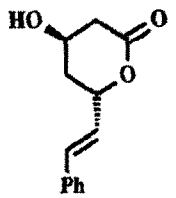
B. Henkel, A. Kunath and H. Schick

Tetrahedron: Asymmetry **1993**, *4*, 153

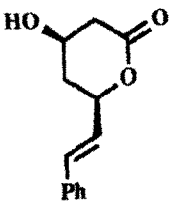


E.e. = >99 % (by HPLC on Chiralcel OF)
$[\alpha]_D^{20}$ = 12 (c = 0.95, dichloromethane)
Source of chirality: enzyme-catalyzed lactonization
Absolute configuration: 3*R*,5*S* (assigned by chemical transformation into (-)-goniothalamin)

$C_{13}H_{14}O_3$ 3-Hydroxy-7-phenyl-6-hepten-5-olide

B. Henkel, A. Kunath, and H. Schick

Tetrahedron: Asymmetry **1993**, *4*, 153

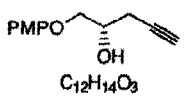


E.e. = >99 % (by HPLC on Chiralcel OD)
$[\alpha]_D^{20}$ = -16 (c = 0.75, methanol); e.e. = 96 %
Source of chirality: enzyme-catalyzed lactonization
Absolute configuration: 3R,5R (assigned by chemical transformation into (+)-goniothalamin)

$C_{13}H_{14}O_3$ 3-Hydroxy-7-phenyl-6-hepten-5-olide

Tetrahedron: Asymmetry **1993**, *4*, 157

Seiichi Takano,* Masaki Setoh, and Kunio Ogasawara



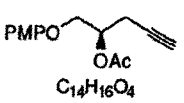
$C_{12}H_{14}O_3$

Absolute configuration 4*S*
$[\alpha]_D^{30}$ +19.83 (*c* 1.01, $CHCl_3$)
Source of chirality: enzymatic transesterification
E. e.=≥99% by chiral HPLC

(4*S*)-4-hydroxy-5-(4-methoxyphenoxy)-1-pentyne

Tetrahedron: Asymmetry **1993**, *4*, 157

Seiichi Takano,* Masaki Setoh, and Kunio Ogasawara



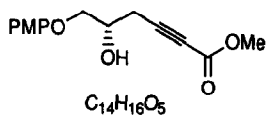
$C_{14}H_{16}O_4$

Absolute configuration 4*R*
$[\alpha]_D^{30}$ +10.11 (*c* 1.02, $CHCl_3$)
Source of chirality: enzymatic transesterification
E. e.=≥99% by chiral HPLC

(4*R*)-4-acetoxy-5-(4-methoxyphenoxy)-1-pentyne

Tetrahedron: Asymmetry **1993**, *4*, 157

Seiichi Takano,* Masaki Setoh, and Kunio Ogasawara



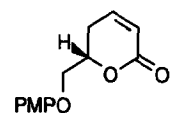
$C_{14}H_{16}O_5$

(5*S*)-methyl 5-hydroxy-(4-methoxyphenoxy)-2-hexynoate

Absolute configuration 5*S*
$[\alpha]_D^{29}$ +22.6 (*c* 1.05, $CHCl_3$)
Source of chirality: enzymatic transesterification
E. e.=≥99% (by precursor)

Tetrahedron: Asymmetry **1993**, *4*, 157

Seiichi Takano,* Masaki Setoh, and Kunio Ogasawara



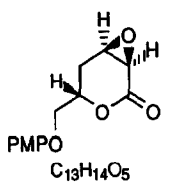
$C_{13}H_{14}O_4$

(6*S*)-5,6-dihydro-(4-methoxyphenoxymethyl)-2-pyrone

Absolute configuration 6*S*
$[\alpha]_D^{28}$ –109.0 (*c* 1.19, $CHCl_3$)
Source of chirality: enzymatic transesterification
E. e.=≥99% (by precursor)

Tetrahedron: Asymmetry **1993**, *4*, 157

Seiichi Takano,* Masaki Setoh, and Kunio Ogasawara



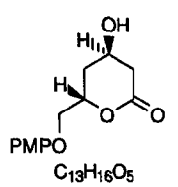
$C_{13}H_{14}O_5$

(3*R*,4*R*,6*S*)-3,4,5,6-tetrahydro-6-(4-methoxyphenoxy-methyl)-2-pyrone

Absolute configuration 3*R*,4*R*,6*S*
$[\alpha]_D^{30}$ +45.5 (*c* 1.05, $CHCl_3$)
E. e.=≥99% (by precursor)

Tetrahedron: Asymmetry **1993**, *4*, 157

Seiichi Takano,* Masaki Setoh, and Kunio Ogasawara



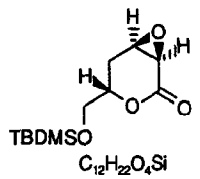
$C_{13}H_{16}O_5$

(4*R*,6*S*)-4-hydro-3,4,5,6-tetrahydro-6-(4-methoxy-phenoxymethyl)-2-pyrone

Absolute configuration 4*R*,6*S*
$[\alpha]_D^{30}$ +19.4 (*c* 1.01, $CHCl_3$)
E. e.=≥99% (by precursor)

Seiichi Takano,* Masaki Setoh, and Kunio Ogasawara

Tetrahedron: Asymmetry **1993**, *4*, 157



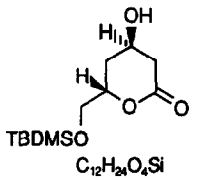
$C_{12}H_{22}O_4Si$

(3*R*,4*R*,6*S*)-6-(*t*-butyldimethylsiloxymethyl)-3,4-epoxy 3,4,5,6-tetrahydro-2-pyrone

Absolute configuration 3*R*,4*R*,6*S*
$[\alpha]_D^{29}$ +34.8 (*c* 1.18, $CHCl_3$)
E. e.=≥99% (by precursor)

Seiichi Takano,* Masaki Setoh, and Kunio Ogasawara

Tetrahedron: Asymmetry **1993**, *4*, 157



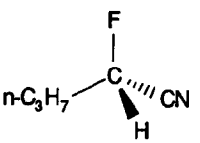
$C_{12}H_{24}O_4Si$

(4*R*,6*S*)-6-(*t*-butyldimethylsiloxymethyl)-4-hydroxy-3,4,5,6-tetrahydro-2-pyrone

Absolute configuration 4*R*,6*S*
$[\alpha]_D^{28}$ –1.90 (*c* 1.00, $CHCl_3$)
E. e.=≥99% (by precursor)

U. Stelzer and F. Effenberger*

Tetrahedron: Asymmetry **1993**, *4*, 161



C_5H_8FN

2-Fluoropentanenitrile

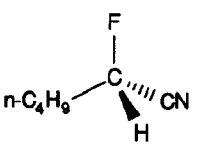
E.e. = 95.4% [by gas chromatography on β-cyclodextrin phase]
$[\alpha]_D^{20}$ = -22.5 (c 1.73, CH_2Cl_2)

Source of chirality: S_N2 reaction with inversion of configuration from 2-Hydroxypentanenitrile (ee 95.7%)

Absolute configuration 2S

U. Stelzer and F. Effenberger*

Tetrahedron: Asymmetry **1993**, *4*, 161



$C_6H_{10}FN$

2-Fluorohexanenitrile

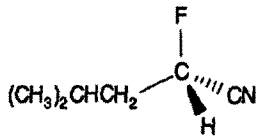
E.e. = 96.9% [by gas chromatography on β-cyclodextrin phase]
$[\alpha]_D^{20}$ = -21.7 (c 1.36, CH_2Cl_2)

