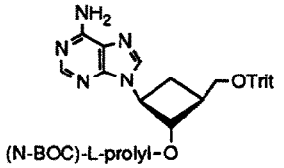
G. Baschang and W. Inderbitzin

Tetrahedron: Asymmetry **1992**, *3*, 193



$C_{39}H_{42}N_6O_5$

1-Adenyl-2-[(N-BOC)-(S)-prolyl]-oxy-3-trityloxymethyl-cyclobutane

E.e. = 100 % (chromatographic separation on silica gel, hexane: 2-propanol = 75 : 25, R_F = 0.28)

λ_{max} (EtOH): 202 nm, ε_{202}: 69080; 260 nm; ε_{260} : 14000

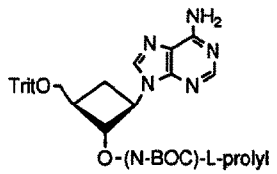
$[\alpha]_D^{20}$ = + 43.0 ± 2.0 (c 0.5, MeOH)

source of chirality : synthetic

Absolute configuration : 1S, 2S, 3R

G. Baschang and W. Inderbitzin

Tetrahedron: Asymmetry **1992**, *3*, 193



$C_{39}H_{42}N_6O_5$

1-Adenyl-2-[(N-BOC)-(S)-prolyl]-oxy-3-trityloxymethyl-cyclobutane

E.e. = 100 % (chromatographic separation on silica gel, hexane: 2-propanol = 75 : 25, R_F = 0.14)

λ_{max} (EtOH): 202 nm, ε_{202}: 71600; 260 nm; ε_{260}: 13880

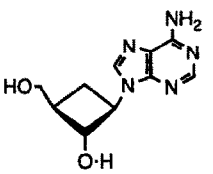
$[\alpha]_D^{20}$ = + 24.2 ± 2.0 (c 0.45, MeOH)

source of chirality : synthetic

Absolute configuration : 1R, 2R, 3S

G. Baschang and W. Inderbitzin

Tetrahedron: Asymmetry **1992**, *3*, 193



$C_{10}H_{15}N_5O_2$

1-Adenyl-2-hydroxy-3-hydroxymethyl-cyclobutane

E.e. = 100 %

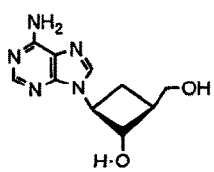
mp.: 252-253 °C; λ_{max} (EtOH): 206 nm, ε_{206}: 20400; 260 nm, ε_{260}: 14200

$[\alpha]_D^{20}$ = + 29.7 ± 1.0 (c 0.39, DMF)

Absolute configuration : 1R, 2R, 3R
(assigned by ORD comparison with (-)-1(S)-Adenyl-3(R)-hydroxy-4(S)-hydroxymethyl-cyclopentane

G. Baschang and W. Inderbitzin

Tetrahedron: Asymmetry **1992**, *3*, 193



$C_{10}H_{15}N_5O_2$

1-Adenyl-2-hydroxy-3-hydroxymethyl-cyclobutane

E.e. = 100 %

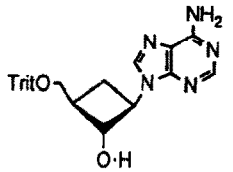
mp.: 249-250 °C; λ_{max} (EtOH): 205 nm, ε_{205}: 20500; 260 nm; ε_{260}: 14200

$[\alpha]_D^{20}$ = - 28.1 ± 1.0 (c 1, DMF)

Absolute configuration : 1S, 2S, 3S
(assigned by ORD comparison with (-)-1(S)-Adenyl-3(R)-hydroxy-4(S)-hydroxymethyl-cyclopentane

G. Baschang and W. Inderbitzin

Tetrahedron: Asymmetry **1992,** *3*, 193



$C_{29}H_{27}N_5O_2$

1-Adenyl-2-hydroxy-3-tritylo-xymethyl-cyclobutane

E.e. = 100 %

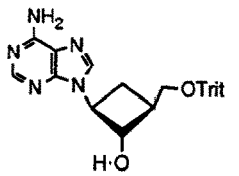
mp.: 187-189 °C; λ_{max} (EtOH): 202 nm, ε_{202}: 61400; 260 nm; ε_{260}: 12520

$[\alpha]_D^{20}$ = + 3.8 ± 1.8 (c 0.55, MeOH)

Absolute configuration : 1R, 2R, 3S

G. Baschang and W. Inderbitzin

Tetrahedron: Asymmetry **1992,** *3*, 193



$C_{29}H_{27}N_5O_2$

1-Adenyl-2-hydroxy-3-trityloxymethyl-cyclobutane

E.e. = 100 % (chromatographic separation of N-BOC-L-prolyl-esters)

mp.: 174-176 °C; λ_{max} (EtOH): 202 nm, ε_{202}: 61300; 260 nm; ε_{260}: 12520

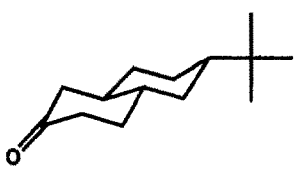
$[\alpha]_D^{20}$ = - 5.1 ± 1.6 (c 0.55, MeOH)

source of chirality : synthetic

Absolute configuration : 1S, 2S, 3R

G. Buchbauer, H. Spreitzer, H. Swatonek and P. Wolschann

Tetrahedron: Asymmetry **1992,** *3*, 197



$C_{14}H_{24}O$

tert-butylbicyclo[4.4.0]decan-3-one

E.e. = 100%

$[\alpha]_D^{20}$ = -16.1 (c 1.13, EtOH)

