)-(S)-O-acetylacetic acid chloride)

$[\alpha]_D^{25} = +16$ ($c = 0.03$, $CHCl_3$)

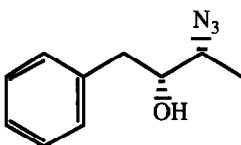
Source of chirality : Microbiological reduction

Absolute configuration : 2S, 3R

(assigned by chemical correlation)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry **1994**, *5*, 1727



$C_{10}H_{13}N_3O$
(2R,3R)-2-azido-4-phenyl-3-butanol

E.e. $\geq 98\%$ (by GC analysis of esters obtained with (-)-(S)-O-acetylacetic acid chloride)

$[\alpha]_D^{25} = -45$ ($c = 0.04$, $CHCl_3$)

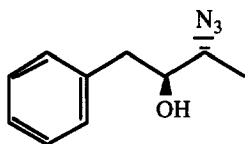
Source of chirality : from a precursor obtained by microbiological reduction

Absolute configuration : 2R, 3R

(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry **1994**, *5*, 1727



$C_{10}H_{13}N_3O$
(2R,3S)-2-azido-4-phenyl-3-butanol

E.e. $\geq 98\%$ (by GC analysis of esters obtained with (-)-(S)-O-acetylacetic acid chloride)

$[\alpha]_D^{25} = -61$ ($c = 0.03$, $CHCl_3$)

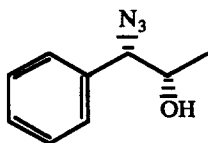
Source of chirality : from a precursor obtained by microbiological reduction

Absolute configuration : 2R, 3S

(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_9H_{11}N_3O$
(1S,2S)-1-azido-1-phenyl-2-propanol

E.e. $\geq 98\%$ (by GC analysis with chiral column : Lipodex E)

$[\alpha]_D^{25} = +250$ (c = 0.04, $CHCl_3$)

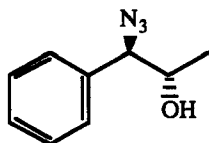
Source of chirality : Microbiological reduction

Absolute configuration : 1S,2S

(assigned by chemical reduction)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_9H_{11}N_3O$
(1R,2S)-1-azido-1-phenyl-2-propanol

E.e. $\geq 98\%$ (by GC analysis with chiral column : Lipodex E)

$[\alpha]_D^{25} = -206$ (c = 0.04, $CHCl_3$)

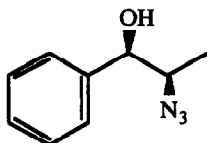
Source of chirality : Microbiological reduction

Absolute configuration : 1R,2S

(assigned by chemical reduction)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_9H_{11}N_3O$
(1R,2R)-2-azido-1-phenyl-1-propanol

E.e. $\geq 98\%$ (by GC analysis with chiral column : Lipodex E)

$[\alpha]_D^{25} = -140$ (c = 0.03, $CHCl_3$)

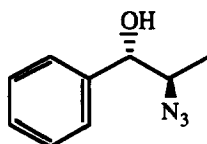
Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 1R,2R

(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_9H_{11}N_3O$
(1S,2R)-2-azido-1-phenyl-1-propanol

E.e. $\geq 98\%$ (by GC analysis with chiral column : Lipodex E)

$[\alpha]_D^{25} = -50$ (c = 0.01, $CHCl_3$)

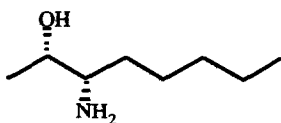
Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 1S,2R

(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_8H_{19}NO$
(2S,3S)-3-amino-2-octanol

E.e. = 97 %

$[\alpha]_D^{25} = -11$ (c = 0.03, $CHCl_3$)

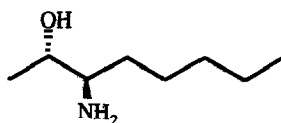
Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 2S,3S

(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_8H_{19}NO$
(2S,3R)-3-amino-2-octanol

E.e. \geq 98 %

$[\alpha]_D^{25} = +3$ (c = 0.03, $CHCl_3$)

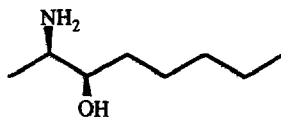
Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 2S,3R

(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_8H_{19}NO$
(2R,3R)-2-amino-3-octanol

E.e. \geq 98 %

$[\alpha]_D^{25} = +14$ (c = 0.04, $CHCl_3$)

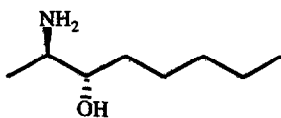
Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 2R,3R

(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_8H_{19}NO$
(2R,3S)-2-amino-3-octanol

E.e. \geq 98 %

$[\alpha]_D^{25} = -146$ (c = 0.05, $CHCl_3$)

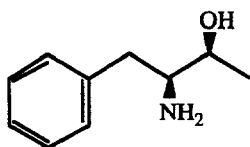
Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 2R,3S

(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_{10}H_{15}NO$
(2S,3S)-3-amino-4-phenyl-2-butanol

