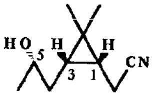
A.V.Tkachev, A.V.Rukavishnikov, Yu.V.Gatilov, I.Yu.Bagrjanskaja

Tetrahedron: Asymmetry **1992**, *3*, 1165



$C_{10}H_{17}NO$

2,2-Dimethyl-3-(2-hydroxypropyl)-cyclopropaneacetonitrile

$[\alpha]_{580}^{22}$ +7.9 (*c* 5.31, $CHCl_3$)

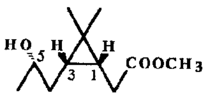
Source of chirality: diastereoselective baker's yeast-induced reduction of the corresponding ketone.

Absolute configuration: 1R,3S,5S (assigned by X-Ray analysis of p-toluenesulfonyl derivative).

(5S):(5R)>98:2 (by ^1H and ^{13}C nmr)

A.V.Tkachev, A.V.Rukavishnikov, Yu.V.Gatilov, I.Yu.Bagrjanskaja

Tetrahedron: Asymmetry **1992**, *3*, 1165



$C_{11}H_{20}O_3$

Methyl 2,2-dimethyl-3-(2-hydroxypropyl)-cyclopropaneacetate

$[\alpha]_{580}^{22}$ +5.0 (*c* 4.02, $CHCl_3$)

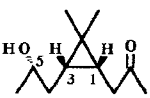
Source of chirality: diastereoselective baker's yeast-induced reduction of the corresponding ketone.

Absolute configuration: 1R,3S,5S (assigned by chemical correlation).

(5S):(5R)>98:2 (by ^1H and ^{13}C nmr)

A.V.Tkachev, A.V.Rukavishnikov, Yu.V.Gatilov, I.Yu.Bagrjanskaja

Tetrahedron: Asymmetry **1992**, *3*, 1165



$C_{11}H_{20}O_2$

2,2-Dimethyl-3-(2-hydroxypropyl)-1-(2-oxo-propyl)-cyclopropane

$[\alpha]_{580}^{19}$ +23.7 (*c* 5.73, $CHCl_3$)

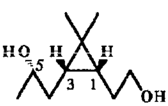
Source of chirality: diastereoselective baker's yeast-induced reduction of the corresponding ketone.

Absolute configuration: 1R,3S,5S (assigned by chemical correlation).

(5S):(5R)>98:2 (by ^1H and ^{13}C nmr)

A.V.Tkachev, A.V.Rukavishnikov, Yu.V.Gatilov, I.Yu.Bagrjanskaja

Tetrahedron: Asymmetry **1992**, *3*, 1165



$C_{10}H_{20}O_2$

2,2-Dimethyl-1-(2-hydroxyethyl)-3-(2-hydroxypropyl)-cyclopropane

$[\alpha]_{580}^{23}$ +6.8 (*c* 6.01, $CHCl_3$)

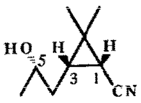
Source of chirality: diastereoselective baker's yeast-induced reduction of the corresponding ketone.

Absolute configuration: 1R,3S,5S (assigned by chemical correlation).

(5S):(5R)>98:2 (by ^1H and ^{13}C nmr)

A.V.Tkachev, A.V.Rukavishnikov, Yu.V.Gatilov, I.Yu.Bagrjanskaja

Tetrahedron: Asymmetry **1992,** *3*, 1165



$C_9H_{15}NO$

2,2-Dimethyl-3-(2-hydroxypropyl)-cyclopropanecarbonitrile

$[\alpha]_{580}^{23}$ +12.5 (*c* 9.29, $CHCl_3$)

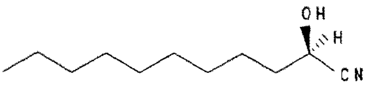
Source of chirality: diastereoselective baker's yeast-induced reduction of the corresponding ketone.

Absolute configuration: 1R,3S,5S (assigned by chemical correlation).