Source of chirality: S_N2 reaction with inversion of configuration from 2-Hydroxyhexanenitrile (ee 98.1%)

Absolute configuration 2S
(assigned by hydrolysis to 2-fluorohexanoic acid)

U. Stelzer and F. Effenberger*

Tetrahedron: Asymmetry **1993**, *4*, 161



$C_6H_{10}FN$

2-Fluoro-4-methylpentanenitrile

E.e. = 93.8% [by gas chromatography on β-cyclodextrin phase]

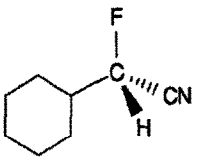
$[\alpha]_D^{20}$ = -28.0 (c 1.00, CH_2Cl_2)

Source of chirality: S_N2 reaction with inversion of configuration from 2-Hydroxy-4-methylpentanenitrile (ee 96.0%)

Absolute configuration 2S

U. Stelzer and F. Effenberger*

Tetrahedron: Asymmetry **1993**, *4*, 161



$C_8H_{12}FN$

2-Cyclohexyl-2-fluoroethanenitrile

E.e. = 94.0% [by gas chromatography on β-cyclodextrin phase]

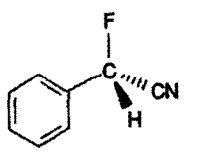
$[\alpha]_D^{20}$ = -11.8 (c 1.00, CH_2Cl_2)

Source of chirality: S_N2 reaction with inversion of configuration from 2-Cyclohexyl-2-hydroxyethanenitrile (ee 94.5%)

Absolute configuration 2S

U. Stelzer and F. Effenberger*

Tetrahedron: Asymmetry **1993**, *4*, 161



C_8H_6FN

2-Fluoro-2-phenylethanenitrile

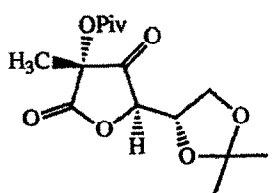
E.e. = 35.7% [by gas chromatography on β-cyclodextrin phase]

$[\alpha]_D^{20}$ = -21.1 (c 1.09, CH_2Cl_2)

Source of chirality: From 2-Hydroxy-2-phenylethanenitrile (ee 98.8%)

A. J. Poss, R. K. Belter and C. Bensimon

Tetrahedron: Asymmetry **1993**, *4*, 169



$C_{15}H_{22}O_7$

5,6-O-isopropylidene-3-keto-2-C-methyl-2-O-trimethylacetyl furanohexulosonic acid lactone

D.e. = 92% [by 300 MHz nmr]

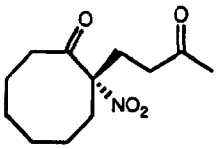
$[\alpha]_D^{24}$ = +114.3 (c 1, $CHCl_3$)

Source of chirality: stereoselective O to C transfer

Absolute confrguration 2R,4R,5S (assigned by X-Ray and NOE)

A. Latvala, S. Stanchev, A. Linden and M. Hesse

Tetrahedron: Asymmetry **1993**, *4*, 173



$C_{12}H_{19}NO_4$
(-)-2-Nitro-2-(3-oxobutyl)cyclooctanone

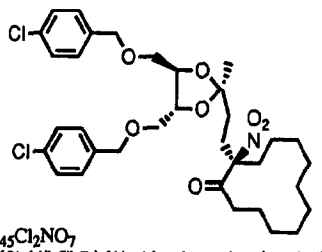
E.e. = 94.4% [by ^1H NMR with $Eu(hfc)_3$]
$[\alpha]_D^{22}$ = -42.3 (c=1.39, $CHCl_3$)
CD: $[\Delta\varepsilon]_{246}$ +2.75, $[\Delta\varepsilon]_{311}$ -1.17, (c=1.27x10^{-4}M, $CHCl_3$)

Source of chirality: asymmetric *Michael* addition

Absolute configuration 2*S*
(assigned by X-ray analysis of 1,3-propanedithiol derivative)

A. Latvala, S. Stanchev, A. Linden and M. Hesse

Tetrahedron: Asymmetry **1993**, *4*, 173



$C_{34}H_{45}Cl_2NO_7$
(+)-2{2'-[4",5"-Bis[(4-chlorobenzyloxy)methyl]-2"-methyl-1",3"-dioxolan-2"-yl]ethyl}-2-nitrocyclododecanone

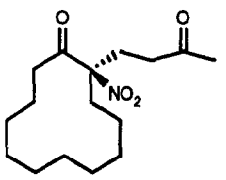
$[\alpha]_D^{22}$ = +49.6 (c=1.19, $CHCl_3$)

Source of chirality: chiral diol and asymm. *Michael* addition

Absolute configuration 2*R*,4"*R*,5"*R*
(assigned by X-ray analysis using known conf. at C-4" and C-5")

A. Latvala, S. Stanchev, A. Linden and M. Hesse

Tetrahedron: Asymmetry **1993**, *4*, 173



$C_{16}H_{27}NO_4$
(+)-2-Nitro-2-(3-oxobutyl)cyclododecanone

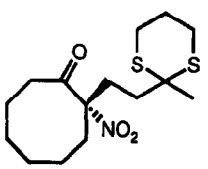
E.e. >95% [by ^1H NMR with $Eu(hfc)_3$]
$[\alpha]_D^{22}$ = +85.0 (c=0.96, $CHCl_3$)
CD: $[\Delta\varepsilon]_{242}$ -5.30, $[\Delta\varepsilon]_{298}$ -2.08 (c=1.24x10^{-4}M, $CHCl_3$)

Source of chirality: asymmetric *Michael* addition

Absolute configuration 2*R*
(assigned by X-ray analysis of its acetal derivative)

A. Latvala, S. Stanchev, A. Linden and M. Hesse

Tetrahedron: Asymmetry **1993**, *4*, 173



$C_{15}H_{25}NO_3S_2$
(-)-2-[2'-(2"-Methyl-1",3"-dithian-2"-yl)-ethyl]-2-nitrocyclooctanone

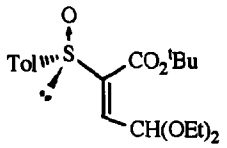
$[\alpha]_D^{22}$ = -41.8 (c=0.96, $CHCl_3$)

Source of chirality: asymmetric *Michael* addition

Absolute configuration 2*S*
(assigned by X-ray crystal structure)

J.C. Carretero, J.L. García Ruano, A. Lorente and F. Yuste

Tetrahedron: Asymmetry **1993**, *4*, 177



E.e.≥ 96% (by ^{1}H-NMR of a further adduct)

$[\alpha]_D^{20}$ = +234 (c=1, $CHCl_3$)

Source of chirality: (R)-*t*-butyl *p*-toluenesulfinyl acetate

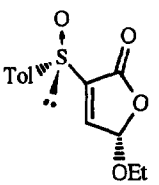
Absolute configuration: S

$C_{19}H_{28}O_5S$

(E)-4,4-diethoxy-1-*p*-tolylsulfinyl-2-butenoic acid *t*-butyl ester

J.C. Carretero, J.L. García Ruano, A. Lorente and F. Yuste

Tetrahedron: Asymmetry **1993**, *4*, 177



E.e.≥ 96% (by ^{1}H-NMR of a further adduct)