E.e. \geq 98 %

$[\alpha]_D^{25} = -27$ (c = 0.03, $CHCl_3$)

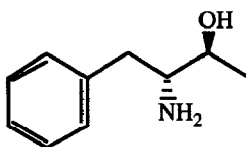
Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 2S,3S

(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_{10}H_{15}NO$
(2S,3R)-3-amino-4-phenyl-2-butanol

E.e. \geq 98 %

$[\alpha]_D^{25} = +35$ (c = 0.03, $CHCl_3$)

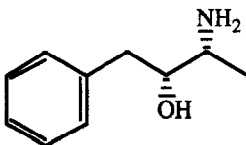
Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 2S,3R

(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_{10}H_{15}NO$
(2R,3R)-2-amino-4-phenyl-3-butanol

E.e. \geq 98 %

$[\alpha]_D^{25} = +27$ (c = 0.03, $CHCl_3$)

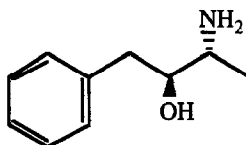
Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 2R,3R

(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_{10}H_{15}NO$
(2R,3S)-2-amino-4-phenyl-3-butanol

E.e. \geq 98 %

$[\alpha]_D^{25} = -31$ (c = 0.03, $CHCl_3$)

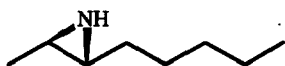
Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 2R,3S

(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_8H_{17}N$
(2R,3S)-2-methyl-3-n-pentylaziridine

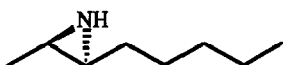
E.e. = 97 % (by GC analysis with chiral column : Lipodex E)
 $[\alpha]_D^{25} = +1$ (c = 0.03, Pentane)

Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 2R,3S
(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_8H_{17}N$
(2R,3R)-2-methyl-3-n-pentylaziridine

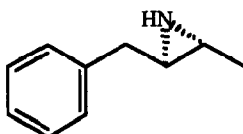
E.e. \geq 98 % (by GC analysis with chiral column : Lipodex E)
 $[\alpha]_D^{25} = +57$ (c = 0.03, Pentane)

Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 2R,3R
(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



$C_{10}H_{15}N$
(2R,3S)-2-methyl-3-benzylaziridine

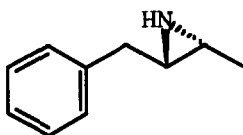
E.e. \geq 98 %
 $[\alpha]_D^{25} = -18$ (c = 0.03, Pentane)

Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 2R,3S
(assigned based on the reaction mechanism)

P. Besse, H. Veschambre, R. Chênevert and M. Dickman

Tetrahedron: Asymmetry 1994, 5, 1727



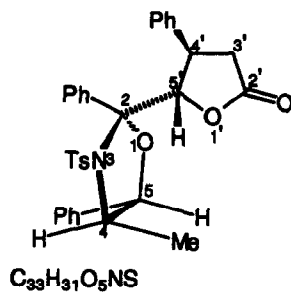
$C_{10}H_{15}N$
(2R,3R)-2-methyl-3-benzylaziridine

E.e. \geq 98 %
 $[\alpha]_D^{25} = +64$ (c = 0.04, Pentane)

Source of chirality : from a precursor obtained by
microbiological reduction

Absolute configuration : 2R,3R
(assigned based on the reaction mechanism)

A. Pelter, R. S. Ward and A. K. Sirt



D.e. 100% by n.m.r.

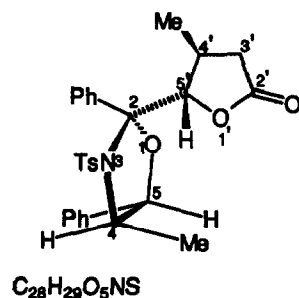
Source of chirality : synthesis from (-)-norpseudoephedrine

Absolute configuration : 2*R*,4*R*,5*R*,4'*R*,5'*S*

(assignment based on n.m.r.data and structure of precursor)

$[\alpha]_D^{20} = +19.53$ (c = 0.998, $CHCl_3$)

A. Pelter, R. S. Ward and A. K. Sirt



D.e. 100% by n.m.r.

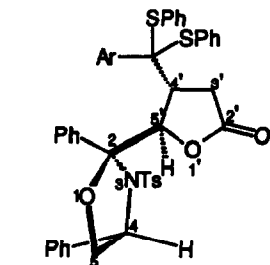
Source of chirality : synthesis from (-)-norpseudoephedrine

Absolute configuration : 2*R*,4*R*,5*R*,4'*S*,5'*S*

(assignment based on n.m.r.data and structure of precursor)

$[\alpha]_D^{20} = -5.41$ (c = 0.998, $CHCl_3$)

A. Pelter, R. S. Ward and A. K. Sirt



D.e. 100% by n.m.r.