(5S):(5R)>98:2 (by ^{1}H and ^{13}C nmr)

T.T. Huuhtanen and L.T. Kanerva

Tetrahedron: Asymmetry **1992,** *3*, 1223



$C_{11}H_{21}NO$

(*R*)-2-Hydroxyundecanenitrile

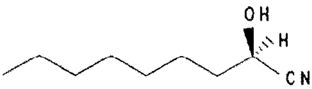
E.e. = 63 % (by chiral GLC)

Source of chirality: (*R*)-mandelonitrile lyase

Absolute configuration: (*R*)

T.T. Huuhtanen and L.T. Kanerva

Tetrahedron: Asymmetry **1992,** *3*, 1223



$C_9H_{17}NO$

(*R*)-2-Hydroxynonanenitrile

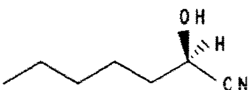
E.e. = 87 % (by chiral GLC)

Source of chirality: (*R*)-mandelonitrile lyase

Absolute configuration: (*R*)

T.T. Huuhtanen and L.T. Kanerva

Tetrahedron: Asymmetry **1992,** *3*, 1223



$C_7H_{13}NO$

(*R*)-2-Hydroxyheptanenitrile

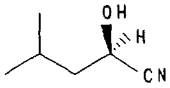
E.e. = 94 % (by chiral GLC)

Source of chirality: (*R*)-mandelonitrile lyase

Absolute configuration: (*R*)

T.T. Huuhtanen and L.T. Kaneva

Tetrahedron: Asymmetry **1992,** *3*, 1223



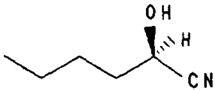
E.e. = 94 % (by chiral GLC)

Source of chirality: (*R*)-mandelonitrile lyase
Absolute configuration: (*R*)

$C_6H_{11}NO$
(*R*)-2-Hydroxy-4-methylpentanenitrile

T.T. Huuhtanen and L.T. Kanerva

Tetrahedron: Asymmetry **1992,** *3*, 1223



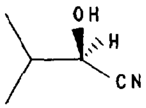
E.e. = 97 % (by chiral GLC)

Source of chirality: (*R*)-mandelonitrile lyase
Absolute configuration: (*R*)

$C_6H_{11}NO$
(*R*)-2-Hydroxyhexanenitrile

T.T. Huuhtanen and L.T. Kanerva

Tetrahedron: Asymmetry **1992,** *3*, 1223



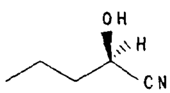
E.e. = 83 % (by chiral GLC)

Source of chirality: (*R*)-mandelonitrile lyase
Absolute configuration: (*R*)

C_5H_9NO
(*R*)-2-Hydroxy-3-methylbutanenitrile

T.T. Huuhtanen and L.T. Kanerva

Tetrahedron: Asymmetry **1992,** *3*, 1223



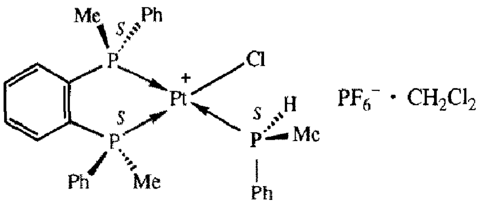
E.e. = 95 % (by chiral GLC)

Source of chirality: (*R*)-mandelonitrile lyase
Absolute configuration: (*R*)

C_5H_9NO
(*R*)-2-Hydroxypentanenitrile

A. Bader, G. Salem, A. C. Willis and S. B. Wild

Tetrahedron: Asymmetry **1992**, *3*, 1227



$C_{28}H_{32}Cl_3F_6P_4Pt$
Chloro(methylphenylphosphine){1,2-phenylenebis-(methylphenylphosphine)}platinum(II) hexafluorophosphate–1-dichloromethane

E.e. = 100%

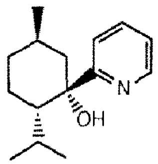
$[\alpha]_D$ = +56 (*c* 1, CH_2Cl_2)

Absolute configuration [*S*-(*R**), (*R**,*R**)]
(X-ray crystal structure)

Source of chirality: [*R*-(*R**,*R**)]-1,2-$C_6H_4(PMePh)_2$
(N. K. Roberts and S. B. Wild, *J. Am. Chem. Soc.* **1979**, *101*, 6254.)

