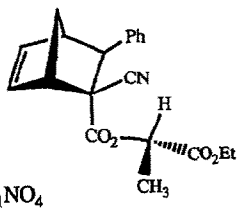
A. Avenoza, C. Cativiela, J. A. Mayoral, J. M. Peregrina, D. Sinou.

Tetrahedron: Asymmetry **1990**, *1*, 765



$C_{20}H_{21}NO_4$

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

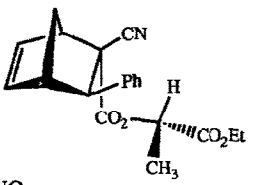
(assigned by mechanistic considerations)

$[\alpha]_D^{20}$ (c = 2.34 · 10^{-2} g/ml, CH_2Cl_2) = − 63.5 ± 0.2

(1S, 2R, 3S, 4R)-2-cyano-3-phenylbicyclo[2.2.1]hept-5-ene-2-carboxylate of (S)-ethyl lactate

A. Avenoza, C. Cativiela, J. A. Mayoral, J. M. Peregrina, D. Sinou.

Tetrahedron: Asymmetry **1990**, *1*, 765



$C_{20}H_{21}NO_4$

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

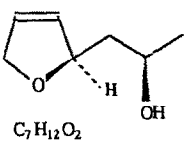
(assigned by mechanistic considerations)

$[\alpha]_D^{25}$ (c = 2.00 · 10^{-2} g/ml, $CHCl_3$) = + 23.2 ± 0.2

(1R, 2S, 3R, 4S)-2-cyano-3-phenylbicyclo[2.2.1]hept-5-ene-2-carboxylate of (S)-ethyl lactate

R. Bloch and M. Seck

Tetrahedron: Asymmetry **1990**, *1*, 855



$C_7H_{12}O_2$

2-(2'-Hydroxypropyl)-2,5-dihydrofuran

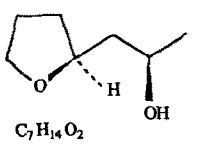
$[\alpha]_D^{25}$ = -95 (c 1.7, MeOH)

Source of chirality : from a precursor obtained by enzymatic hydrolysis.

Absolute configuration : 2R,2'R

R. Bloch and M. Seck

Tetrahedron: Asymmetry **1990**, *1*, 855



$C_7H_{14}O_2$

2-(2'-Hydroxypropyl)-tetrahydrofuran

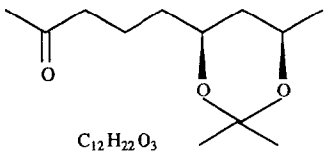
$[\alpha]_D^{25}$ = -11.6 (c 1.2, MeOH)

Source of chirality : from a precursor obtained by enzymatic hydrolysis.

Absolute configuration : 2R,2'S

R. Bloch and M. Seck

Tetrahedron: Asymmetry **1990**, *1*, 855



$C_{12}H_{22}O_3$

6,8-isopropylidenedioxy-2-nonanone

E.e.> 95% (by NMR with $Eu(hfc)_3$)

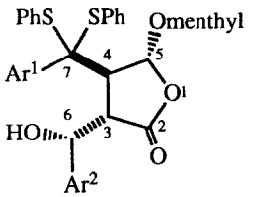
$[\alpha]_D^{25}$ = -11.7 (c 1.5, MeOH)

Source of chirality : from a precursor obtained by enzymatic hydrolysis.

Absolute configuration : 6S,8R

A. Pelter, R. S. Ward, D. M. Jones and P. Maddocks

Tetrahedron: Asymmetry **1990**, *1*, 857

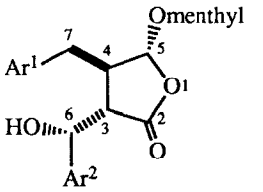


$C_{43}H_{48}S_2O_8$

Ar^1 = 3,4-dimethoxyphenyl,Ar^2 = 3,4-methylenedioxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3S,4R,5R,6R
(assigned by correlation with, and X-ray analysis of, related thioether adduct)