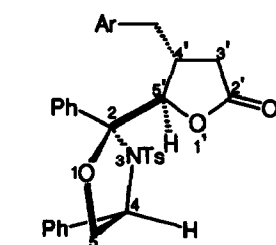
Source of chirality : synthesis from (-)-phenylglycinol

Absolute configuration : 2*S*,4*R*,4'*R*,5'*R*

(assignment based on n.m.r.data and structure of precursor)

$[\alpha]_D^{20} = -8.45$ (c = 0.604, $CHCl_3$)

A. Pelter, R. S. Ward and A. K. Sirt



D.e. 100% by n.m.r.

Source of chirality : synthesis from (-)-phenylglycinol

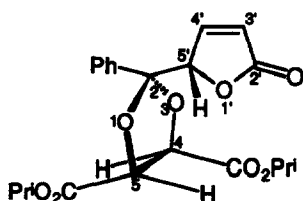
Absolute configuration : 2*S*,4*R*,4'*S*,5'*R*

(assignment based on n.m.r.data and structure of precursor)

$[\alpha]_D^{20} = -13.62$ (c = 0.756, $CHCl_3$)

A. Pelter, R. S. Ward and A. K. Sirt

Tetrahedron: Asymmetry 1994, 5, 1745



C₂₁H₂₄O₈

D.e. 100% by n.m.r.

Source of chirality : synthesis from L-diisopropyl tartrate

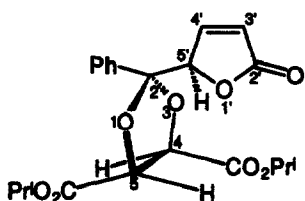
Absolute configuration : 4*R*,5*R*,5'*S*

(assignment based on n.m.r.data and NOe measurements)

[α]_D²⁰ = -63.4 (c = 0.858, CHCl₃)

A. Pelter, R. S. Ward and A. K. Sirt

Tetrahedron: Asymmetry 1994, 5, 1745



C₂₁H₂₄O₈

D.e. 100% by n.m.r.

Source of chirality : synthesis from L-diisopropyl tartrate

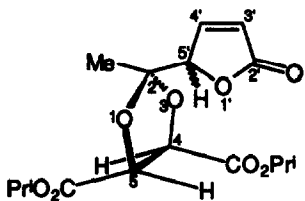
Absolute configuration : 4*R*,5*R*,5'*R*

(assignment based on n.m.r.data and NOe measurements)

[α]_D²⁰ = +55.8 (c = 0.634, CHCl₃)

A. Pelter, R. S. Ward and A. K. Sirt

Tetrahedron: Asymmetry 1994, 5, 1745



C₁₆H₂₂O₈

D.e. 14% by n.m.r.

Source of chirality : synthesis from L-diisopropyl tartrate

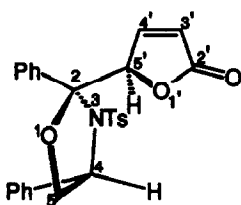
Absolute configuration : 4*R*,5*R*,5'*RS*

(assignment based on n.m.r.data and structure of precursor)

M.p. 68-70°C

A. Pelter, R. S. Ward and A. K. Sirt

Tetrahedron: Asymmetry 1994, 5, 1745



C₂₈H₂₃O₅NS

D.e. 100% by n.m.r.

Source of chirality : synthesis from (-)-phenylglycinol

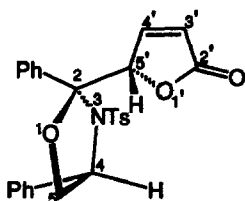
Absolute configuration : 2*S*,4*R*,5'*R*

(assignment based on n.m.r. and X-ray data)

[α]_D²⁰ = -12.7 (c = 1.018, CHCl₃)

A. Pelter, R. S. Ward and A. K. Sirt

Tetrahedron: Asymmetry 1994, 5, 1745



$C_{26}H_{23}O_5NS$

D.e. 100% by n.m.r.

Source of chirality : synthesis from (-)-phenylglycinol

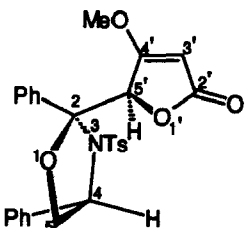
Absolute configuration : 2*S*,4*R*,5'*S*

(assignment based on n.m.r.data and NOe measurements)

$[\alpha]_D^{20} = -102.9$ (c = 1.02, $CHCl_3$)

A. Pelter, R. S. Ward and A. K. Sirt

Tetrahedron: Asymmetry 1994, 5, 1745



$C_{27}H_{25}O_6NS$

D.e. 100% by n.m.r.

Source of chirality : synthesis from (-)-phenylglycinol

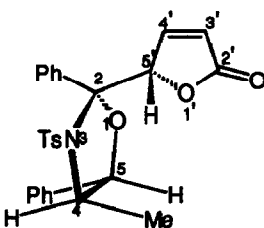
Absolute configuration : 2*R*,4*R*,5'*S*

(assignment based on n.m.r.data and NOe measurements)

$[\alpha]_D^{20} = -23.95$ (c = 1.002, $CHCl_3$)

A. Pelter, R. S. Ward and A. K. Sirt

Tetrahedron: Asymmetry 1994, 5, 1745



$C_{27}H_{25}O_5NS$

D.e. 100% by n.m.r.