$[\alpha]_D^{20}$ = +356 (c=1, $CHCl_3$)

Source of chirality: (R)-*t*-butyl *p*-toluenesulfinylacetate

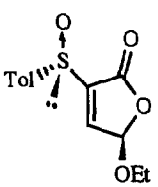
Absolute configuration: S_5S_S

$C_{13}H_{14}O_4S$

5-ethoxy-3-*p*-tolylsulfinyl-2(5H)-furanone

J.C. Carretero, J.L. García Ruano, A. Lorente and F. Yuste

Tetrahedron: Asymmetry **1993**, *4*, 177



E.e.≥ 96% (by ^{1}H-NMR of a further adduct)

$[\alpha]_D^{20}$ = +205 (c=1, $CHCl_3$)

Source of chirality: (R)-*t*-butyl *p*-toluenesulfinyl acetate

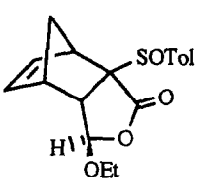
Absolute configuration: R_5S_S

$C_{13}H_{14}O_4S$

5-ethoxy-3-*p*-tolylsulfinyl-2(5H)-furanone

J.C. Carretero, J.L. García Ruano, A. Lorente and F. Yuste

Tetrahedron: Asymmetry **1993**, *4*, 177



E.e.≥ 96% (by ^{1}H-NMR)

$[\alpha]_D^{20}$ = +38 (c=1, $CHCl_3$)

Source of chirality: (R_5S_S)-5-ethoxy-3-*p*-tolylsulfinyl-2(5H)-furanone and asymmetric Diels-Alder reaction

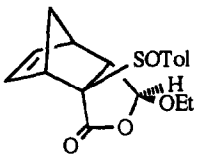
Absolute configuration: $R_3S_{3a}R_{7a}S_S$

$C_{18}H_{20}O_4S$

3-Ethoxy-7a-*p*-tolylsulfinyl-3a,4,7,7a-tetrahydro-4,7-methanoisobenzofuran-1(3H)-one

J.C. Carretero, J.L. García Ruano, A. Lorente and F. Yuste

Tetrahedron: Asymmetry **1993**, *4*, 177



$C_{18}H_{20}O_4S$

E.e.≥ 96% (by ^{1}H-NMR)

$[\alpha]_D^{20} = +90$ (c=1, $CHCl_3$)

Source of chirality: (S_5S_S)-5-ethoxy-3-*p*-tolylsulfinyl-2(5H)-furanone and asymmetric Diels-Alder reaction

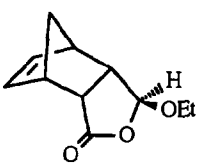
Absolute configuration: $S_3R_{3a}S_{7a}S_S$ (by X-ray analysis)

3-Ethoxy-7a-*p*-tolylsulfinyl-3a,4,7,7a-tetrahydro-4,7-methanoisobenzofuran-1(3H)-one

---

J.C. Carretero, J.L. García Ruano, A. Lorente and F. Yuste

Tetrahedron: Asymmetry **1993**, *4*, 177



$C_{11}H_{14}O_3$

E.e.≥ 96% [by ^{1}H-NMR with $Pr(hfc)_3$]

$[\alpha]_D^{20} = +59$ (c=0.7, CH_2Cl_2)

Source of chirality: Asymmetric Diels-Alder reaction

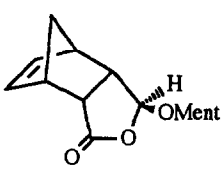
Absolute configuration: $S_3S_{3a}R_{7a}$

3-Ethoxy-3a,4,7,7a-tetrahydro-4,7-methanoisobenzofuran-1(3H)-one

---

J.C. Carretero, J.L. García Ruano, A. Lorente and F. Yuste

Tetrahedron: Asymmetry **1993**, *4*, 177



$C_{19}H_{28}O_3$

E.e.≥ 96% (by ^{1}H-NMR of a precursor)

$[\alpha]_D^{20} = +11$ (c=0.6, CH_2Cl_2)

Source of chirality: Asymm. Diels-Alder reaction

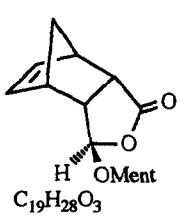
Absolute configuration: $S_3S_{3a}R_{7a}$ (Ment. = l-menthyl)

3-(l-Menthyloxy)-3a,4,7,7a-tetrahydro-4,7-methanoisobenzofuran-1(3H)-one

---

J.C. Carretero, J.L. García Ruano, A. Lorente and F. Yuste

Tetrahedron: Asymmetry **1993**, *4*, 177



$C_{19}H_{28}O_3$

E.e.≥ 96% (by ^{1}H-NMR of a precursor and by comparation with reported $[\alpha]_D$ value)

$[\alpha]_D^{20} = -134$ (c=0.5, CH_2Cl_2)

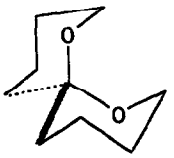
Source of chirality: Asymm. Diels-Alder reaction

Absolute configuration: $R_3R_{3a}S_{7a}$ (Ment. = l-menthyl)

3-(l-Menthyloxy)-3a,4,7,7a-tetrahydro-4,7-methanoisobenzofuran-1(3H)-one

H. Galons, J. Gnaïm, N. Rysanek, G. LeBas, F. Villain, G. Tsoucaris

Tetrahedron: Asymmetry **1993**, *4*, 181



$C_9H_{16}O_2$

(S)-(+) 1,7-Dioxaspiro(5,5)undecane

E.e. = 96%
$[\alpha]_D^{23}$ = +118(c= 0.026)

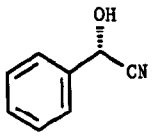
Source of chirality : separation of diastereoisomeric inclusion complexes

Absolute configuration : 5S assigned by optical rotation and crystallography

---

Dominique Callant, Dirk Stanssens and Johannes G. de Vries

Tetrahedron: Asymmetry **1993**, *4*, 185



(S)-Mandelonitrile C_8H_7NO

E.e.: 76% (Chiral HPLC, Daicel OD)

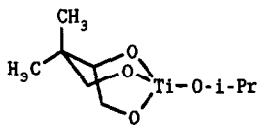
$[\alpha]_D^{22}$ = - 33.4 (c = 1.3, benzene)
(measured on the 76% e.e. sample)

Source of chirality: Asymmetric synthesis

Absolute configuration: S

Dominique Callant, Dirk Stanssens and Johannes G. de Vries

Tetrahedron: Asymmetry **1993**, *4*, 185



[(S)-3,3-Dimethyl-1,2,4-butanetriolato-O,O',O"]titanium isopropoxide $C_9H_{18}O_4Ti$

E.e. presumed 98%

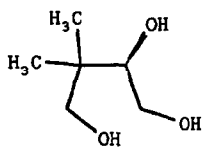
$[\alpha]_D^{22}$ = - 9.46 (c = 1.0, CH_2Cl_2)

Source of chirality: Chiral pool

Absolute configuration: S

Dominique Callant, Dirk Stanssens and Johannes G. de Vries

Tetrahedron: Asymmetry **1993**, *4*, 185



(S)-3,3 -Dimethyl-1,2,4-butanetriol

E.e. 98% (from rotation)