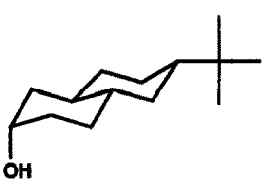
Source of chirality: enantiomeric separation

absolute configuration: 1R, 6S, 8S

assigned by the octant rule

G. Buchbauer, H. Spreitzer, H. Swatonek and P. Wolschann

Tetrahedron: Asymmetry **1992,** *3*, 197



$C_{14}H_{26}O$

tert-butylbicyclo[4.4.0]decan-3-ol

E.e. = 100%

$[\alpha]_D^{20}$ = +4.8 (c 1.25, EtOH)

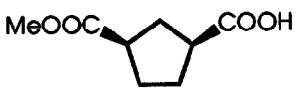
Source of chirality: enantiomeric separation

absolute configuration: 1S, 3R, 6R, 8R

assigned by the octant rule applied on the corresponding ketone

R. Chênevert and R. Martin

Tetrahedron: Asymmetry **1992,** *3*, 199



$C_8H_{12}O_4$

ee = 90% (NMR, derivative with (S)-1-(1-napthyl) ethyl amine

$[\alpha]_D^{20}$ = +0.5 (C 3.5, $CHCl_3$)

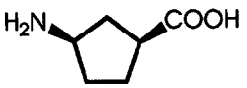
Source of chirality: enzymatic hydrolysis

Absolute configuration: 1S, 3R

cis-3-carbomethoxycyclopentanecarboxylic acid

R. Chênevert and R. Martin

Tetrahedron: Asymmetry **1992,** *3*, 199



$C_6H_{11}O_2N$

ee = 90% (NMR, N-trifluoroacetyl derivative with (S)-1-(napthyl) ethyl amine

$[\alpha]_D^{20}$= +6.4 (C 1, H_2O)

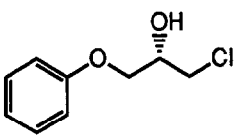
Source of chirality: enzymatic hydrolysis

Absolute configuration: 1S, 3R

cis-3-Aminocyclopentanecarboxylic acid

U. Ader and M. P. Schneider

Tetrahedron: Asymmetry **1992,** *3*, 201



$C_9H_{11}ClO_2$

1-Chloro-3-phenoxy-2-propanol

E.e. = 92.3% [by HPLC using Chiralcel OD]

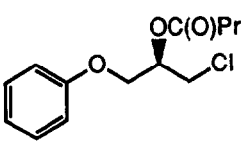
$[\alpha]_D^{20}$ = +2.25 (c = 3.1, $CHCl_3$)

Source of chirality: enzymatic hydrolysis

Absolute configuration 2*S*
(assigned to 1,2-Epoxy-3-phenoxypropan)

U. Ader and M. P. Schneider

Tetrahedron: Asymmetry **1992,** *3*, 201



$C_{13}H_{17}ClO_3$

2-Butoxy-1-chloro-3-phenoxypropan

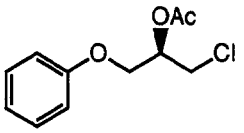
E.e. = 86.2% [by HPLC using Chiralcel OB]

Source of chirality: enzymatic hydrolysis

Absolute configuration 2*R*
(assigned from reaction mechanism and HPLC)

U. Ader and M. P. Schneider

Tetrahedron: Asymmetry **1992,** *3*, 201



$C_{11}H_{13}ClO_3$

2-Acetoxy-1-chloro-3-phenoxypropan

E.e. = 97.2% [by HPLC using Chiralpak OT(+)]

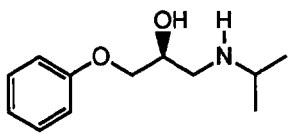
$[\alpha]_D^{20} = -34.0$ (c = 1.0, $CHCl_3$)

Source of chirality: enzymatic hydrolysis

Absolute configuration 2*R*
(assigned to 1,2-Epoxy-3-phenoxypropan)

U. Ader and M. P. Schneider

Tetrahedron: Asymmetry **1992,** *3*, 205



$C_{12}H_{19}NO_2$

1-[(Methylethyl)-amino]-3-phenoxy-2-propanol

E.e. = 95% [by HPLC using Chiralcel OD]

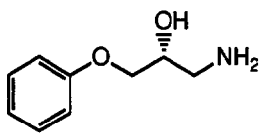
$[\alpha]_D^{20} = +2.26$ (c = 1.0, MeOH)

Source of chirality: Epoxid

Absolute configuration 2*S*
(assigned to 1,2-Epoxy-3-phenoxypropan)

U. Ader and M. P. Schneider

Tetrahedron: Asymmetry **1992,** *3*, 205



$C_9H_{13}NO_2$

1-Amino-3-phenoxy-2-propanol

E.e. = >99% [by HPLC using Chiralcel OD]

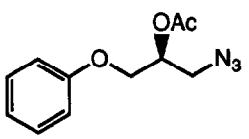
$[\alpha]_D^{20} = +3.74$ (c = 1.0, MeOH)

Source of chirality: Epoxid

Absolute configuration 2*S*
(assigned to 1,2-Epoxy-3-phenoxypropan)