Source of chirality : synthesis from (-)-norpseudoephedrine

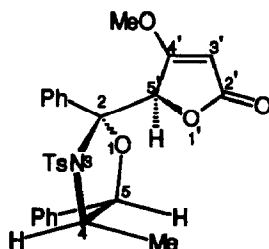
Absolute configuration : 2*R*,4*R*,5*R*,5'*S*

(assignment based on n.m.r. and X-ray data)

$[\alpha]_D^{20} = -129.3$ (c = 1.03, $CHCl_3$)

A. Pelter, R. S. Ward and A. K. Sirt

Tetrahedron: Asymmetry 1994, 5, 1745



$C_{28}H_{27}O_6NS$

D.e. 100% by n.m.r.

Source of chirality : synthesis from (-)-norpseudoephedrine

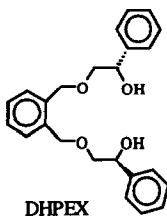
Absolute configuration : 2*R*,4*R*,5*R*,5'*R*

(assignment based on n.m.r.data and NOe measurements)

$[\alpha]_D^{20} = -93.62$ (c = 0.998, $CHCl_3$)

Seiji Takeuchi,* Akiko Ohira, Norikazu Miyoshi,
Hajime Mashio, and Yoshiaki Ohgo

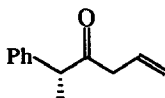
Tetrahedron: Asymmetry 1994, 5, 1763



M.p. 58.0-59.0 °C
[α]_D²² -87.0 (c 1.06, CHCl₃)
E.e.=100% (by HPLC using CHIRALCEL OJ column)
Source of chirality: (S)-mandelic acid
Absolute configuration: (S,S)

Seiji Takeuchi,* Akiko Ohira, Norikazu Miyoshi,
Hajime Mashio, and Yoshiaki Ohgo

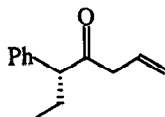
Tetrahedron: Asymmetry 1994, 5, 1763



[α]_D²⁰ -283 (c 0.57, toluene)
E.e.=91% (by HPLC using CHIRALCEL OB' column)
Source of chirality: enantioselective protonation
Absolute configuration: R (already reported)

Seiji Takeuchi,* Akiko Ohira, Norikazu Miyoshi,
Hajime Mashio, and Yoshiaki Ohgo

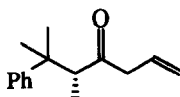
Tetrahedron: Asymmetry 1994, 5, 1763



[α]_D¹⁷ -287 (c 0.35, toluene)
E.e.=84% (by HPLC using CHIRALCEL OB' column)
Source of chirality: enantioselective protonation
Absolute configuration: R (already reported)

Seiji Takeuchi,* Akiko Ohira, Norikazu Miyoshi,
Hajime Mashio, and Yoshiaki Ohgo

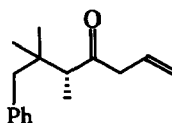
Tetrahedron: Asymmetry 1994, 5, 1763



[α]_D²⁰ -194 (c 0.76, toluene)
E.e.=97% (by HPLC using CHIRALCEL OD column)
Source of chirality: enantioselective protonation
Absolute configuration: R (determined by modified Mosher method)

Seiji Takeuchi,* Akiko Ohira, Norikazu Miyoshi,
Hajime Mashio, and Yoshiaki Ohgo

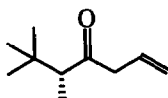
Tetrahedron: Asymmetry 1994, 5, 1763



$[\alpha]_D^{19}$ -107 (c 0.57, toluene)
E.e.=94% (by HPLC using CHIRALCEL OD column)
Source of chirality: enantioselective protonation
Absolute configuration: R (deduced from specific rotation,
CD spectrum and ¹H NMR spectrum using Eu(hfc)₃)

Seiji Takeuchi,* Akiko Ohira, Norikazu Miyoshi,
Hajime Mashio, and Yoshiaki Ohgo

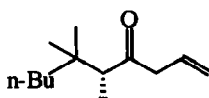
Tetrahedron: Asymmetry 1994, 5, 1763



$[\alpha]_D^{23}$ -386 (c 1.35, toluene)
E.e.=93% (by ¹H NMR using Eu(hfc)₃)
Source of chirality: enantioselective protonation
Absolute configuration: R (deduced from specific rotation,
CD spectrum and ¹H NMR spectrum using Eu(hfc)₃)

Seiji Takeuchi,* Akiko Ohira, Norikazu Miyoshi,
Hajime Mashio, and Yoshiaki Ohgo

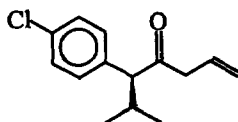
Tetrahedron: Asymmetry 1994, 5, 1763



$[\alpha]_D^{19}$ -118 (c 0.83, toluene)
E.e.=91% (by ¹H NMR using Eu(hfc)₃)
Source of chirality: enantioselective protonation
Absolute configuration: R (determined by modified Mosher
method)