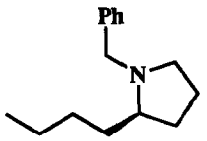
$[\alpha]_D^{22}$ = - 15.67 (c = 1.0, EtOH)

Source of chirality: Chiral pool

Absolute configuration: S

T. Nguyen, D. Sherman, D. Ball, M. Solow and B. Singaram

Tetrahedron: Asymmetry **1993**, *4*, 189

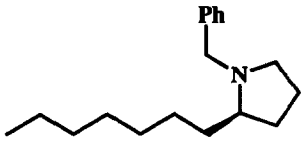


(*R*)-*N*-Benzyl-2-butylpyrrolidine

E. e = >98 %
α^{25}_D = -49.4 (neat,*l* 1.0)
Source of chirality = (*S*)-1-Octen-4-ol
Absolute configuration = *R*

T. Nguyen, D. Sherman, D. Ball, M. Solow and B. Singaram

Tetrahedron: Asymmetry **1993**, *4*, 189

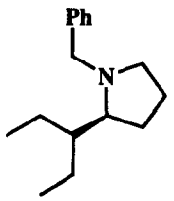


(*R*)-*N*-Benzyl-2-heptylpyrrolidine

E. e = >98 %
α^{25}_D = -50.6 (neat,*l* 1.0)
Source of chirality = (*S*)-1-Undecen-4-ol
Absolute configuration = *R*

T. Nguyen, D. Sherman, D. Ball, M. Solow and B. Singaram

Tetrahedron: Asymmetry **1993**, *4*, 189

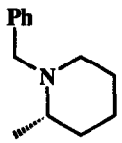


(*S*)-*N*-Benzyl-2-(3-pentyl)pyrrolidine

E. e = >98 %
$[\alpha]^{25}_D$ = +69.2 (*c* 2,*n*-pentane)
Source of chirality = (*R*)-5-Ethyl-1-hepten-4-ol
Absolute configuration = *S*

T. Nguyen, D. Sherman, D. Ball, M. Solow and B. Singaram

Tetrahedron: Asymmetry **1993**, *4*, 189

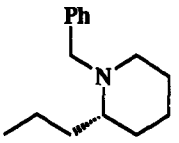


(*S*)-*N*-Benzyl-2-methylpiperidine

E. e = >98 %
α^{25}_D = +68.2 (neat,*l* 1.0)
Source of chirality = (*R*)-1-Penten-4-ol
Absolute configuration = *S*

T. Nguyen, D. Sherman, D. Ball, M. Solow and B. Singaram

Tetrahedron: Asymmetry **1993**, *4*, 189

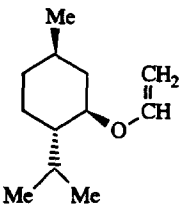


(*S*)-*N*-Benzyl-2-propylpiperidine
[(*S*)-*N*-Benzylconiine]

E. e = >98 %
α^{25}_D = +86.7 (neat,*l* 1.0)
Source of chirality = (*R*)-1-Hepten-4-ol
Absolute configuration = *S*

G. Dujardin, S. Molato and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 193

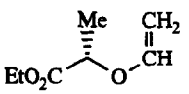


$C_{12}H_{22}O$
(1*R*,2*S*,5*R*)-(-)-Menthyl vinyl ether

$[\alpha]_D$ -77 (c 2.40, Et_2O)
Ee = 100%
Source of chirality :
(1*R*,2*S*,5*R*)-(-)-menthol

G. Dujardin, S. Molato and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 193

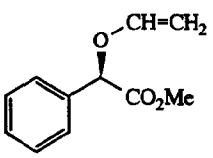


$C_7H_{12}O_3$
Ethyl (*S*)-(-)-2-vinyloxypropionate

$[\alpha]_D$ -86 (c 0.79, Et_2O)
Ee › 95%
Source of chirality :
ethyl (*S*)-(-)-lactate

G. Dujardin, S. Molato and E. Brown

Tetrahedron: Asymmetry **1993**, *4*, 193

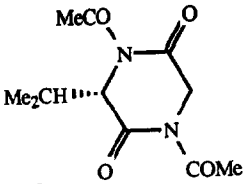


$C_{11}H_{12}O_3$
Methyl (*R*)-(-)-2-vinyloxyphenylacetate

$[\alpha]_D$ -106 (c 1.43, MeOH)
Ee › 95%
Source of chirality :
(*R*)-(-)-mandelic acid

Tetrahedron: Asymmetry **1993,** *4*, 197

T. W. Badran, C. J. Easton, E. Horn, K. Kociuba, B. L. May, D. M. Schliebs, and E. R. T. Tiekink

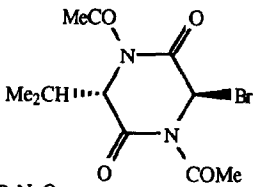


$[\alpha]^{20}_{580}$ +43.0 (c 1, $CHCl_3$)
E.e. > 95% by nmr of the derivative, 1,4-diacetyl-3-(1-methylethyl)-6-(prop-2-enyl)-2,5-piperazinedione, with Eu(hfc)3
Source of chirality: S-valine
Absolute configuration: S

$C_{11}H_{16}N_2O_4$
1,4-Diacetyl-3-(1-methylethyl)-2,5-piperazinedione

Tetrahedron: Asymmetry **1993,** *4*, 197

T. W. Badran, C. J. Easton, E. Horn, K. Kociuba, B. L. May, D. M. Schliebs, and E. R. T. Tiekink

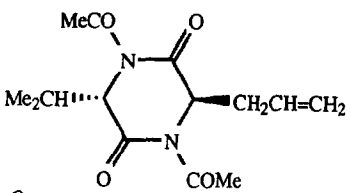


$[\alpha]^{20}_{580}$ +110.3 (c 1, $CHCl_3$)
D.e. > 99% by nmr.
E.e. > 95% by nmr of the derivative, 1,4-diacetyl-3-(1-methylethyl)-6-(prop-2-enyl)-2,5-piperazinedione, with Eu(hfc)3
Source of chirality: S-valine
Absolute configuration: 3R,6S

$C_{11}H_{15}BrN_2O_4$
3-Bromo-1,4-diacetyl-6-(1-methylethyl)-2,5-piperazinedione

Tetrahedron: Asymmetry **1993,** *4*, 197

T. W. Badran, C. J. Easton, E. Horn, K. Kociuba, B. L. May, D. M. Schliebs, and E. R. T. Tiekink



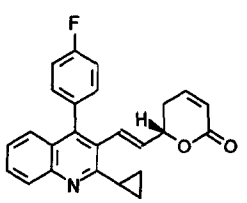
$[\alpha]^{20}_{580}$ +27.6 (c 1, $CHCl_3$)
D.e. > 99%
E.e. > 95% by nmr with Eu(hfc)3
Source of chirality: S-valine
Absolute configuration: 3S,6R

$C_{14}H_{20}N_2O_4$
1,4-Diacetyl-3-(1-methylethyl)-6-(prop-2-enyl)-2,5-piperazinedione

---

Tetrahedron: Asymmetry **1993,** *4*, 201

Seiichi Takano,* Takashi Kamikubo, Takumichi Sugihara, Mikio Suzuki,† and Kunio Ogasawara