U. Ader and M. P. Schneider

Tetrahedron: Asymmetry **1992,** *3*, 205



$C_{11}H_{13}N_3O_3$

2-Acetoxy-1-azido-3-phenoxypropan

E.e. = 84% [by HPLC using Chiralcel OB]

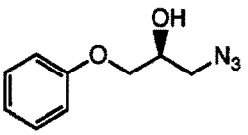
$[\alpha]_D^{20} = -44.9$ (c = 1.0, $CHCl_3$)

Source of chirality: enzymatic hydrolysis

Absolute configuration 2*S*
(assigned to 1-Amino-3-phenoxy-2-propanol)

U. Ader and M. P. Schneider

Tetrahedron: Asymmetry **1992,** *3*, 205



$C_9H_{11}N_3O_2$

1-Azido-3-phenoxy-2-propanol

E.e. = 82.7% [by HPLC using Chiralcel OD]

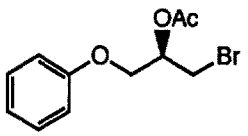
$[\alpha]_D^{20} = -20.8$ (c = 3.0, $CHCl_3$)

Source of chirality: enzymatic transesterification

Absolute configuration *2S*
(assigned to 1-Amino-3-phenoxy-2-propanol)

U. Ader and M. P. Schneider

Tetrahedron: Asymmetry **1992,** *3*, 205



$C_{11}H_{13}BrO_3$

2-Acetoxy-1-Bromo-3-phenoxypropan

E.e. = 96.9% [by HPLC as alcohol (Chiralcel OD)]

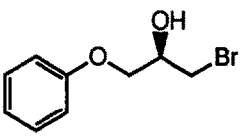
$[\alpha]_D^{20} = -25.81$ (c = 1.0, $CHCl_3$)

Source of chirality: enzymatic hydrolysis

Absolute configuration *2R*
(assigned to 1,2-Epoxy-3-phenoxypropan)

U. Ader and M. P. Schneider

Tetrahedron: Asymmetry **1992,** *3*, 205



$C_9H_{11}BrO_2$

1-Bromo-3-phenoxy-2-propanol

E.e. = 98.3% [by HPLC using Chiralcel OD]

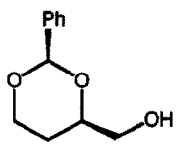
$[\alpha]_D^{20} = -0.70$ (c = 3.1, $CHCl_3$)

Source of chirality: enzymatic transesterification

Absolute configuration *2R*
(assigned to 1,2-Epoxy-3-phenoxypropan)

B. Herradón

Tetrahedron: Asymmetry **1992,** *3*, 209



$C_{11}H_{14}O_3$

(R,R)-4-Hydroxymethyl-2-phenyl-1,3-dioxane

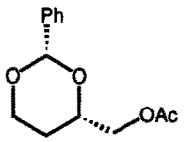
E.e. > 98% [by ^{1}H-NMR in the presence of Eu(hfc)$_3$].

$[\alpha]_D^{25} = -10.0$ ($CHCl_3$, c= 1.18)

Source of chirality: lipase catalyzed transesterification.

B. Herradón

Tetrahedron: Asymmetry **1992**, *3*, 209



E.e. =87% [by ^{1}H-NMR in the presence of Eu(hfc)$_3$]

$[\alpha]_D^{25}$= +23.5 ($CHCl_3$, c= 1.5)

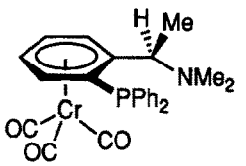
Source of chirality: lipase catalyzed transesterification.

$C_{13}H_{16}O_4$

(S,S)-4-Acetoxymethyl-2-phenyl-1,3-dioxane

M. Uemura, R. Miyake, H. Nishimura, Y. Matsumoto, T. Hayashi

Tetrahedron: Asymmetry **1992**, *3*, 213



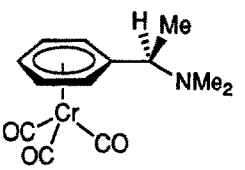
E.e. = >99%

$[\alpha]_D^{19}$ –42 (*c* 1.1, chloroform)

Absolute configuration: (*R*)-(*S*)

mp 154 °C

Source of chirality: prepared from



$C_{25}H_{24}O_3NPCr$

Tricarbonyl[(*R*)-*N*,*N*-dimethyl-1-((*S*)-2-diphenylphosphinophenyl)ethylamine]chromium

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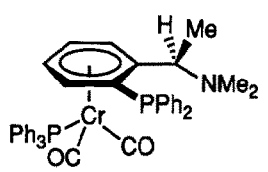
M. Uemura, R. Miyake, H. Nishimura, Y. Matsumoto, T. Hayashi

Tetrahedron: Asymmetry **1992**, *3*, 213



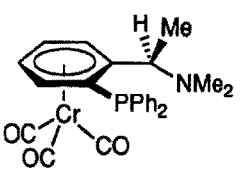
E.e. = >99%

$[\alpha]_D^{22}$ –344 (*c* 0.58, chloroform)

Absolute configuration: (*R*)-(*S*)

mp 151 °C

Source of chirality: prepared from



$C_{42}H_{39}O_2NP_2Cr$

Dicarbonyl(triphenylphosphine)[(*R*)-*N*,*N*-dimethyl-1-((*S*)-2-diphenylphosphinophenyl)ethylamine]chromium