Seiji Takeuchi,* Akiko Ohira, Norikazu Miyoshi,
Hajime Mashio, and Yoshiaki Ohgo

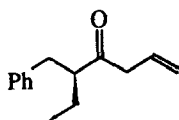
Tetrahedron: Asymmetry 1994, 5, 1763



$[\alpha]_D^{24}$ +210 (c 0.51, toluene)
E.e.=85% (by ¹H NMR using Eu(hfc)₃)
Source of chirality: enantioselective protonation
Absolute configuration: S (deduced from specific rotation,
CD spectrum and ¹H NMR spectrum using Eu(hfc)₃)

Seiji Takeuchi,* Akiko Ohira, Norikazu Miyoshi,
Hajime Mashio, and Yoshiaki Ohgo

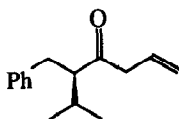
Tetrahedron: Asymmetry **1994**, 5, 1763



$[\alpha]_D^{24} +23.0$ (c 0.61, toluene)
E.e.=29% (by HPLC using CHIRALCEL OB' column)
Source of chirality: enantioselective protonation
Absolute configuration: S (deduced from specific rotation,
CD spectrum and ^1H NMR spectrum using $\text{Eu}(\text{hfc})_3$)

Seiji Takeuchi,* Akiko Ohira, Norikazu Miyoshi,
Hajime Mashio, and Yoshiaki Ohgo

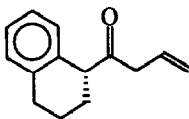
Tetrahedron: Asymmetry **1994**, 5, 1763



$[\alpha]_D^{23} +46.5$ (c 1.22, toluene)
E.e.=68% (by ^1H NMR using $\text{Eu}(\text{hfc})_3$)
Source of chirality: enantioselective protonation
Absolute configuration: S (deduced from specific rotation,
and ^1H NMR spectrum using $\text{Eu}(\text{hfc})_3$)

Seiji Takeuchi,* Akiko Ohira, Norikazu Miyoshi,
Hajime Mashio, and Yoshiaki Ohgo

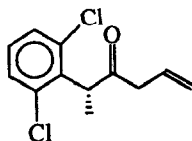
Tetrahedron: Asymmetry **1994**, 5, 1763



$[\alpha]_D^{15} -31.0$ (c 1.67, toluene)
E.e.=48% (by HPLC using CHIRALCEL OD column)
Source of chirality: enantioselective protonation
Absolute configuration: R (deduced from specific rotation,
CD spectrum and ^1H NMR spectrum using $\text{Eu}(\text{hfc})_3$)

Seiji Takeuchi,* Akiko Ohira, Norikazu Miyoshi,
Hajime Mashio, and Yoshiaki Ohgo

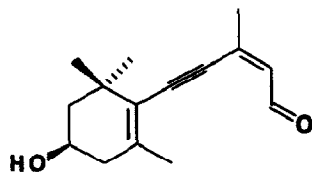
Tetrahedron: Asymmetry **1994**, 5, 1763



$[\alpha]_D^{19} -111$ (c 0.80, toluene)
E.e.=62% (by HPLC using CHIRALCEL OB' column)
Source of chirality: enantioselective protonation
Absolute configuration: R (deduced from specific rotation,
CD spectrum and ^1H NMR spectrum using $\text{Eu}(\text{hfc})_3$)

J.A. Haugan and S. Liaaen-Jensen

Tetrahedron: Asymmetry 1994, 5, 1781



$C_{15}H_{20}O_2$

$[\alpha]_D^{20} = 88.4$ ($c = 0.0172$, MeOH)

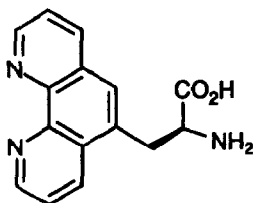
UV, IR, MS, 1H NMR

Source of chirality: Synthesis
from chiral synthon

2-Z-5-((4'*R*)-4'-hydroxy-2',6',6'-trimethylcyclohex-1'-enyl)-3-methyl-2-penten-4-yn-1-al.

G. Y. Krippner and M. M. Harding

Tetrahedron: Asymmetry 1994, 5, 1793



$C_{12}H_{12}N_2O_2$

2-Amino-3-(5'-(1',10'-phenanthrolyl))propionic acid

E.e = 98%

(1H nmr of (*R*)-*O*-acetylmandelic amide)

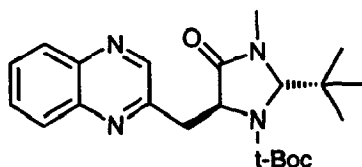
$[\alpha]_D^{22} = +13$ (c 0.5, 1N HCl)

Source of chirality: asymm. synth.

Absolute configuration 2S

G. Y. Krippner and M. M. Harding

Tetrahedron: Asymmetry 1994, 5, 1793



$C_{22}H_{30}N_4O_3$

5-(2'-quinoxolylmethyl)-2-*t*-butyl-1-*t*-butylloxycarbonyl-3-methyl-4-imidazolidinone

E.e = 98%

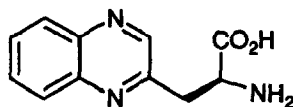
$[\alpha]_D^{22} = +72$ (c 1, CH_2Cl_2)

Source of chirality: asymm. synth.