Chelucci, G.; Soccolini, F.

Tetrahedron: Asymmetry **1992**, *3*, 1235



$[\alpha]^{25}_D$ -33.0 (*c* 1.6, CCl_4); mp 69-70 °C

Absolute configuration: 1S, 2S, 5R

Source of chirality: (-)-menthone

Use: catalyst for enantioselective reactions

$C_{15}H_{23}NO$
2-[1-hydroxy-5-methyl-2-(1-methylethyl)-cyclohex-1-yl]-pyridine

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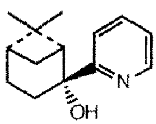
Chelucci, G.; Soccolini, F

Tetrahedron: Asymmetry **1992**, *3*, 1235



$[\alpha]^{25}_D$ -1.9 (*c* 1.6, CCl_4); bp 120 °C (0.1 mbar)

Absolute configuration: 1R, 2R, 5R

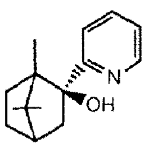
Source of chirality: (+)-nopinone

Use: catalyst for enantioselective reactions

$C_{14}H_{19}NO$
2-(2-hydroxy-6,6-dimethylbiclico[3.1.1]ept-2-yl)-pyridine

Chelucci, G.; Soccolini, F.

Tetrahedron: Asymmetry **1992**, *3*, 1235



$[\alpha]^{25}_D$ -46.2 (*c* 1.6, CCl_4); mp 59-60 °C

Absolute configuration: 1R, 2S, 5S

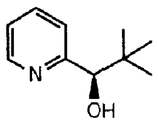
Source of chirality: (+)-camphor

Use: catalyst for enantioselective reactions

$C_{15}H_{21}NO$
2-(2-hydroxy-1,7,7-trimethylbiclico[2.2.1]ept-2-yl)-pyridine

Chelucci, G.; Soccolini, F.

Tetrahedron: Asymmetry **1992**, *3*, 1235



$[\alpha]^{25}_D$ +16.32 (*c* 1.6, CCl_4); bp 100 °C (10 mbar)

Absolute configuration: R E.e.= 91 %

Source of chirality: asymmetric reduction with a chiral borane

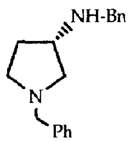
Use: catalyst for enantioselective reactions

$C_{10}H_{15}NO$

2-(2,2-dimethyl-1-hydroxypropyl)pyridine

Jacques Maddaluno, Aline Corruble, Valérie Leroux, Gérard Plé, Lucette Duhamel and Pierre Duhamel*.

Tetrahedron: Asymmetry **1992**, *3*, 1239



E.e.= 86% [by derivatization with (-)-α-fluoro-α-phenyl acetic acid chloride]

$[\alpha]^{27}_D$ =+1.7 (c 2.0, $CHCl_3$)

Source of chirality: natural [(S)-Asparagine] and asymm. synth.

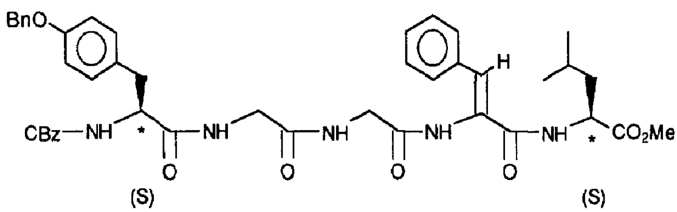
Absolute configuration 3S

$C_{18}H_{22}N_2$

3-Benzylamino-N-benzyl-pyrrolidine

A. Hammadi, J. M. Nuzillard, J. C. Poulin and H. B. Kagan

Tetrahedron: Asymmetry **1992**, *3*, 1247



mp = 91-93°C

$[\alpha]_D$ = -9.9 (c 1.0, CH_3OH)

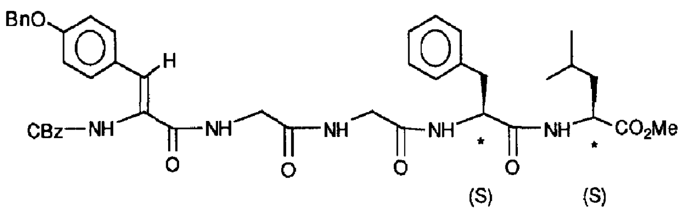
Source of chirality : (S)Tyrosine, (S)Leucine