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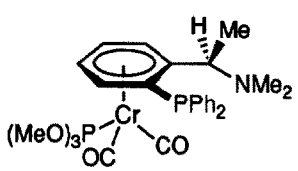
M. Uemura, R. Miyake, H. Nishimura, Y. Matsumoto, T. Hayashi

Tetrahedron: Asymmetry **1992**, *3*, 213



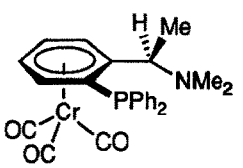
E.e. = >99%

$[\alpha]_D^{26}$ –381 (*c* 0.32, chloroform)

Absolute configuration: (*R*)-(*S*)

mp 117 °C

Source of chirality: prepared from

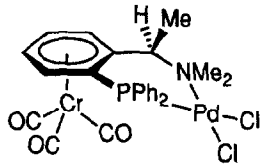


$C_{27}H_{33}O_5NP_2Cr$

Dicarbonyl(trimethyl phosphite)[(*R*)-*N*,*N*-dimethyl-1-((*S*)-2-diphenylphosphinophenyl)ethylamine]chromium

M. Uemura, R. Miyake, H. Nishimura, Y. Matsumoto, T. Hayashi

Tetrahedron: Asymmetry **1992**, *3*, 213



$C_{25}H_{24}O_3NPCl_2PdCr$

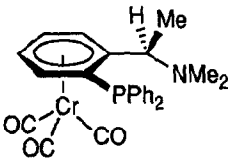
E.e. = >99%

$[\alpha]_D^{15}$ +786 (*c* 0.18, chloroform)

Absolute configuration: (*R*)-(*S*)

mp 153 °C

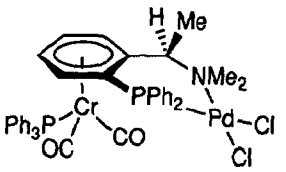
Source of chirality: prepared from



Dichloro{tricarbonyl[(*R*)-*N*,*N*-dimethyl-1-((*S*)-2-diphenylphosphinophenyl)ethylamine]chromium}palladium(II)

M. Uemura, R. Miyake, H. Nishimura, Y. Matsumoto, T. Hayashi

Tetrahedron: Asymmetry **1992**, *3*, 213



$C_{42}H_{39}O_2NP_2Cl_2PdCr$

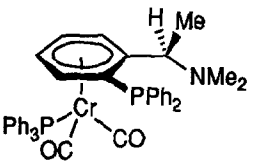
E.e. = >99%

$[\alpha]_D^{15}$ +1348 (*c* 0.14, chloroform)

Absolute configuration: (*R*)-(*S*)

mp 184 °C

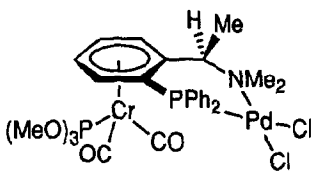
Source of chirality: prepared from



Dichloro{dicarbonyl(triphenylphosphine)[(*R*)-*N*,*N*-dimethyl-1-((*S*)-2-diphenylphosphinophenyl)ethylamine]-chromium}palladium(II)

M. Uemura, R. Miyake, H. Nishimura, Y. Matsumoto, T. Hayashi

Tetrahedron: Asymmetry **1992**, *3*, 213



$C_{27}H_{33}O_5NP_2Cl_2PdCr$

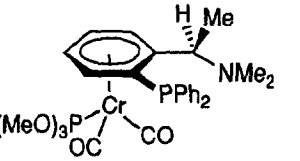
E.e. = >99%

$[\alpha]_D^{14}$ +1540 (*c* 0.15, chloroform)

Absolute configuration: (*R*)-(*S*)

mp 153 °C

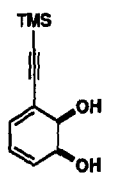
Source of chirality: prepared from



Dichloro{dicarbonyl(trimethyl phosphite)[(*R*)-*N*,*N*-dimethyl-1-((*S*)-2-diphenylphosphinophenyl)ethylamine]-chromium}palladium(II)

T. Hudlicky and E. E. Boros

Tetrahedron: Asymmetry **1992**, *3*, 217

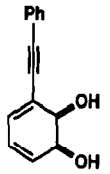


E.e. >98%, $[\alpha]_D$ = +186 , c = 1.77, $CHCl_3$

Absolute configuration: 1S, 2R (assigned by synthesis from the homochiral *cis*-diol metabolite produced from the microbial oxidation of bromobenzene by *Pseudomonas putida* strain 39-D).

T. Hudlicky and E. E. Boros

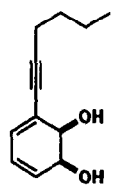
Tetrahedron: Asymmetry **1992,** *3*, 217



E.e. >98%, $[\alpha]_D$ = +181 , c = 1.11, $CHCl_3$
Absolute configuration: 1S, 2R (assigned by synthesis from the homochiral *cis*-diol metabolite produced from the microbial oxidation of bromobenzene by *Pseudomonas putida* strain 39-D).

T. Hudlicky and E. E. Boros

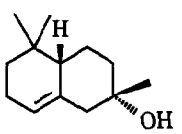
Tetrahedron: Asymmetry **1992,** *3*, 217



E.e. >98%, $[\alpha]_D$ = +144 , c = 1.54, $CHCl_3$
Absolute configuration: 1S, 2R (assigned by synthesis from the homochiral *cis*-diol metabolite produced from the microbial oxidation of bromobenzene by *Pseudomonas putida* strain 39-D).