A. Pelter, R. S. Ward, D. M. Jones and P. Maddocks

Tetrahedron: Asymmetry **1990**, *1*, 857

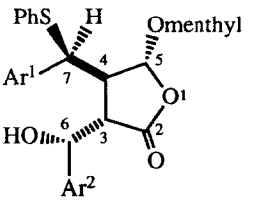


$C_{31}H_{40}O_8$

Ar^1 = 3,4-dimethoxyphenyl,Ar^2 = 3,4-methylenedioxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3S,4R,5R,6R
(assigned by correlation with, and X-ray analysis of, related thioether adduct)

A. Pelter, R. S. Ward, D. M. Jones and P. Maddocks

Tetrahedron: Asymmetry **1990**, *1*, 857

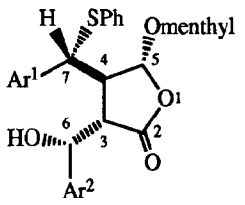


$C_{37}H_{44}SO_8$

Ar^1 = 3,4-dimethoxyphenyl,Ar^2 = 3,4-methylenedioxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3S,4R,5R,6R,7S
(assigned by correlation with, and X-ray analysis of, stereoisomer)

A. Pelter, R. S. Ward, D. M. Jones and P. Maddocks

Tetrahedron: Asymmetry **1990**, *1*, 857

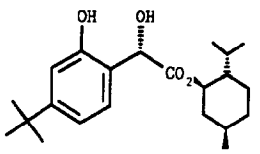


$C_{37}H_{44}SO_8$

Ar^1 = 3,4-dimethoxyphenyl, Ar^2 = 3,4-methylenedioxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3S,4R,5R,6R,7R
(assigned by X-ray analysis)

F. Bigi, G. Casnati, G. Sartori, C. Dalprato, R. Bortolini

Tetrahedron: Asymmetry **1990**, *1*, 861



$[\alpha]_D^{25}$ = -24.9 (c = 0.4, CH_2Cl_2)
Source of chirality: diastereoselective alkylation with (-)-menthyl glyoxylate
Absolute configuration: S (assigned by nmr)

$C_{22}H_{34}O_4$

(2S)-2-Hydroxy-2-(4-tert-butyl-2-hydroxyphenyl)-acetic acid (-)-menthylester

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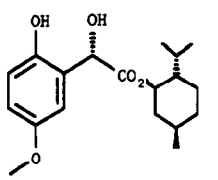
F. Bigi, G. Casnati, G. Sartori, C. Dalprato, R. Bortolini

Tetrahedron: Asymmetry **1990**, *1*, 861



$[\alpha]_D^{25}$ = -10.7 (c = 0.4, EtOH)
Source of chirality: diastereoselective alkylation with (-)-menthyl glyoxylate
Absolute configuration: S (assigned by nmr)

$C_{19}H_{28}O_5$

(2S)-2-Hydroxy-2-(5-methoxy-2-hydroxyphenyl)-acetic acid (-)-menthylester

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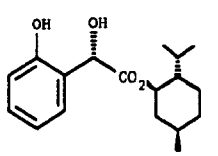
F. Bigi, G. Casnati, G. Sartori, C. Dalprato, R. Bortolini

Tetrahedron: Asymmetry **1990**, *1*, 861



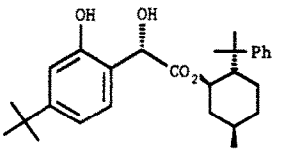
$[\alpha]_D^{25}$ = +4.5 (c = 0.8, EtOH)
Source of chirality: diastereoselective alkylation with (-)-menthyl glyoxylate
Absolute configuration: S (assigned by nmr)

$C_{18}H_{17}O_4$

(2S)-2-Hydroxy-2-(2-hydroxyphenyl)-acetic acid (-)-menthylester

F. Bigi, G. Casnati, G. Sartori, C. Dalprato, R. Bortolini

Tetrahedron: Asymmetry **1990**, *1*, 861



$[\alpha]_D^{25}$ = +19.2 (c = 0.8, EtOH)

Source of chirality: diastereoselective alkylation with (-)-8-phenylmenthyl glyoxylate

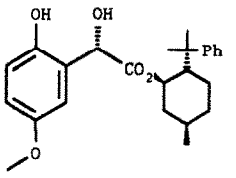
Absolute configuration: S (assigned by chemical correlation).