Absolute configuration 2S,5S

G. Y. Krippner and M. M. Harding

Tetrahedron: Asymmetry 1994, 5, 1793



$C_{11}H_{11}N_3O_2$

2-Amino-3-(2'-quinoxolyl)propionic acid

E.e = 98%

(1H nmr of (*R*)-*O*-acetylmandelic amide)

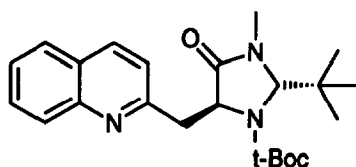
$[\alpha]_D^{22} = +14$ (c 0.5, 0.1N NH_3)

Source of chirality: asymm. synth.

Absolute configuration 2S

G. Y. Krippner and M. M. Harding

Tetrahedron: Asymmetry 1994, 5, 1793



E.e = 98%

$[\alpha]_{\text{D}}^{22} = +84$ (c 1, CH₂Cl₂)

Source of chirality: asymm. synth.

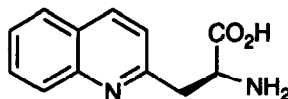
Absolute configuration 2S,5S

C₂₃H₃₁N₃O₃

5-(2'-quinolylmethyl)-2-t-butyl-1-t-butylloxycarbonyl-3-methyl-4-imidazolidinone

G. Y. Krippner and M. M. Harding

Tetrahedron: Asymmetry 1994, 5, 1793



E.e = 98%

(¹H nmr of (R)-O-acetylmandelic amide)

$[\alpha]_{\text{D}}^{22} = +40$ (c 1, 1N HCl)

Source of chirality: asymm. synth.

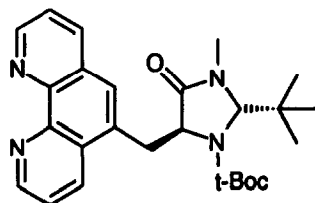
Absolute configuration 2S,5S

C₁₂H₁₂N₂O₂

2-Amino-3-(2'-quinolyl)propionic acid

G. Y. Krippner and M. M. Harding

Tetrahedron: Asymmetry 1994, 5, 1793



E.e = 98%

$[\alpha]_{\text{D}}^{22} = -16$ (c 1, CH₂Cl₂)

Source of chirality: asymm. synth.

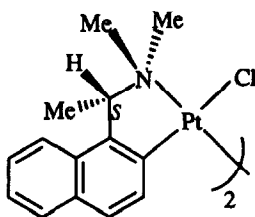
Absolute configuration 2S,5S

C₂₆H₃₂N₄O₃

5-(5'-1'10'-phenanthrolylmethyl)-2-t-butyl-1-t-butylloxycarbonyl-3-methyl-4-imidazolidinone

Simon Y.M. Chooi, John D. Ranford, Pak-Hing Leung and K.F. Mok

Tetrahedron: Asymmetry 1994, 5, 1805



C₂₈H₃₂Cl₂N₂Pt₂

$[\alpha]_{\text{D}}^{25} = +61.5$ (c 1.0, CH₂Cl₂)

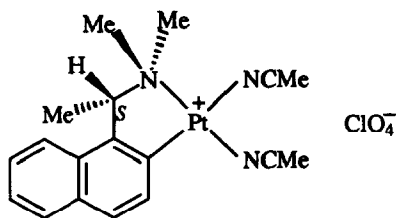
Source of chirality: (S)-(-)-1-(1-naphthyl)ethylamine

Absolute configuration: S

Bis(μ -chloro)bis[(S)-1-[1-(dimethylamino)ethyl]-2-naphthalenyl-C,N]diplatinum(II)

Simon Y.M. Chooi, John D. Ranford, Pak-Hing Leung and K.F. Mok

Tetrahedron: Asymmetry 1994, 5, 1805



$C_{18}H_{22}ClN_3O_4Pt$

$[\alpha]_D^{25} = +32.6$ (c 1.0, CH_2Cl_2)

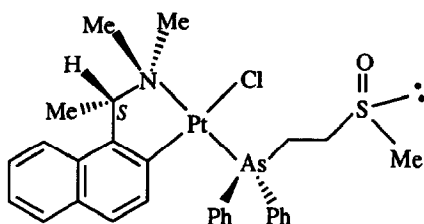
Source of chirality: (S)-(-)-1-(1-naphthyl)ethylamine

Absolute configuration: S

Bis(acetonitrile)[1-[1-(dimethylamino)ethyl]-2-naphthalenyl-C,N]platinum(II) perchlorate

Simon Y.M. Chooi, John D. Ranford, Pak-Hing Leung and K.F. Mok

Tetrahedron: Asymmetry 1994, 5, 1805



$C_{29}H_{33}AsClNOPtS$

$[\alpha]_D^{25} = -13.3$ (c 1.0, CH_2Cl_2)