P. Naegeli, Y. Wirz-Habersack

Tetrahedron: Asymmetry **1992,** *3*, 221



$C_{13}H_{22}O$

(-)-α-Ambrinol

(-)-2,5,5-Trimethyl-1,2,3,4,4a,5,6,7-octahydronaphthalen-2-ol

E.e. >99.6% by HPLC, GLC on chiral phases

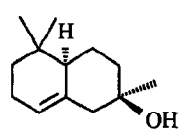
$[\alpha]_D^{20}$= -125.98 (c=1.143 in $CHCl_3$)

source of chirality: resolution of racemate via (1S)(-)-camphanic acid esters

absolute configuration 2S,4aS assigned by correlation with (+)-Ambrein (lit. [1])

P. Naegeli, Y. Wirz-Habersack

Tetrahedron: Asymmetry **1992,** *3*, 221



$C_{13}H_{22}O$

(+)-α-Ambrinol

(+)-2,5,5-Trimethyl-1,2,3,4,4a,5,6,7-octahydronaphthalen-2-ol

E.e. >99.6% by HPLC, GLC on chiral phases

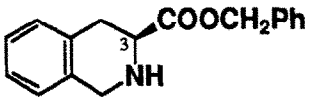
$[\alpha]_D^{20}$= +125.35 (c=1.081 in $CHCl_3$)

source of chirality: resolution of racemate via (1S)(-)-camphanic acid esters

absolute configuration 2R,4aR assigned by correlation with (-)-α-Ambrinol

K. Stingl, J. Martens* and S. Wallbaum

Tetrahedron: Asymmetry **1992**, *3*, 223



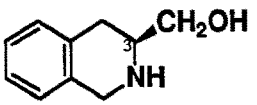
$C_{17}H_{17}NO_2$

E.e. under investigation
$[\alpha]_D^{20} = -86.6$ (c = 1.46, MeOH)
Source of chirality: (*S*)-phenylalanine
Absolute configuration S

Benzyl 1,2,3,4-tetrahydroisoquinoline-3-carboxylate

K. Stingl, J. Martens* and S. Wallbaum

Tetrahedron: Asymmetry **1992**, *3*, 223



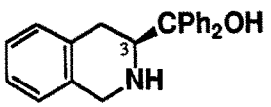
$C_{10}H_{13}NO$

E.e. under investigation
$[\alpha]_D^{20} = -101.3$ (c = 1.92, EtOH)
Source of chirality: (*S*)-phenylalanine
Absolute configuration S

(1,2,3,4-Tetrahydroisoquinolin-3-yl)methanol

K. Stingl, J. Martens* and S. Wallbaum

Tetrahedron: Asymmetry **1992**, *3*, 223



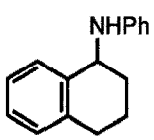
$C_{22}H_{21}NO$

E.e. under investigation
$[\alpha]_D^{20} = -93.7$ (c = 0.83, $CHCl_3$)
Source of chirality: (*S*)-phenylalanine
Absolute configuration S

α,α-Diphenyl-(1,2,3,4-tetrahydroisoquinolin-3-yl)methanol

T. Kawate, M. Nakagawa, T. Kakikawa and T. Hino

Tetrahedron: Asymmetry **1992**, *3*, 227

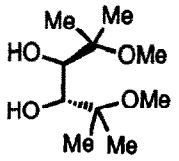


E.e.= 12% (by HPLC analysis usinf Daicel Chiracel OD)
$[\alpha]_D^{25} = +1.46$ (c 0.89, MeOH)
Source of chirality: asymmetric reduction
Absolute configuration: Not determined

N-(1-1,2,3,4-tetrahydronaphthyl)-aniline

T. Kawate, M. Nakagawa, T. Kakikawa and T. Hino

Tetrahedron: Asymmetry **1992**, *3*, 227



E.e.= ~100%

$[\alpha]_D^{25}$ = -7.83 (c 1.66, $CHCl_3$)

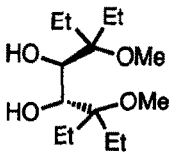
Source of chirality: natural

Absolute configuration: 3R,4R

(3R,4R)-2,5-Dimethoxy-2,5-dimethyl-3,4-hexanediol

T. Kawate, M. Nakagawa, T. Kakikawa and T. Hino

Tetrahedron: Asymmetry **1992**, *3*, 227



E.e.= ~100%

$[\alpha]_D^{23}$ = +1.86 (c 2.15, $CHCl_3$)

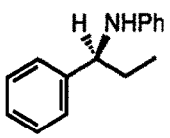
Source of chirality: natural

Absolute configuration: 4R,5R

(4R,5R)-3,6-Dimethoxy-3,6-dimethyl-4,5-octanediol

T. Kawate, M. Nakagawa, T. Kakikawa and T. Hino

Tetrahedron: Asymmetry **1992**, *3*, 227



N-(1-Phenylpropyl)-aniline

E.e.= 73% (by comparison of optical rotation with that reported)

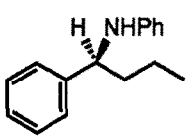
$[\alpha]_D^{25}$ = +6.40 (c 2.89, MeOH)

Source of chirality: asymmetric reduction

Absolute configuration: S
(assigned by comparison with literature data)