$C_{28}H_{38}O_4$

(2S)-2-Hydroxy-2-(4-tert-butyl-2-hydroxyphenyl)-acetic acid (-)-8-phenylmenthylester

F. Bigi, G. Casnati, G. Sartori, C. Dalprato, R. Bortolini

Tetrahedron: Asymmetry **1990**, *1*, 861



$[\alpha]_D^{25}$ = +16.5 (c = 0.3, EtOH)

Source of chirality: diastereoselective alkylation with (-)-8-phenylmenthyl glyoxylate

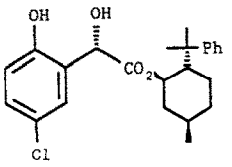
Absolute configuration: S (supposed on the basis of analogy with general method)

$C_{25}H_{32}O_5$

(2S)-2-Hydroxy-2-(5-methoxy-2-hydroxyphenyl)-acetic acid (-)-8-phenylmenthylester

F. Bigi, G. Casnati, G. Sartori, C. Dalprato, R. Bortolini

Tetrahedron: Asymmetry **1990**, *1*, 861



$[\alpha]_D^{25}$ = +26.5 (c = 0.4, EtOH)

Source of chirality: diastereoselective alkylation with (-)-8-phenylmenthyl glyoxylate

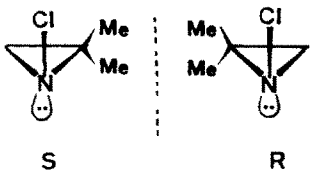
Absolute configuration: S (supposed on the basis of analogy with general method)

$C_{24}H_{29}ClO_4$

(2S)-2-Hydroxy-2-(5-chloro-2-hydroxyphenyl)-acetic acid (-)-8-phenylmenthylester

V. Schurig* and U. Leyrer

Tetrahedron: Asymmetry **1990**, *1*, 865



S R

C_4H_8ClN

E.e. > 99% (at 22°C)

(by complexation gas chromatography on nickel(II)-*bis*-[(2-heptafluorobutanoyl)-(*1S,5S*)-4-methylthujonate])

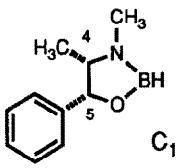
Absolute configuration of (+)-1-chloro-2.2-dimethylaziridine-*S*

(from elution order on nickel(II) *bis*[(3-heptafluorobutanoyl)-(*1R*)-camphorate])

Source of chirality: preparative enantiomer separation on nickel(II) *bis*[(3-heptafluorobutanoyl)-(*1R*)-camphorate]

Tetrahedron: Asymmetry **1990**, *1*, 869

J.M. Brown and G.Lloyd-Jones



$C_{10}H_{14}BNO$

4S,5R- 4-methyl-5-phenyl-oxazaborolidine.

E.e. = 100%

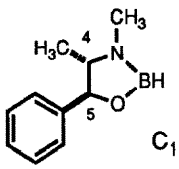
$[\alpha]_D^{20}$ = -108 (c=1, $CHCl_3$)

Source of chirality (1R,2S)- ephedrine

Absolute configuration 4S, 5R.

Tetrahedron: Asymmetry **1990**, *1*, 869

J.M. Brown and G.Lloyd-Jones



$C_{10}H_{14}BNO$

4S,5S- 4-methyl-5-phenyl-oxazaborolidine.

E.e. = 100%

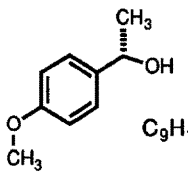
$[\alpha]_D^{20}$ = +59 (c=1, $CHCl_3$)

Source of chirality (1S,2S)- pseudoephedrine

Absolute configuration 4S, 5S.