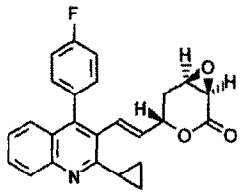


Absolute configuration 6'*S*
mp 168-168.5 °C
$[\alpha]_D^{29}$ –57.84 (*c* 1.49, $CHCl_3$)
source of chirality: (*S*)- and (*R*)-epichlorohydrins (>98% ee)
E. e.=>95% by precursor and final product

$C_{25}H_{20}FNO_2$

Tetrahedron: Asymmetry **1993**, *4*, 201

Seiichi Takano,* Takashi Kamikubo, Takumichi Sugihara, Mikio Suzuki,† and Kunio Ogasawara

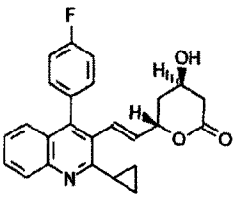


$C_{25}H_{20}FNO_3$

Absolute configuration 3*R*':4*R*':6*S*'
mp 170-171 °C
$[\alpha]_D^{28}$ +43.15 (*c* 1.13, $CHCl_3$)
source of chirality: (*S*)- and (*R*)-epichlorohydrins (>98% ee)
E. e.=>95% by precursor and final product

Tetrahedron: Asymmetry **1993**, *4*, 201

Seiichi Takano,* Takashi Kamikubo, Takumichi Sugihara, Mikio Suzuki,† and Kunio Ogasawara

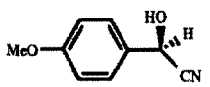


NK-104
$C_{25}H_{22}FNO_3$

Absolute configuration 4'*R*:6'*S*
mp 138-139 °C
$[\alpha]_D^{32}$ +8.84 (*c* 0.92, $CHCl_3$)
source of chirality: (*S*)- and (*R*)-epichlorohydrin
E. e.=97.8 by chiral HPLC

Tetrahedron: Asymmetry **1993**, *4*, 205

Roger F.C.Brown, W. Roy Jackson and Tom D. McCarthy*
Department of Chemistry, Monash University, Wellington Road, Clayton, 3168, Victoria, Australia.



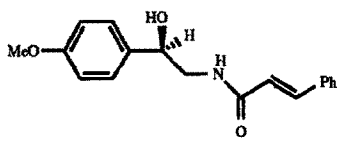
$C_9H_9NO_2$
(R)-2-hydroxy-2-(4-methoxyphenyl)acetonitrile

E.e.=>99% [by n.m.r. of (R)-Mosher's ester]
$[\alpha]_D^{24}$=+44.8 (c=1, $CHCl_3$)

Source of chirality: asymm. addn. of HCN to *para*-anisaldehyde

Tetrahedron: Asymmetry **1993**, *4*, 205

Roger F.C.Brown, W. Roy Jackson and Tom D. McCarthy*
Department of Chemistry, Monash University, Wellington Road, Clayton, 3168, Victoria, Australia.



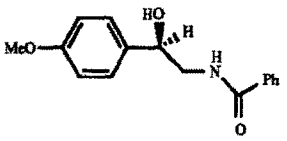
$C_{18}H_{19}NO_3$
(R)-N-[2-hydroxy-2-(4-methoxyphenyl)ethyl]-3-phenyl-*E*-2-propenamide

E.e.=>99%
$[\alpha]_D^{24}$=-35.6 (c=0.4, $CHCl_3$)

Source of chirality: Synthesis from (R)-2-hydroxy-2-(4-methoxyphenyl)acetonitrile

Roger F.C.Brown, W. Roy Jackson and Tom D. McCarthy*
Department of Chemistry, Monash University, Wellington Road,
Clayton, 3168, Victoria, Australia.

Tetrahedron: Asymmetry **1993**, *4*, 205



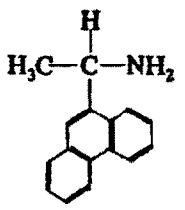
$C_{16}H_{17}NO_3$
(R)-N-[2-hydroxy-2-(4-methoxyphenyl) ethyl] benzamide

E.e.=>99%
$[\alpha]_D^{24}$=-59.8 (c=0.4, $CHCl_3$)

Source of chirality: Synthesis from (R)-2-hydroxy-2-(4-methoxyphenyl)acetonitrile

M. Kühn and J. Buddrus

Tetrahedron: Asymmetry **1993**, *4*, 207

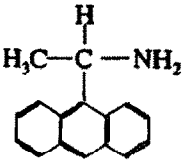


$C_{16}H_{15}N$
9-(1-Aminoethyl)phenanthrene

E.e. ≥ 98 % [by ^{1}H-NMR with (+)-2,2,2-trifluoro-1-(9-anthryl)ethanol]
$[\alpha]_D^{20}$ = +35 (c 0.57, $CHCl_3$)
Source of chirality: racemat
Absolute configuration: unknown

M. Kühn and J. Buddrus

Tetrahedron: Asymmetry **1993**, *4*, 207

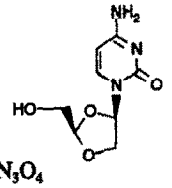


$C_{16}H_{15}N$
9-(1-Aminoethyl)anthracene

E.e. ≥ 98 % [by ^{1}H-NMR with (+)-2,2,2-trifluoro-1-(9-anthryl)ethanol]
$[\alpha]_D^{20}$ = -17 (c 0.59, $CHCl_3$)
Source of chirality: racemat
Absolute configuration: unknown

H. Jin, H.L.A. Tse, C.A. Evans, T.S. Mansour, C.M. Beels, P. Ravenscroft, D.C. Humber, M.F.Jones, J.J. Payne and M.V.J. Ramsay

Tetrahedron: Asymmetry **1993**, *4*, 211



$C_8H_{11}N_3O_4$
2-Hydroxymethyl-4-(cytosin-1'-yl)-1,3-dioxolane

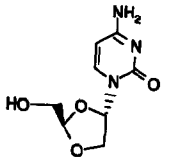
E.e.=>99%(asymmetric synthesis, chiral HPLC and NMR)
$[\alpha]_D^{25}$ = +35.2 (c 1.0,MeOH)

Source of chirality: L-ascorbic acid

Absolute configuration 2R,4R

H. Jin, H.L.A. Tse, C.A. Evans, T.S. Mansour,C.M. Beels, P. Ravenscroft, D.C. Humber, M.F.Jones, J.J. Payne and M.V.J. Ramsay

Tetrahedron: Asymmetry **1993**, *4*, 211



$C_8H_{11}N_3O_4$

2-Hydroxymethyl-4-(cytosin-1'-yl)-1,3-dioxolane

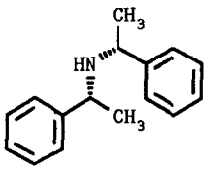
E.e. = >99% (asymmetric synthesis, chiral HPLC and NMR)
$[\alpha]_D^{25}$ = -68.5 (c 1.0, MeOH)

Source of chirality: L-ascorbic acid

Absolute configuration 2R,4S

C. Lensink and J.G. de Vries

Tetrahedron: Asymmetry **1993**, *4*, 215



$C_{16}H_{19}N$

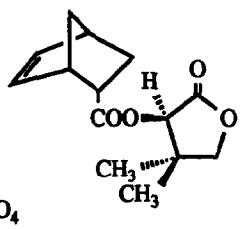
(R,R)-bis(1-phenylethyl)amine

$[\alpha]_D^{RT}$ = +158.3 (c 3.13, EtOH)

Source of chirality: diastereoselective hydrogenation

C. Cativiela, F. Figueras, J. M. Fraile, J. I. García, J. A. Mayoral.

Tetrahedron: Asymmetry **1993**, *4*, 223



$C_{14}H_{18}O_4$

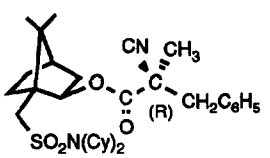
(1S,2S,4S)-bicyclo[2.2.1]hept-5-ene-2-carboxylate of (R)-pantolactone

$[\alpha]_D^{25}$ = -113.3 (c=30 mg/ml , $CHCl_3$) (98% d.e.)