$C_{44}H_{48}N_5O_9$

CBz-(O)Bn-(S)Tyr-(Gly)2-Δ^ZPhe-(S)Leu-OMe

A. Hammadi, J. M. Nuzillard, J. C. Poulin and H. B. Kagan

Tetrahedron: Asymmetry **1992**, *3*, 1247



mp = 124-126°C

$[\alpha]_D$ = 6.7 (c 1.0, CH_3OH)

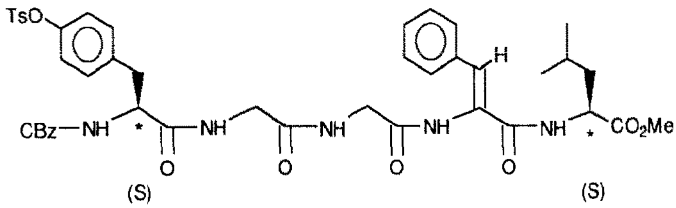
Source of chirality : (S)Phenylalanine, (S)Leucine

$C_{44}H_{48}N_5O_9$

CBz-(O)Bn-Δ^ZTyr-(Gly)2-(S)Phe-(S)Leu-OMe

A. Hammadi, J. M. Nuzillard, J. C. Poulin and H. B. Kagan

Tetrahedron: Asymmetry **1992,** *3*, 1247



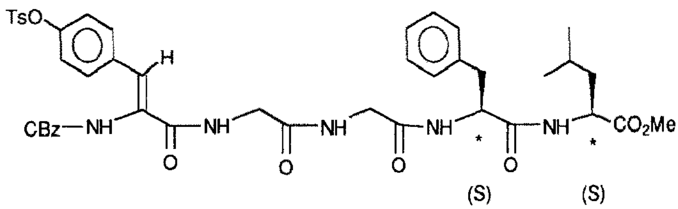
mp = 128-129°C
[α]D = - 18.1 (c 1.0, CH_3OH)

Source of chirality : (S)Tyrosine, (S)Leucine

$C_{44}H_{49}N_5O_{11}S$
CBz-(O)Ts-(S)Tyr-$(Gly)_2$-Δ^ZPhe-(S)Leu-OMe

A. Hammadi, J. M. Nuzillard, J. C. Poulin and H. B. Kagan

Tetrahedron: Asymmetry **1992,** *3*, 1247



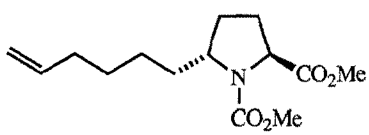
mp = 88-89°C
[α]D = 7.1 (c 1.0, CH_3OH)

Source of chirality :
(S)Phenylalanine, (S)Leucine

$C_{44}H_{49}N_5O_{11}S$
CBz-(O)Bn-Δ^ZTyr-$(Gly)_2$-(S)Phe-(S)Leu-OMe

M. Skrinjar, C. Nilsson and L. -G. Wistrand

Tetrahedron: Asymmetry **1992,** *3*, 1263



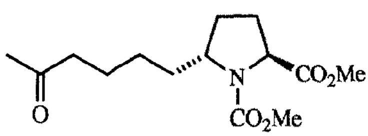
E.e.≥ 90 %
$[\alpha]_D^{25}$ = -71.2 (c 1.0, MeOH)
Source of chirality: L-proline
Absolute configuration: 2S, 5R

$C_{14}H_{23}NO_4$

(5R)-5-(5-Hexenyl)-1-methoxy-carbonyl-L-proline methyl ester

M. Skrinjar, C. Nilsson and L. -G. Wistrand

Tetrahedron: Asymmetry **1992,** *3*, 1263



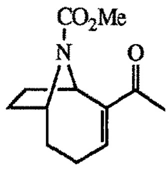
E.e.≥ 90 %
$[\alpha]_D^{25}$ = -84.3 (c 1.0, MeOH)
Source of chirality: L-proline
Absolute configuration: 2S, 5R