Tetrahedron: Asymmetry **1990**, *1*, 869

J.M. Brown and G.Lloyd-Jones



$C_9H_{12}O$

1'S -1'-(4-methoxyphenyl)-ethanol.

E.e. = 76%

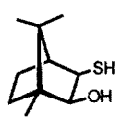
$[\alpha]_D^{19}$ = -39.1 (c=0.43, $CHCl_3$)

Source of chirality Catalytic hydroboration.

Absolute configuration 1S.

Tetrahedron: Asymmetry **1990**, *1*, 873

S.-M. Hung, D.-S. Lee, and T.-K. Yang*



1

$[\alpha]_D^{20}$ +5.09 (c 1.18, $CHCl_3$).

E.e. = 100% [prepared from optically pure 1R-(+)-camphor]

Source of chirality: natural (+)-camphor

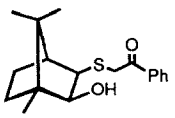
Absolute configuration: 2S, 3R

$C_{10}H_{18}OS$

MerCO, 3-Mercapto-2-camphanol (or 3-Mercapto-2-isoborneol)

S.-M. Hung, D.-S. Lee, and T.-K. Yang*

Tetrahedron: Asymmetry **1990,** *1*, 873



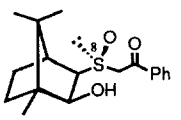
4

$[\alpha]_D^{20}$ +5.09 (c 1.18, $CHCl_3$).
E.e. = 100% [prepared from optically pure thiol 1]
Source of chirality: natural (+)-camphor
Absolute configuration: 2S, 3R

$C_{18}H_{24}O_2S$
3-(2-Oxo-2-phenylethyl)sulfenyl-2-camphanol

S.-M. Hung, D.-S. Lee, and T.-K. Yang*

Tetrahedron: Asymmetry **1990,** *1*, 873



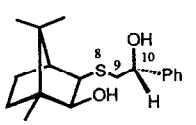
5

$[\alpha]_D^{20}$ +5.09 (c 1.18, $CHCl_3$).
E.e. ≥ 95% [by NMR analysis, compared with its 8R diastereomer]
Source of chirality: asymmetric oxidation of sulfide 4
Absolute configuration: 2S, 3R, 8S

$C_{18}H_{24}O_3S$
3-(2-Oxo-2-phenylethyl)sulfinyl-2-camphanol

S.-M. Hung, D.-S. Lee, and T.-K. Yang*

Tetrahedron: Asymmetry **1990,** *1*, 873



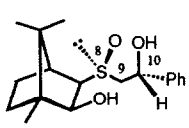
6a

$[\alpha]_D^{18}$ –11.60 (*c* 2.57, $CHCl_3$).
E.e. ≥ 95% [by NMR analysis, compared with its 9S diastereomer 6b]
Source of chirality: asymmetric reduction of 4 with DIBAH
Absolute configuration: 2S, 3R, 10R

$C_{18}H_{26}O_2S$
3-(2-Hydroxy-2-phenylethyl)sulfenyl-2-camphanol

S.-M. Hung, D.-S. Lee, and T.-K. Yang*

Tetrahedron: Asymmetry **1990,** *1*, 873



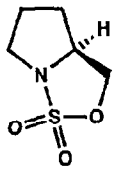
7a

$[\alpha]_D^{18}$ –23.45 (*c* 1.31, $CHCl_3$).
E.e. ≥ 95% [by NMR analysis, compared with its 9S diastereomer 7b]
Source of chirality: asymmetric reduction of 5 with DIBAH
Absolute configuration: 2S, 3R, 8S, 10R

$C_{18}H_{26}O_3S$
3-(2-Hydroxy-2-phenylethyl)sulfinyl-2-camphanol

D. Alker, K.J. Doyle, L.M. Harwood, and A. McGregor

Tetrahedron: Asymmetry **1990**, *1*, 877



$C_5H_9NO_3S$

$[\alpha]^D_{20}$ = +43.2 (c 1.02, $CHCl_3$)

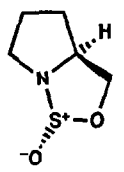
Source of chirality (*S*)–prolinol

Absolute configuration : 5(*S*)