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

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229



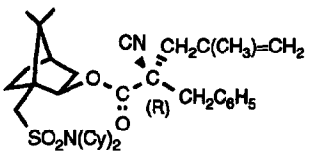
$C_{33}H_{48}N_2O_4S$

(2R)-(1S,2R,4R)-10-dicyclohexylsulfamoylisobornyl-2-methyl-3-phenyl-2-cyanopropanoate

d.e.>95% by NMR
$[\alpha]_D^{20}$ - 62.8 (c = 1.56 in $CHCl_3$)
Source of chirality : natural and diastereoselective methylation
Absolute configuration : 2R

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229



d.e.>95% by NMR

$[\alpha]_D^{20}$ - 82.4 (c = 0.42 in $CHCl_3$)

Source of chirality : natural and diastereoselective alkylation

Absolute configuration : 2R

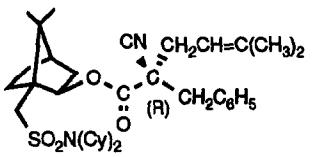
$C_{38}H_{52}N_2O_4S$

(2R)-(1S,2R,4R)-10-dicyclohexylsulfamoylisobornyl-2-(2-methylallyl)-3-phenyl-2-cyanopropanoate

---

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229



d.e.>95% by NMR

$[\alpha]_D^{20}$ - 65.6 (c = 0.43 in $CHCl_3$)

Source of chirality : natural and diastereoselective alkylation

Absolute configuration : 2R

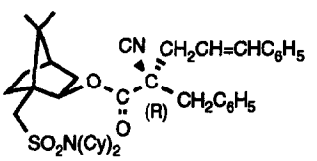
$C_{37}H_{54}N_2O_4S$

(2R)-(1S,2R,4R)-10-dicyclohexylsulfamoylisobornyl-2-(3,3-dimethylallyl)-3-phenyl-2-cyanopropanoate

---

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229



d.e.>95% by NMR

$[\alpha]_D^{20}$ - 78.6 (c = 0.41 in $CHCl_3$)

Source of chirality : natural and diastereoselective alkylation

Absolute configuration : 2R

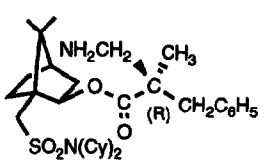
$C_{41}H_{54}N_2O_4S$

(2R)-(1S,2R,4R)-10-dicyclohexylsulfamoylisobornyl-2-cinnamyl-3-phenyl-2-cyanopropanoate

---

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229



d.e.>95% by NMR

$[\alpha]_D^{20}$ - 30.6 (c = 0.87 in $CHCl_3$)

Source of chirality : natural and diastereoselective methylation

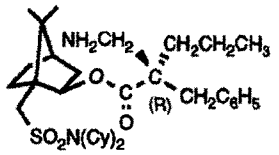
Absolute configuration : 2R

$C_{33}H_{52}N_2O_4S$

(2R)-(1S,2R,4R)-10-dicyclohexylsulfamoylisobornyl-2-benzyl-2-methyl-3-aminopropanoate

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229



d.e.>95% by NMR

$[\alpha]_D^{20}$ - 23.6 (c = 0.94 in $CHCl_3$)

Source of chirality : natural and diastereoselective alkylation

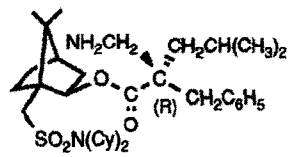
Absolute configuration : 2R

$C_{35}H_{58}N_2O_4S$

(2R)-(1S,2R,4R)-10-dicyclohexylsulfamoylisobornyl-2-benzyl-2-propyl-3-aminopropanoate

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229



d.e.>95% by NMR

$[\alpha]_D^{20}$ - 29.8 (c = 1.14 in $CHCl_3$)

Source of chirality : natural and diastereoselective alkylation

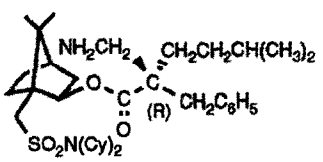
Absolute configuration : 2R

$C_{36}H_{58}N_2O_4S$

(2R)-(1S,2R,4R)-10-dicyclohexylsulfamoylisobornyl-2-benzyl-2-isobutyl-3-aminopropanoate

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229



d.e.>95% by NMR

$[\alpha]_D^{20}$ - 32 (c = 1.45 in $CHCl_3$)

Source of chirality : natural and diastereoselective alkylation

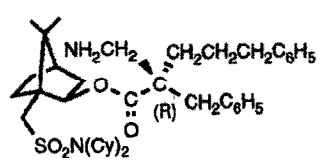
Absolute configuration : 2R

$C_{37}H_{60}N_2O_4S$

(2R)-(1S,2R,4R)-10-dicyclohexylsulfamoylisobornyl-2-benzyl-2-isopentyl-3-aminopropanoate

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229



d.e.>95% by NMR

$[\alpha]_D^{20}$ - 27.9 (c = 1.93 in $CHCl_3$)

Source of chirality : natural and diastereoselective alkylation

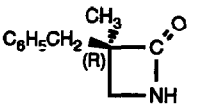
Absolute configuration : 2R

$C_{41}H_{60}N_2O_4S$

(2R)-(1S,2R,4R)-10-dicyclohexylsulfamoylisobornyl-2-benzyl-2-(3-phenylpropyl)-3-aminopropanoate

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229

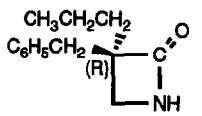


e.e.>95%
$[\alpha]_D^{20}$ - 43.3 (c = 0.30 in $CHCl_3$)
Source of chirality : natural and diastereoselective methylation
Absolute configuration : 3R

$C_{11}H_{13}NO$
(3R)-3-benzyl-3-methyl-2-azetidinone

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229

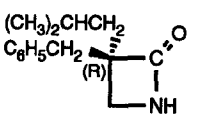


e.e.>95%
$[\alpha]_D^{20}$ - 63.7 (c = 0.60 in $CHCl_3$)
Source of chirality : natural and diastereoselective alkylation
Absolute configuration : 3R

$C_{13}H_{17}NO$
(3R)-3-benzyl-3-propyl-2-azetidinone

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229

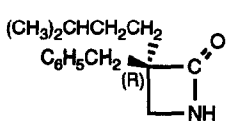


e.e.>95%
$[\alpha]_D^{20}$ - 39.4 (c = 0.32 in $CHCl_3$)
Source of chirality : natural and diastereoselective alkylation
Absolute configuration : 3R

$C_{14}H_{19}NO$
(3R)-3-benzyl-3-isobutyl-2-azetidinone

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229

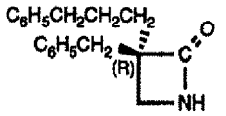


e.e.>95%
$[\alpha]_D^{20}$ - 36.9 (c = 0.64 in $CHCl_3$)
Source of chirality : natural and diastereoselective alkylation
Absolute configuration : 3R