T. Kawate, M. Nakagawa, T. Kakikawa and T. Hino

Tetrahedron: Asymmetry **1992**, *3*, 227



N-(1-Phenylbutyl)-aniline

E.e.= 65% (by HPLC analysis usinf Daicel Chiracel OD)

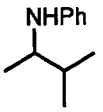
$[\alpha]_D^{25}$ = +1.84 (c 2.12, MeOH)

Source of chirality: asymmetric reduction

Absolute configuration: S
(assigned by comparison with literature data)

T. Kawate, M. Nakagawa, T. Kakikawa and T. Hino

Tetrahedron: Asymmetry **1992**, *3*, 227



N-(3-methyl-2-butyl)-aniline

E.e.= 71% (by HPLC analysis usinf Daicel Chiracel OD)

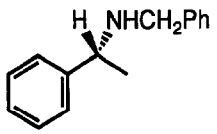
$[\alpha]_D^{23}$ = -27.90 (c 1.24, MeOH)

Source of chirality: asymmetric reduction

Absolute configuration: Not determined

T. Kawate, M. Nakagawa, T. Kakikawa and T. Hino

Tetrahedron: Asymmetry **1992**, *3*, 227



N-Benzyl-α-phnethylamine

E.e.=72% (by comparison of optical rotation with that reported)

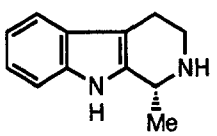
$[\alpha]_D^{22}$ = +28.57 (c 0.63, MeOH)

Source of chirality: asymmetric reduction

Absolute configuration: R
(assigned by comparison with literature data)

T. Kawate, M. Nakagawa, T. Kakikawa and T. Hino

Tetrahedron: Asymmetry **1992**, *3*, 227



1-Methyl-1,2,3,4-tetrahydro-β-carboline

E.e.= 42% (by comparison of optical rotation with that reported)

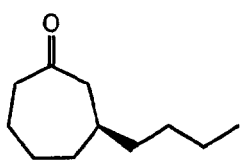
$[\alpha]_D^{27}$ = +22.0 (c 0.91, EtOH)

Source of chirality: asymmetric reduction

Absolute configuration: R
(assigned by comparison with literature data)

B. E. Rossiter, G. Miao, N. M. Swingle, M. Eguchi
A. E. Hernández, and R. G. Patterson

Tetrahedron: Asymmetry **1992**, *3*, 231



$C_{11}H_{20}O$
3-*n*-Butylcycloheptanone

E.e. = 96% [by GC, 30m Chiraldex BPH column, Astec, Inc.]

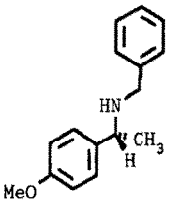
$[\alpha]_D^{24}$ = -33.0 (c 3.20, $CHCL_3$)

source of chirality: asymm. synth. (cuprate conjugate addition)

The absolute configuration has not been determined. It is believed to be 3S because of the method by which it was synthesized and by comparison of its optical rotation with that of (*R*)-(+)-3-methylcycloheptanone.

Cornelis Lensink and Johannes G. de Vries

Tetrahedron: Asymmetry **1992**, *3*, 235



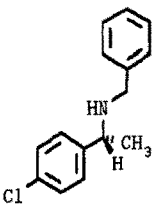
E.e.=92% [by nmr with 2,2,2,-trifluoro-1-(9-anthryl)ethanol]
$[\alpha]_D^{20}$= +59.5(c=1.0, EtOH)
Source of chirality: asymm. cat. hydrogenation of imine
Absolute configuration: R

$C_{16}H_{19}NO$

N-benzyl-4-methoxy-α-methylbenzylamine

Cornelis Lensink and Johannes G. de Vries

Tetrahedron: Asymmetry **1992**, *3*, 235



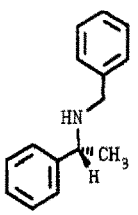
E.e.=92% [by nmr with 2,2,2,-trifluoro-1-(9-anthryl)ethanol]
$[\alpha]_D^{20}$= +49.3(c=1.0, EtOH)
Source of chirality: asymm. cat. hydrogenation of imine
Absolute configuration: R

$C_{15}H_{16}ClN$

N-benzyl-4-chloro-α-methylbenzylamine

Cornelis Lensink and Johannes G. de Vries

Tetrahedron: Asymmetry **1992**, *3*, 235



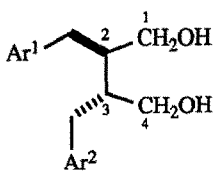
E.e.=94% [by nmr with 2,2,2,-trifluoro-1-(9-anthryl)ethanol]
$[\alpha]_D^{20}$= +56.6(c=1.0, EtOH)
Source of chirality: asymm. cat. hydrogenation of imine
Absolute configuration: R

$C_{15}H_{17}N$

N-benzyl-α-methylbenzylamine

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

Tetrahedron: Asymmetry **1992**, *3*, 239

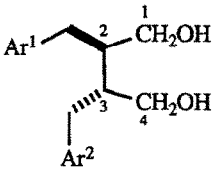


$C_{21}H_{26}O_6$

Ar^1 = 3,4-dimethoxyphenyl, Ar^2 = 3,4-methylenedioxyphenyl
Source of chirality : synthesis from (-)-menthol
Absolute configuration 2R,3R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{24}$ = -37 (c = 0.18, $CHCl_3$)