5(*S*)–[3.3.0]–1–aza–2–thia–3–oxabicyclooctane–2,2-dioxide

D. Alker, K.J. Doyle, L.M. Harwood, and A. McGregor

Tetrahedron: Asymmetry **1990**, *1*, 877



$C_5H_9NO_2S$

$[\alpha]^D_{20}$ = -44.3 (c 2.78, CH_2Cl_2)

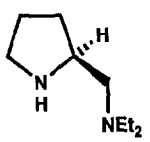
Source of chirality (*S*)–prolinol

Absolute configuration : 2(*S*),5(*S*)

2(*S*),5(*S*)–[3.3.0]–1–aza–2–thia–3–oxabicyclooctane–2–oxide

D. Alker, K.J. Doyle, L.M. Harwood, and A. McGregor

Tetrahedron: Asymmetry **1990**, *1*, 877



$C_9H_{20}N_2$

$[\alpha]^D_{20}$ = +10.0 (c 0.44, $CHCl_3$)

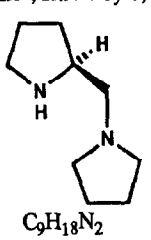
Source of chirality (*S*)–prolinol

Absolute configuration : 2(*S*)

2(*S*)–2–(diethylaminomethyl)pyrrolidine

D. Alker, K.J. Doyle, L.M. Harwood, and A. McGregor

Tetrahedron: Asymmetry **1990**, *1*, 877



$C_9H_{18}N_2$

$[\alpha]^D_{20}$ = +13.0 (c 1.36, EtOH)

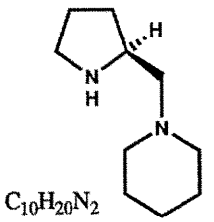
Source of chirality (*S*)–prolinol

Absolute configuration : 2(*S*)

2(*S*)–2–(pyrrolidinomethyl)pyrrolidine

D. Alker, K.J. Doyle, L.M. Harwood, and A. McGregor

Tetrahedron: Asymmetry **1990**, *1*, 877



$C_{10}H_{20}N_2$

2(*S*)–2–(piperidinomethyl)pyrrolidine

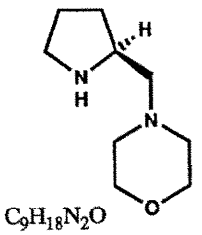
$[\alpha]^D_{20}$ = +15.2 (c 2.40, EtOH)

Source of chirality (*S*)–prolinol

Absolute configuration : 2(*S*)

D. Alker, K.J. Doyle, L.M. Harwood, and A. McGregor

Tetrahedron: Asymmetry **1990**, *1*, 877



$C_9H_{18}N_2O$

2(*S*)–2–(morpholinomethyl)pyrrolidine

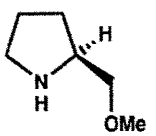
$[\alpha]^D_{20}$ = +18.6 (c 2.99, EtOH)

Source of chirality (*S*)–prolinol

Absolute configuration : 2(*S*)

D. Alker, K.J. Doyle, L.M. Harwood, and A. McGregor

Tetrahedron: Asymmetry **1990**, *1*, 877



$C_6H_{13}NO$

2(*S*)–2–(methoxymethyl)pyrrolidine

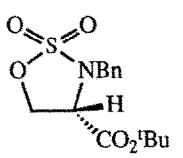
$[\alpha]^D_{20}$ = +2.8 (c 0.60, $CHCl_3$)

Source of chirality (*S*)–prolinol

Absolute configuration : 2(*S*)

J.E. Baldwin, A.C. Spivey and C.J. Schofield

Tetrahedron: Asymmetry **1990**, *1*, 881



$C_{14}H_{19}NO_5S$

N-Benzyl-2,2-dioxo-1,2,3-oxathiazolidine-(4S)-carboxylic acid *tert*-butyl ester

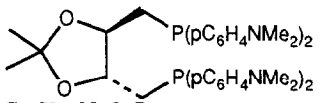
$[\alpha]^D_{20}$ = -48.4 (c. 0.75, $CHCl_3$)