$C_{15}H_{21}NO$
(3R)-3-benzyl-3-isopentyl)-2-azetidinone

C. Cativiela, M. D. Diaz-de-Villegas, J. A. Galvez

Tetrahedron: Asymmetry **1993**, *4*, 229

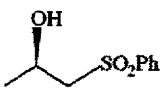


e.e.>95%
$[\alpha]_D^{20}$ - 30.00 (c = 0.50 in $CHCl_3$)
Source of chirality : natural and diastereoselective alkylation
Absolute configuration : 3R

$C_{19}H_{21}NO$
(3R)-3-benzyl-3-(3-phenylpropyl)-2-azetidinone

Tetrahedron: Asymmetry **1993**, *4*, 239

S.Robin, F. Huet, A. Fauve, H. Veschambre

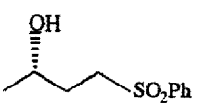


$C_9H_{12}O_3S$
(R)-1-(Phenylsulfonyl)-2-propanol

E.e. > 95% (^{1}H NMR with $Eu(hfc)_3$)
$[\alpha]_J$ = -15.5 (c 3, MeOH)
Source of chirality :
microbiological reduction

Tetrahedron: Asymmetry **1993**, *4*, 239

S.Robin, F. Huet, A. Fauve, H. Veschambre

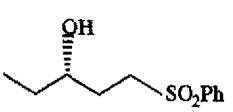


$C_{10}H_{14}O_3S$
(S)-1-(Phenylsulfonyl)-3-butanol

E.e. > 95% (^{1}H NMR with $Eu(hfc)_3$)
$[\alpha]_D$ = +20.7 (c 1, $CHCl_3$)
Source of chirality :
microbiological reduction

Tetrahedron: Asymmetry **1993**, *4*, 239

S.Robin, F. Huet, A. Fauve, H. Veschambre

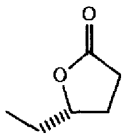


$C_{11}H_{16}O_3S$
(S)-1-(Phenylsulfonyl)-3-pentanol

E.e. = 64% (^{1}H NMR with $Eu(hfc)_3$)
$[\alpha]_D$ = +16 (c 1, $CHCl_3$)
Source of chirality :
microbiological reduction

S.Robin, F. Huet, A. Fauve, H. Veschambre

Tetrahedron: Asymmetry **1993**, *4*, 239

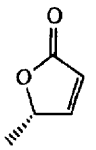


$C_6H_{10}O_2$
(S)-5-Ethyl-tetrahydro-2-furanone

E.e. = 64% (^{1}H NMR with Eu(hfc)$_3$)
$[\alpha]_D$ = +25.3 (c 1, THF)
Source of chirality : from a precursor obtained by microbiological reduction

S.Robin, F. Huet, A. Fauve, H. Veschambre

Tetrahedron: Asymmetry **1993**, *4*, 239

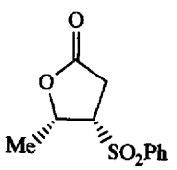


$C_5H_6O_2$
(S)-5-Methyl-2(5H)-furanone

E.e. > 95% (by optical rotation)
$[\alpha]_D$ = +105.6 (c 1, $CHCl_3$)
Source of chirality : from a precursor obtained by microbiological reduction

S.Robin, F. Huet, A. Fauve, H. Veschambre

Tetrahedron: Asymmetry **1993**, *4*, 239

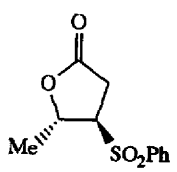


$C_{11}H_{12}O_4S$
(5S,4S)-5-Methyl-4(phenylsulfonyl)-tetrahydro-2-furanone

E.e. > 95% (by optical rotation)
$[\alpha]_D$ = +16.2 (c 1, $CHCl_3$)
Source of chirality : from a precursor obtained by microbiological reduction

S.Robin, F. Huet, A. Fauve, H. Veschambre

Tetrahedron: Asymmetry **1993**, *4*, 239

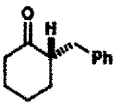


$C_{11}H_{12}O_4S$
(5S,4R)-5-Methyl-4(phenylsulfonyl)-tetrahydro-2-furanone

E.e. > 90% (by optical rotation)
$[\alpha]_D$ = -30.9 (c 1, $CHCl_3$)
Source of chirality : from a precursor obtained by microbiological reduction

Kaoru Fuji, Kiyoshi Tanaka and Hisashi Miyamoto

Tetrahedron: Asymmetry **1993**, *4*, 247

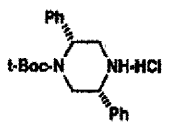


$C_{13}H_{16}O$
(2*S*)-2-Benzylcyclohexanone

E. e. = 69 % (HPLC on chiral column)
$[\alpha]_D^{20}$ -34.4 (c 1.1, MeOH)
Source of chirality: Asymmetric protonation of the lithium enolate
Absolute configuration: 2*S*

Kaoru Fuji, Kiyoshi Tanaka and Hisashi Miyamoto

Tetrahedron: Asymmetry **1993**, *4*, 247

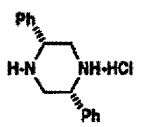


$C_{21}H_{26}N_2O_2$
(2*R*,5*R*)-1-*tert*-Butoxycarbonyl-2,5-diphenylpiperazine

E. e. = > 99 %
$[\alpha]_D^{25}$ -107.7 (c 0.58, $CHCl_3$)
Source of chirality: *R*-Phenylglycine
Absolute configuration: 2*R*, 5*R*

Kaoru Fuji, Kiyoshi Tanaka and Hisashi Miyamoto

Tetrahedron: Asymmetry **1993**, *4*, 247

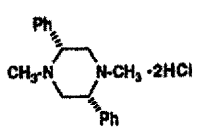


$C_{16}H_{18}N_2 \cdot HCl$
(2*R*,5*R*)-2,5-diphenylpiperazine monohydrochloride

E. e. = > 99 %
$[\alpha]_D^{25}$ + 4.4 (c 0.82, $CHCl_3$)
Source of chirality: *R*-Phenylglycine
Absolute configuration: 2*R*, 5*R*

Kaoru Fuji, Kiyoshi Tanaka and Hisashi Miyamoto

Tetrahedron: Asymmetry **1993**, *4*, 247

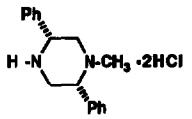


$C_{18}H_{22}N_2 \cdot 2HCl$
(2*R*,5*R*)-1,4-Dimethyl-2,5-diphenylpiperazine dihydrochloride

E. e. = > 99 %
$[\alpha]_D^{25}$ -64.0 (c 0.30, H_2O)
Source of chirality: *R*-Phenylglycine
Absolute configuration: 2*R*, 5*R*

Kaoru Fuji, Kiyoshi Tanaka and Hisashi Miyamoto

Tetrahedron: Asymmetry **1993**, *4*, 247

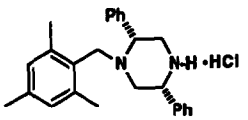


$C_{17}H_{20}N_2 \cdot 2HCl$
(2*R*,5*R*)-2,5-Diphenyl-1-methylpiperazine dihydrochloride

E. e. = > 99 %
$[\alpha]_D^{25}$ -6.7 (c 0.30, H_2O)
Source of chirality: *R*-Phenylglycine
Absolute configuration: 2*R*, 5*R*