Tetrahedron: Asymmetry **1992**, *3*, 239

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

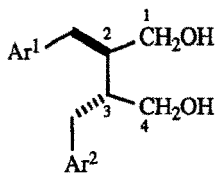


$C_{22}H_{30}O_6$

$Ar^1 = Ar^2$ = 3,4-dimethoxyphenyl
Source of chirality : synthesis from (-)-menthol
Absolute configuration 2R,3R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{18}$ = -32 (c = 2.35, $CHCl_3$)

Tetrahedron: Asymmetry **1992**, *3*, 239

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

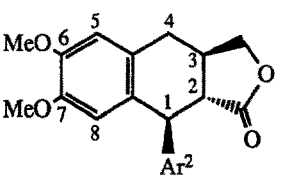


$C_{22}H_{28}O_7$

Ar^1 = 3,4-methylenedioxyphenyl, Ar^2 = 3,4,5-trimethoxyphenyl
Source of chirality : synthesis from (-)-menthol
Absolute configuration 2R,3R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{16}$ = -30 (c = 2.15, $CHCl_3$)

Tetrahedron: Asymmetry **1992**, *3*, 239

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

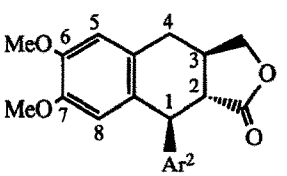


$C_{21}H_{20}O_6$

Ar^2 = 3,4-methylenedioxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 1S,2S,3R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{20}$ = -64 (c = 0.99, $CHCl_3$)

Tetrahedron: Asymmetry **1992**, *3*, 239

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

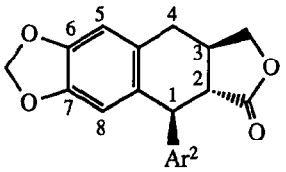


$C_{22}H_{24}O_6$

Ar^2 = 3,4-dimethoxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 1S,2S,3R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{22}$ = -58 (c = 0.87, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

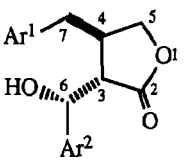


$C_{22}H_{22}O_7$

Ar^2 = 3,4,5-trimethoxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 1S,2S,3R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{21}$ = -53 (c = 0.97, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

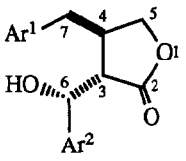


$C_{21}H_{22}O_7$

Ar^1 = 3,4-dimethoxyphenyl, Ar^2 = 3,4-methylenedioxyphenyl
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3S,4R,6R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{23}$ = -35 (c = 1.07, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

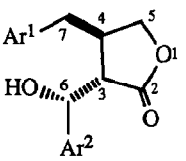


$C_{22}H_{26}O_7$

Ar^1 = Ar^2 = 3,4-dimethoxyphenyl
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3S,4R,6R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{23}$ = -39 (c = 1.17, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

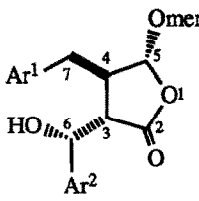


$C_{22}H_{24}O_8$

Ar^1 = 3,4-methylenedioxyphenyl, Ar^2 = 3,4,5-trimethoxyphenyl
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3S,4R,6R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{25}$ = -36 (c = 2.16, $CHCl_3$)

Tetrahedron: Asymmetry **1992,** *3*, 239

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

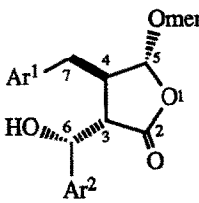


$C_{31}H_{40}O_8$

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
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{20}$ = -112 (c = 0.67, $CHCl_3$)

Tetrahedron: Asymmetry **1992,** *3*, 239

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

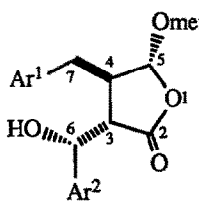


$C_{32}H_{44}O_8$

Ar^1 = Ar^2 = 3,4-dimethoxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3S,4R,5R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{23}$ = -131 (c = 0.22, $CHCl_3$)

Tetrahedron: Asymmetry **1992,** *3*, 239

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

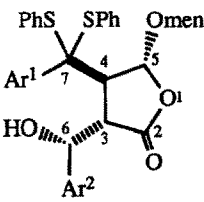


$C_{32}H_{42}O_9$

Ar^1 = 3,4-methylenedioxyphenyl, Ar^2 = 3,4,5-trimethoxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3S,4R,5R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{23}$ = -125 (c = 0.47, $CHCl_3$)

Tetrahedron: Asymmetry **1992,** *3*, 239

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

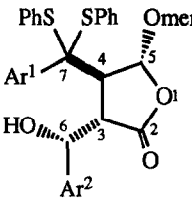


$C_{43}H_{48}S_2O_8$

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)
$[\alpha]_D^{23}$ = -145 (c = 0.98, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

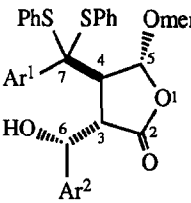


$C_{44}H_{52}S_2O_8$

$Ar^1 = Ar^2$ = 3,4-dimethoxyphenyl
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)
$[\alpha]_D^{23}$ = -144 (c = 0.47, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