Source of chirality (S)-serine

Absolute configuration: (4S)

I. Toth and B. E. Hanson

Tetrahedron: Asymmetry **1990**, *1*, 895



$C_{39}H_{52}N_4O_2P_2$
(-),2,3-O-Isopropylidene-2,3-dihydroxy-1,4-bis-[bis-((p-N,N-dimethylamino)phenyl)phosphino]butane

E.e. = 100% [by optical purity of starting material, Aldrich]

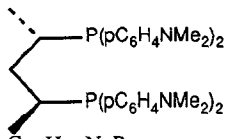
$[\alpha]_D^{20}$ = -18.7 (c 1.94; benzene)

Source of chirality : natural

Absolute configuration: 2R,3R

I. Toth and B. E. Hanson

Tetrahedron: Asymmetry **1990**, *1*, 895



$C_{37}H_{50}N_4P_2$
2,4-Bis[-bis((p-N,N-dimethylamino)phenyl)phosphine] pentane

E.e. = 100% [by optical purity of starting material, Aldrich]

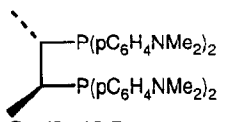
$[\alpha]_D^{20}$ = -90.2 (c 1.839; $CHCl_3$)

Source of chirality : synthetic

Absolute configuration: 2S,4S

I. Toth and B. E. Hanson

Tetrahedron: Asymmetry **1990**, *1*, 895



$C_{36}H_{48}N_4P_2$
Bis[-bis-((p-N,N-dimethylamino)phenyl)phosphine] butane,

E.e. = 100%.[by optical purity of starting material, Aldrich]

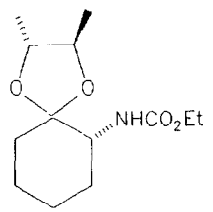
$[\alpha]_D^{20}$ = -149.2 (c 1.22; $CHCl_3$)

Source of chirality : natural

Absolute configuration: 2S,3S

S. Fioravanti, M. A. Loreto, L. Pellacani and P. A. Tardella

Tetrahedron: Asymmetry **1990**, *1*, 931



$C_{13}H_{23}NO_4$

2-(Ethoxycarbonylamino)cyclohexanone 1,2-Dimethylethylene Acetal

D.e. = 97 % [by GLC and ^{13}C NMR]

$[\alpha]_D$ = +8.01 (c 0.72, CH_2Cl_2)

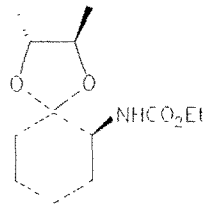
Source of chirality: (2R, 3R)-butane-2,3-diol

Absolute configuration R,R,R

(assigned by ^{13}C NMR and chemical correlation)

S. Fioravanti, M. A. Loreto, L. Pellacani and P. A. Tardella

Tetrahedron: Asymmetry **1990**, *1*, 931



$C_{13}H_{23}NO_4$

2-(Ethoxycarbonylamino)cyclohexanone
1,2-Dimethylethylene Acetal

D.e. = 82 % [by GLC and ^{13}C NMR]

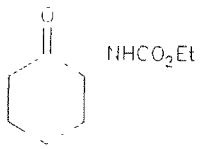
$[\alpha]_D$ = -7.84 (c 0.51, CH_2Cl_2)

Source of chirality: (2R, 3R)-butane-2,3-diol

Absolute configuration R,R,S
(assigned by ^{13}C NMR and chemical correlation)

S.Fioravanti, M. A. Loreto, L. Pellacani and P. A. Tardella

Tetrahedron: Asymmetry **1990**, *1*, 931



$C_9H_{15}NO_3$

2-(Ethoxycarbonylamino)cyclohexanone

E.e. = 97 % [by GLC and ^{13}C NMR, after conversion into the diastereomeric acetals]

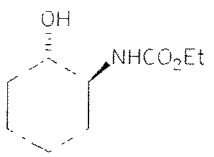
$[\alpha]_D$ = -40.38 (c 0 52, CH_2Cl_2)

Source of chirality: asymm. synth.