$C_{14}H_{23}NO_5$

(5R)-1-Methoxycarbonyl-5-(1-(5-oxohexyl))-L-proline methyl ester

M. Skrinjar, C. Nilsson and L. -G. Wistrand

Tetrahedron: Asymmetry **1992**, *3*, 1263



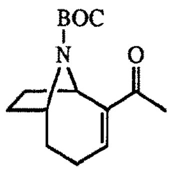
$C_{12}H_{17}NO_3$

(1R)-2-Acetyl-9-methoxycarbonyl-9-azabicyclo[4.2.1]-2-nonene

E.e.≥ 90 %
$[\alpha]_D^{25}$ = -40.9 (c 1.0, MeOH)
Source of chirality: L-proline
Absolute configuration: 1R

M. Skrinjar, C. Nilsson and L. -G. Wistrand

Tetrahedron: Asymmetry **1992**, *3*, 1263



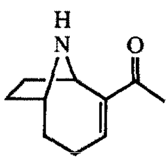
$C_{15}H_{23}NO_3$

(1R)-2-Acetyl-9-t-butyloxy-carbonyl-9-azabicyclo[4.2.1]nonane

E.e.= 94 % (det. by Mosher derivative of a precursor)
$[\alpha]_D^{25}$ = -46.8 (c 0.839, CH_2Cl_2)
Source of chirality: L-proline
Absolute configuration: 1R

M. Skrinjar, C. Nilsson and L. -G. Wistrand

Tetrahedron: Asymmetry **1992**, *3*, 1263



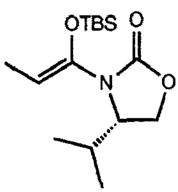
$C_{10}H_{15}NO$

(+)-Anatoxin-a

E.e.= 94 % (^{1}H NMR and HPLC of Mosher derivative)
$[\alpha]_D^{25}$ = +39.8 (c 0.676, abs. EtOH)
Source of chirality: L-proline
Absolute configuration: 1R
(assigned on the basis of α_D)

A. B. Holmes, A. J. Nadin, P. J. O'Hanlon and N. D. Pearson

Tetrahedron: Asymmetry **1992**, *3*, 1289



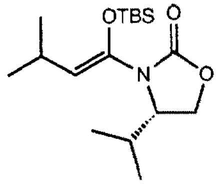
$C_{15}H_{29}NO_3Si$

3[4S, (Z)]-[1-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1-propenyl]-4-(1-methylethyl)-2-oxazolidinone

E.e. >95%
$[\alpha]_D^{21}$ -62 (*c* 3.26 in $CHCl_3$)
Source of chirality: (L)-valine
Absolute configuration: 4S

A. B. Holmes, A. J. Nadin, P. J. O'Hanlon and N. D. Pearson

Tetrahedron: Asymmetry **1992,** *3*, 1289



E.e. >95%

$[\alpha]_D^{25}$ -63 (c 0 77 in $CHCl_3$)

Source of chirality: (L)-valine

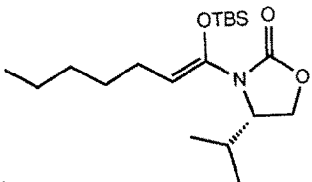
Absolute configuration: 4S

$C_{17}H_{33}NO_3Si$

3[4S, (Z)]-[1-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-3-methyl-1-butenyl]-4-(1-methylethyl)-2-oxazolidinone

A B. Holmes, A J. Nadin, P. J. O'Hanlon and N D Pearson

Tetrahedron: Asymmetry **1992,** *3*, 1289



E.e. >95%

$[\alpha]_D^{25}$ -64 (c 1 93 in $CHCl_3$)

Source of chirality: (L)-valine

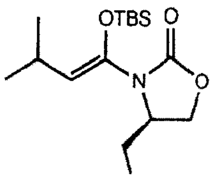
Absolute configuration 4S

$C_{19}H_{37}NO_3Si$

3[4S, (Z)]-[1-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1-heptenyl]-4-(1-methylethyl)-2-oxazolidinone