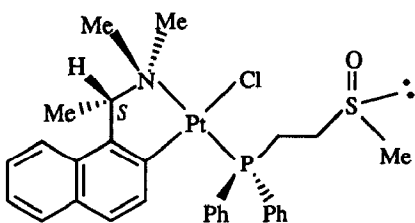
Source of chirality: (S)-(-)-1-(1-naphthyl)ethylamine

Absolute configuration: S_C, R_S and S_C, S_S

Chloro[1-[1-(dimethylamino)ethyl]-2-naphthalenyl-C,N][2-(methylsulfinyl)ethyl]diphenylarsine-As]platinum(II)

Simon Y.M. Chooi, John D. Ranford, Pak-Hing Leung and K.F. Mok

Tetrahedron: Asymmetry 1994, 5, 1805



$C_{29}H_{33}ClNOPtS$

$[\alpha]_D^{25} = -31.6$ (c 1.0, CH_2Cl_2)

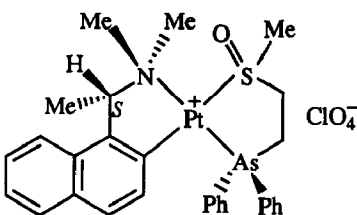
Source of chirality: (S)-(-)-1-(1-naphthyl)ethylamine

Absolute configuration: S_C, R_S and S_C, S_S

Chloro[1-[1-(dimethylamino)ethyl]-2-naphthalenyl-C,N][2-(methylsulfinyl)ethyl]diphenylphosphine-P]platinum(II)

Simon Y.M. Chooi, John D. Ranford, Pak-Hing Leung and K.F. Mok

Tetrahedron: Asymmetry 1994, 5, 1805



$C_{29}H_{33}AsClNO_5PtS$

$[\alpha]_D^{25} = +16.5$ (c 1.0, CH_2Cl_2)

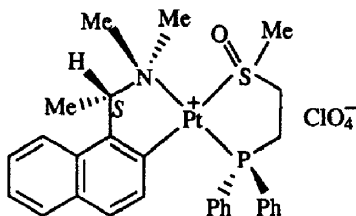
Source of chirality: (S)-(-)-1-(1-naphthyl)ethylamine

Absolute configuration: S_C, R_S and S_C, S_S

[1-[1-(Dimethylamino)ethyl]-2-naphthalenyl-C,N][2-(methylsulfinyl)ethyl]diphenylarsine-As,S]platinum(II) perchlorate

Simon Y.M. Chooi, John D. Ranford, Pak-Hing Leung and K.F. Mok

Tetrahedron: Asymmetry 1994, 5, 1805



$C_{29}H_{33}ClNO_5P_2S$

$[\alpha]_D^{25} = +15.2$ (c 1.0, CH_2Cl_2)

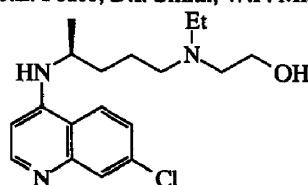
Source of chirality: (*S*)-(-)-1-(1-naphthyl)ethylamine

Absolute configuration: S_C, R_S and S_C, S_S

[1-[1-(Dimethylamino)ethyl]-2-naphthalenyl-*C,M*][[2-(methylsulfinyl)ethyl]diphenylphosphine-*P,S*]platinum(II) perchlorate

P.M. Blaney, S.J. Byard, G. Carr, G.J. Ellames, J.M. Herbert, J.E. Peace, D.I. Smith, W.F. Michne and M.S. Sanner

Tetrahedron: Asymmetry 1994, 5, 1815



$C_{18}H_{26}ClN_3O$
Hydroxychloroquine

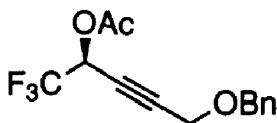
e.e. > 98% by chiral HPLC

$[\alpha]_D^{20} = +86.5$ (c 0.95, H_2O)
as bis(dihydrogenphosphate)

Absolute Configuration: *S*

T. Yamazaki, H. Iwatsubo, and T. Kitazume

Tetrahedron: Asymmetry 1994, 5, 1823



$C_{14}H_{13}F_3O_3$

(*2S*)-2-Acetoxy-5-benzyloxy-1,1,1-trifluoropent-3-yne

E.e. = 97% [by 1H NMR analysis of its MTPA ester after hydrolysis]

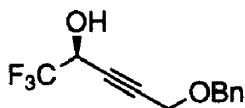
$[\alpha]_D^{17} +89.47$ (c 1.12, $CHCl_3$)

Absolute configuration : *S* [chemical correlation to the material independently prepared from the reported optically active compound]

Source of Chirality : Enzymatic optical resolution

T. Yamazaki, H. Iwatsubo, and T. Kitazume

Tetrahedron: Asymmetry 1994, 5, 1823



$C_{12}H_{11}F_3O_2$

(*2S*)-5-Benzyloxy-1,1,1-trifluoropent-3-yn-2-ol

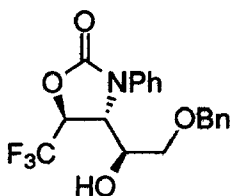
E.e. = 97%

$[\alpha]_D^{20} -4.27$ (c 1.30, $CHCl_3$)