Absolute configuration R
(assigned by chemical correlation)

S. Fioravanti, M. A. Loreto, L. Pellacani and P. A. Tardella

Tetrahedron: Asymmetry **1990**, *1*, 931



$C_9H_{17}NO_3$

trans-2-(ethoxycarbonylamino)cyclohexanol

D.e. = 100 %

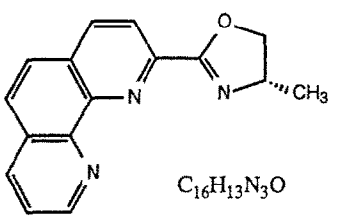
$[\alpha]_D$ = -5.97 (c 0.67, CH_2Cl_2)

Source of chirality: (1S, 2S)-trans-2-aminocyclohexanol

Absolute configuration 1S,2S
(assigned by chemical correlation)

S. Gladiali, L. Pinna, G. Delogu, E. Graf and H. Brunner

Tetrahedron: Asymmetry **1990**, *1*, 937



$C_{16}H_{13}N_3O$

2-[(4-Methyl)-2-oxazolin-2-yl]-1,10-phenanthroline

E.e. = 100% (based on the e.e. of the starting chiron)

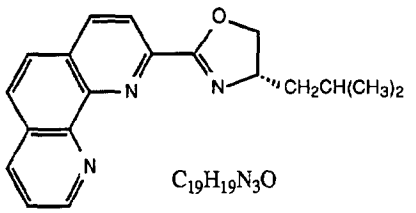
$[\alpha]_D^{25}$ = -13.7 (c 1, Ethanol 96%)

Source of chirality: (+)-(S)-Alaninol

Absolute configuration : S

S. Gladiali, L. Pinna, G. Delogu, E. Graf and H. Brunner

Tetrahedron: Asymmetry **1990**, *1*, 937



$C_{19}H_{19}N_3O$

2-[(4-Isobutyl)-2-oxazolin-2-yl]-1,10-phenanthroline

E.e. = 100% (based on the e.e. of the starting chiron)

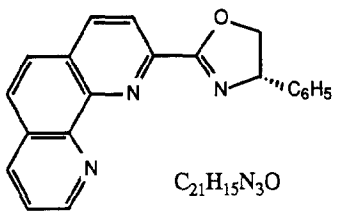
$[\alpha]_D^{25}$ = 11.4 (c 1, Ethanol 96%)

Source of chirality: (+)-(S)-Leucinol

Absolute configuration : S

S. Gladiali, L. Pinna, G. Delogu, E. Graf and H. Brunner

Tetrahedron: Asymmetry **1990**, *1*, 937



$C_{21}H_{15}N_3O$

2-[(4-Phenyl)-2-oxazolin-2-yl]-1,10-phenanthroline

E.e. = 100% (based on the e.e. of the starting chiron)

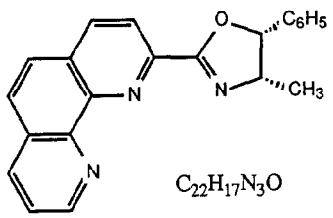
$[\alpha]_D^{25}$ = 129.3 (c 1, Ethanol 96%)

Source of chirality: (+)-(S)-Phenylglycinol

Absolute configuration : S

S. Gladiali, L. Pinna, G. Delogu, E. Graf and H. Brunner

Tetrahedron: Asymmetry **1990**, *1*, 937



$C_{22}H_{17}N_3O$

2-[(4-Methyl-5-phenyl)-2-oxazolin-2-yl]-1,10-phenanthroline

E.e. = 100% (based on the e.e. of the starting chiron)

$[\alpha]_D^{25}$ = 213.4 (c 1, Ethanol 96%)

Source of chirality: (+)-(1S, 2R))-2-Amino-1-phenyl-1-propanol (D-Norephedrine)

Absolute configuration : 4S, 5R