A B. Holmes, A. J Nadin, P J. O'Hanlon and N. D. Pearson

Tetrahedron: Asymmetry **1992,** *3*, 1289



E e. >95%

$[\alpha]_D^{25}$ +42(c 1.27 in $CHCl_3$)

Source of chirality: (D)-phenylalanine

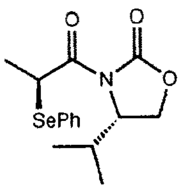
Absolute configuration· 4R

$C_{21}H_{34}NO_3Si$

3[4R, (Z)]-[1-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-3-methyl-1-butenyl]-4-(1-methylphenyl)-2-oxazolidinone

A B. Holmes, A. J. Nadin, P. J. O'Hanlon and N. D. Pearson

Tetrahedron: Asymmetry **1992,** *3*, 1289



D.e. 72%

$[\alpha]_D^{21}$ +145 (c 3.73 in $CHCl_3$)

Source of chirality. Asymmetric Synthesis

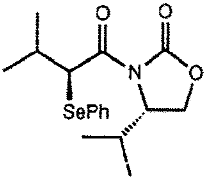
Absolute configuration: 2R,4S

$C_{15}H_{19}NO_3Se$

[3(2R),4S]-3-(2-Phenylseleno-1-oxopropyl)-4-(1-methylethyl)-2-oxazolidinone

Tetrahedron: Asymmetry **1992**, *3*, 1289

A B. Holmes, A. J. Nadin, P. J. O'Hanlon and N. D. Pearson



D.e. 94%
$[\alpha]_D^{21}$ +47 (*c* 0.86 in $CHCl_3$)

Source of chirality: Asymmetric Synthesis

Absolute configuration: 2R,4S

$C_{17}H_{23}NO_3Se$

[3(2R),4S]-3-(2-Phenylseleno-3-methyl-1-oxobutyl)-4-(1-methylethyl)-2-oxazolidinone

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Tetrahedron: Asymmetry **1992**, *3*, 1289

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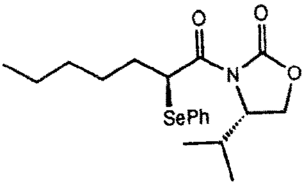

D.e. 60 %
$[\alpha]_D^{25}$ +58 (*c* 1.52 in $CHCl_3$)

Source of chirality: Asymmetric Synthesis

Absolute configuration: 2R,4S

$C_{19}H_{27}NO_3Se$

[3(2R),4S]-3-(2-Phenylseleno-1-oxoheptyl)-4-(1-methylethyl)-2-oxazolidinone

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Tetrahedron: Asymmetry **1992**, *3*, 1289

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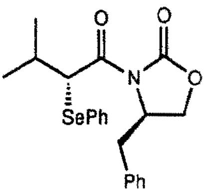

D.e. 86 %
$[\alpha]_D^{25}$ -11 (*c* 1.16 in $CHCl_3$)

Source of chirality: Asymmetric Synthesis

Absolute configuration: 2S,4R

$C_{21}H_{23}NO_3Se$

[3(2S),4R]-3-(2-Phenylseleno-3-methyl-1-oxobutyl)-4-(1-methylphenyl)-2-oxazolidinone

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Tetrahedron: Asymmetry **1992**, *3*, 1289

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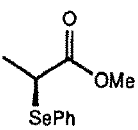

E.e. 70 % [by NMR with $Eu(tfc)_3$]
$[\alpha]_D^{21}$ -133 (*c* 2.59 in $CHCl_3$)

Source of chirality: Asymmetric Synthesis

Absolute configuration: 2R

$C_{12}H_{16}O_2Se$

(2R)-2-Phenylselenopropanoic acid, methyl ester

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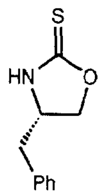
Tetrahedron: Asymmetry **1992,** *3*, 1289



$C_{10}H_{11}NOS$

(4S)-4-Methylphenyl-2-oxazolidinethione

E.e. >95 %

$[\alpha]_D^{21}$ -107 (*c* 2.89 in $CHCl_3$)