Absolute configuration : *S* [hydrolyzed material of the acetate obtained by enzymatic optical resolution]

T. Yamazaki, H. Iwatsubo, and T. Kitazume

Tetrahedron: Asymmetry 1994, 5, 1823



E.e. = 97%

$[\alpha]_D^{16} -17.56$ (c 0.68, CHCl₃)

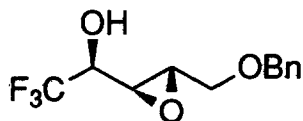
Absolute configuration : 1'S,4R,5S [deduced from ¹H NMR coupling constants as well as MM2 calculation]

C₁₉H₁₈F₃NO₄

(1'S,4R,5S)-4-[2'-(benzyloxy)-1'-hydroxyethyl]-5-trifluoromethyl-3-phenyloxazolidin-2-one

T. Yamazaki, H. Iwatsubo, and T. Kitazume

Tetrahedron: Asymmetry 1994, 5, 1823



E.e. = 97%

$[\alpha]_D^{17} -27.38$ (c 1.58, CHCl₃)

Absolute configuration : 2S,3S,4R [from mechanistic consideration]

C₁₂H₁₃F₃O₃

(2S,3S,4R)-5-benzyloxy-3,4-epoxy-1,1,1-trifluoropentane-2-ol

Pierre Riviere, Antony Mauvais and Ekkehard Winterfeldt*

Tetrahedron: Asymmetry 1994, 5, 1831



Ee > 98% by nmr with Eu(hfc)₃

$[\alpha]_D^{25} = +30.6$ (c=0.162, toluene)

Source of chirality: Diene 1

Absolute configuration: 4R

(4R)-4-butyl-4-methyl-2-cyclopenten-1-one

Pierre Riviere, Antony Mauvais and Ekkehard Winterfeldt*

Tetrahedron: Asymmetry 1994, 5, 1831



Ee > 98% by nmr with Eu(hfc)₃

$[\alpha]_D^{25} = +72.5$ (c=0.180, toluene)

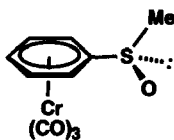
Source of chirality: Diene 1

Absolute configuration: 4R

(4R)-4-methyl-4-phenyl-2-cyclopenten-1-one

S.L. Griffiths, S. Perrio and S.E. Thomas*

Tetrahedron: Asymmetry 1994, 5, 1847



tricarbonyl[η^6 -(methylsulfinyl)benzene]chromium(0)

E.e. = $\geq 95\%$

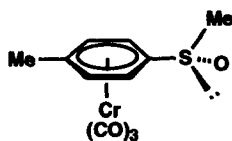
$[\alpha]_D^{25} = -208$ (c 1, acetone)

Source of chirality: asymmetric oxidation [diethyl L-(+)-tartrate]

Absolute configuration: *R*

S.L. Griffiths, S. Perrio and S.E. Thomas*

Tetrahedron: Asymmetry 1994, 5, 1847



tricarbonyl[η^6 -1-methyl-4-(methylsulfinyl)benzene]chromium(0)

E.e. = $\geq 95\%$

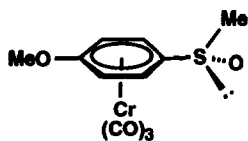
$[\alpha]_D^{25} = +179$ (c 1, acetone)

Source of chirality: asymmetric oxidation [diethyl D-(-)-tartrate]

Absolute configuration: *S*

S.L. Griffiths, S. Perrio and S.E. Thomas*

Tetrahedron: Asymmetry 1994, 5, 1847



tricarbonyl[η^6 -1-methoxy-4-(methylsulfinyl)benzene]chromium(0)

E.e. = $\geq 95\%$

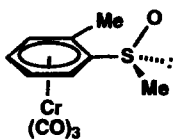
$[\alpha]_D^{25} = +147$ (c 1, acetone)

Source of chirality: asymmetric oxidation [diethyl D-(-)-tartrate]

Absolute configuration: *S*

S.L. Griffiths, S. Perrio and S.E. Thomas*

Tetrahedron: Asymmetry 1994, 5, 1847



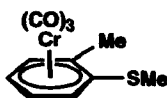
tricarbonyl[η^6 -1-methyl-2-(methylsulfinyl)benzene]chromium(0)

E.e. = 60%

$[\alpha]_D^{25} = -175$ (c 0.095, absolute EtOH)

Source of chirality: asymmetric oxidation [diethyl L-(+)-tartrate]

Absolute configuration: 1*S*, 2*S*



E.e. = 59%

$[\alpha]_D^{25} = +150$ (c 0.09, absolute EtOH)

Source of chirality: asymmetric oxidation [diethyl L-(+)-tartrate]

Absolute configuration: 1*R*

$C_{11}H_{10}CrO_3S$

tricarbonyl[η^6 -1-methyl-2-(methylthio)benzene]chromium(0)