Kaoru Fuji, Kiyoshi Tanaka and Hisashi Miyamoto

Tetrahedron: Asymmetry **1993**, *4*, 247

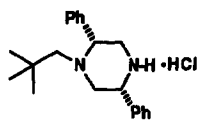


$C_{26}H_{30}N_2 \cdot HCl$
(2*R*,5*R*)-2,5-Diphenyl-1-(2,4,6-trimethylbenzyl)piperazine monohydrochloride

E. e. = > 99 %
$[\alpha]_D^{25}$ -17.0 (c 1.0, $CHCl_3$)
Source of chirality: *R*-Phenylglycine
Absolute configuration: 2*R*, 5*R*

Kaoru Fuji, Kiyoshi Tanaka and Hisashi Miyamoto

Tetrahedron: Asymmetry **1993**, *4*, 247

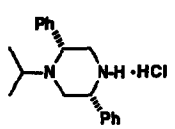


$C_{21}H_{28}N_2 \cdot HCl$
(2*R*,5*R*)-1-(2,2-Dimethylpropyl)-2,5-diphenylpiperazine monohydrochloride

E. e. = > 99 %
$[\alpha]_D^{25}$ -43.9 (c 0.46, $CHCl_3$)
Source of chirality: *R*-Phenylglycine
Absolute configuration: 2*R*, 5*R*

Kaoru Fuji, Kiyoshi Tanaka and Hisashi Miyamoto

Tetrahedron: Asymmetry **1993**, *4*, 247

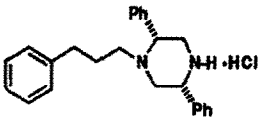


$C_{19}H_{24}N_2 \cdot HCl$
(2*R*,5*R*)-2,5-Diphenyl-1-isopropylpiperazine monohydrochloride

E. e. = > 99 %
$[\alpha]_D^{25}$ -12.6 (c 1.0, $CHCl_3$)
Source of chirality: *R*-Phenylglycine
Absolute configuration: 2*R*, 5*R*

Kaoru Fuji, Kiyoshi Tanaka and Hisashi Miyamoto

Tetrahedron: Asymmetry **1993**, *4*, 247



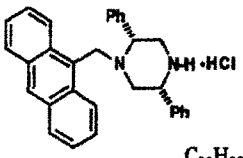
$C_{25}H_{28}N_2$·HCl

(2*R*,5*R*)-2,5-Diphenyl-1-(3-phenylpropyl)piperazine monohydrochloride

E. e. = > 99 %
$[\alpha]_D^{25}$ -6.1 (c 0.66, $CHCl_3$)
Source of chirality: *R*-Phenylglycine
Absolute configuration: 2*R*, 5*R*

Kaoru Fuji, Kiyoshi Tanaka and Hisashi Miyamoto

Tetrahedron: Asymmetry **1993**, *4*, 247



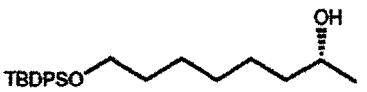
$C_{31}H_{28}N_2$·HCl

(2*R*,5*R*)-2,5-Diphenyl-1-(9-phenanthrenylmethyl)piperazine monohydrochloride

E. e. = > 99 %
$[\alpha]_D^{25}$ -37.5 (c 0.4, $CHCl_3$)
Source of chirality: *R*-Phenylglycine
Absolute configuration: 2*R*, 5*R*

G. B. Jones and S. B. Heaton

Tetrahedron: Asymmetry **1993**, *4*, 261



$C_{24}H_{36}SiO_2$

(R)-8-hydroxy octan-2-ol-
8-tert butyl diphenyl silyl ether

E.e. >85%

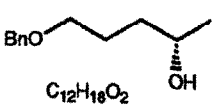
$[\alpha]_D^{25}$ = +14.1 (c 13.7, $CHCl_3$)

Absolute configuration: R

Source of chirality: enantioselective catalyst

G. B. Jones and S. B. Heaton

Tetrahedron: Asymmetry **1993**, *4*, 261



$C_{12}H_{18}O_2$

(S)- 5-hydroxy pentan-2-ol
benzyloxy ether

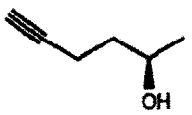
E.e. >72%

$[\alpha]_D^{25}$ = +3.2 (c 3.5, $CHCl_3$)

Absolute configuration: S
Source of chirality: enantioselective catalyst

G. B. Jones and S. B. Heaton

Tetrahedron: Asymmetry **1993**, *4*, 261



$C_6H_{10}O$

(R)- 6-heptyn-2-ol

E.e. >64%

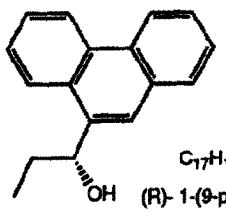
$[\alpha]_D^{25}$ = + 14.2 (c 4.7, $CHCl_3$)

Absolute configuration: R

Source of chirality: enantioselective catalyst

G. B. Jones and S. B. Heaton

Tetrahedron: Asymmetry **1993**, *4*, 261



$C_{17}H_{16}O$

(R)- 1-(9-phenanthryl)propan-1-ol

E.e. >93%

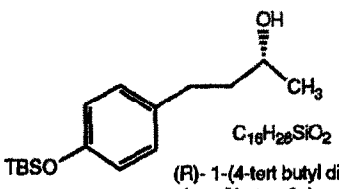
$[\alpha]_D^{25}$ = 53.57 (c 1.95, EtOH)

Absolute configuration: R

Source of chirality: enantioselective catalyst

G. B. Jones and S. B. Heaton

Tetrahedron: Asymmetry **1993**, *4*, 261



$C_{16}H_{28}SiO_2$

(R)- 1-(4-tert butyl dimethylsilyloxy phenyl)butan-2ol

E.e. >85%

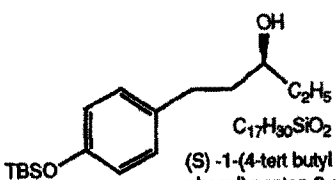
$[\alpha]_D^{25}$ = -5.96 (c 2.7, $CHCl_3$)

Absolute configuration: R

Source of chirality: enantioselective catalyst

G. B. Jones and S. B. Heaton

Tetrahedron: Asymmetry **1993**, *4*, 261



$C_{17}H_{30}SiO_2$

(S) -1-(4-tert butyl dimethylsilyloxy phenyl) pentan-3-ol

E.e. >85%

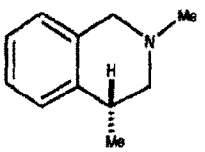
$[\alpha]_D^{25}$ = +11.9 (c 0.05, $CHCl_3$)

Absolute configuration: S

Source of chirality: enantioselective catalyst

L. Belvisi, C. Gennari, G. Poli, C. Scolastico and B. Salom

Tetrahedron: Asymmetry 1993, *4*, 273



$C_{11}H_{15}N$

(R)-1,2,3,4-tetrahydro-2,4-dimethylisoquinoline

E.e.=100% (by ^{1}H n.m.r. of salt formed with Mosher acid)

$[\alpha]_D^{25}$ = +35.5 (c 1.1, $CHCl_3$)

Source of chirality: asymmetric synthesis (radical cyclization) starting from (1R,2S)-(-)Norephedrine

Absolute configuration: R