Source of chirality: (L)-phenylalaninol

Absolute configuration: 4S

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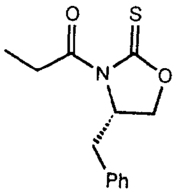
Tetrahedron: Asymmetry **1992,** *3*, 1289



$C_{13}H_{15}NO_2S$

(4S)-4-Methylphenyl-3-(oxopropyl)-2-oxazolidinethione

E.e >95 %

$[\alpha]_D^{21}$ +130 (*c* 1.69 in $CHCl_3$)

Source of chirality: (L)-phenylalaninol

Absolute configuration. 4S

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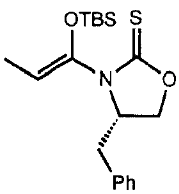
Tetrahedron: Asymmetry **1992,** *3*, 1289



$C_{19}H_{29}NO_2SSi$

(3[4S, (Z)]-[1-[[(1,1-dimethylethyl)dimethylsilyl]oxy]-1-propenyl]-4-(1-methylphenyl)-2-oxazolidinethione

E.e. >95 %

$[\alpha]_D^{21}$ -30 (*c* 2.23 in $CHCl_3$)

Source of chirality: (L)-phenylalaninol

Absolute configuration: 4S

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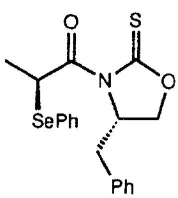
Tetrahedron: Asymmetry **1992,** *3*, 1289



$C_{19}H_{19}NO_2SSe$

[3(2R),4S]-3-(2-Phenylseleno-1-oxopropyl)-4-(1-methylphenyl)-2-oxazolidinethione

D.e. 76%

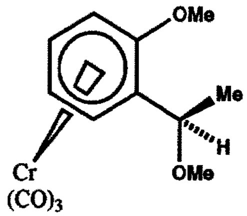
$[\alpha]_D^{21}$ +129 (*c* 0 99 in $CHCl_3$)

Source of chirality· Asymmetric Synthesis

Absolute configuration· 2R,4S

S.G. Davies, C.L. Goodfellow and K.H. Sutton

Tetrahedron: Asymmetry **1992**, *3*, 1303

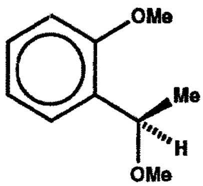


e.e. = 100 %
$[\alpha]_D^{22}$ = +220 (c 0.8, $CHCl_3$)
Absolute configuration R,R

$C_{13}H_{14}CrO_5$
Tricarbonyl(η^6-α-methoxy-*o*-methoxybenzyl methyl ether)chromium(0)

S.G. Davies, C.L. Goodfellow and K.H. Sutton

Tetrahedron: Asymmetry **1992**, *3*, 1303

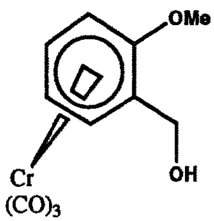


e.e. = 100 %
$[\alpha]_D^{22}$ = +109 (c 1.2, $CHCl_3$)
Absolute configuration R

$C_{10}H_{14}CrO_2$
α-Methyl-*o*-methoxybenzyl methyl ether

S.G. Davies, C.L. Goodfellow and K.H. Sutton

Tetrahedron: Asymmetry **1992**, *3*, 1303

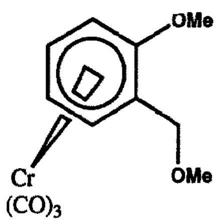


e.e. = 100 %
$[\alpha]_D^{22}$ = +237 (c 1, $CHCl_3$)
Absolute configuration R

$C_{11}H_{10}CrO_5$
Tricarbonyl(η^6-*o*-methoxybenzyl alcohol)chromium(0)

S.G. Davies, C.L. Goodfellow and K.H. Sutton

Tetrahedron: Asymmetry **1992**, *3*, 1303



e.e. = 100 %
$[\alpha]_D^{22}$ = +200 (c 1.3, $CHCl_3$)
Absolute configuration R

$C_{12}H_{12}CrO_5$
Tricarbonyl(η^6-*o*-methoxybenzyl methyl ether)chromium(0)