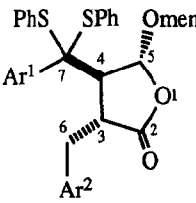


$C_{44}H_{50}S_2O_9$

Ar^1 = 3,4-methylenedioxyphenyl, Ar^2 = 3,4,5-trimethoxyphenyl
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)
$[\alpha]_D^{25}$ = -159 (c = 2.62, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

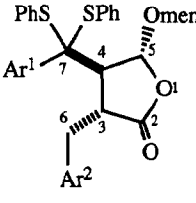


$C_{43}H_{48}S_2O_7$

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 3R,4R,5R
(assigned by correlation with, and X-ray analysis of, related thioether adduct)
$[\alpha]_D^{25}$ = -162 (c = 0.71, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

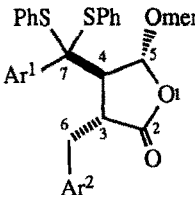


$C_{44}H_{52}S_2O_7$

$Ar^1 = Ar^2$ = 3,4-dimethoxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3R,4R,5R
(assigned by correlation with, and X-ray analysis of, related thioether adduct)
$[\alpha]_D^{24}$ = -156 (c = 0.36, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

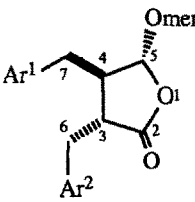


$C_{44}H_{50}S_2O_8$

Ar^1 = 3,4-methylenedioxyphenyl, Ar^2 = 3,4,5-trimethoxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3R,4R,5R
(assigned by correlation with, and X-ray analysis of, related thioether adduct)
$[\alpha]_D^{20}$ = -179 (c = 2.18, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

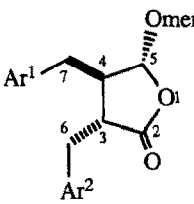


$C_{31}H_{40}O_7$

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 3R,4R,5R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{25}$ = -124 (c = 1.16, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

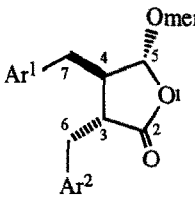


$C_{32}H_{44}O_7$

Ar^1 = Ar^2 = 3,4-dimethoxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3R,4R,5R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{21}$ = -117 (c = 1.67, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

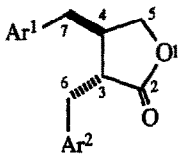


$C_{32}H_{42}O_8$

Ar^1 = 3,4-methylenedioxyphenyl, Ar^2 = 3,4,5-trimethoxyphenyl
D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3R,4R,5R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{20}$ = -112 (c = 4.40, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

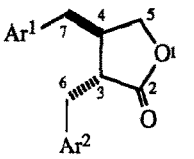


$C_{21}H_{22}O_6$

Ar^1 = 3,4-dimethoxyphenyl, Ar^2 = 3,4-methylenedioxyphenyl
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3R,4R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{23}$ = -36 (c = 0.21, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

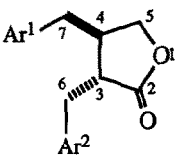


$C_{22}H_{26}O_6$

Ar^1 = Ar^2 = 3,4-dimethoxyphenyl
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3R,4R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{18}$ = -28 (c = 1.62, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

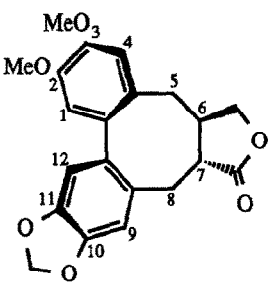


$C_{22}H_{24}O_7$

Ar^1 = 3,4-methylenedioxyphenyl, Ar^2 = 3,4,5-trimethoxyphenyl
Source of chirality : synthesis from (-)-menthol
Absolute configuration 3R,4R
(assigned by correlation with, and X-ray analysis of, related compound)
$[\alpha]_D^{18}$ = -44 (c = 1.33, $CHCl_3$)

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

Tetrahedron: Asymmetry **1992,** *3*, 239

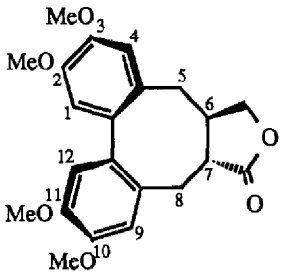


D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 6R,7R,1a/12aS
(assigned by correlation of specific rotation and ^{13}C n.m.r. with literature)
$[\alpha]_D^{22}$ = +90 (c = 0.82, $CHCl_3$)

$C_{21}H_{20}O_6$

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

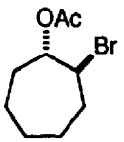
Tetrahedron: Asymmetry **1992**, *3*, 239



D.e. 100% by n.m.r.
Source of chirality : synthesis from (-)-menthol
Absolute configuration 6R,7R,1a/12aS
(assigned by correlation of specific rotation and ^{13}C n.m.r. with literature)
$[\alpha]_D^{21}$ = +188 (c = 2.16, $CHCl_3$)
$C_{22}H_{24}O_6$

A.K. Gupta, R.J. Kazlauskas

Tetrahedron: Asymmetry **1992**, *3*, 243

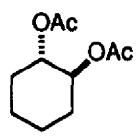


$C_9H_{15}BrO_2$

ee = 97.4±0.9% (by ^{1}NMR with (+)-Eu(hfc)$_3$).
$[\alpha]_D$ = +29 (c 1.50, $CHCl_3$)
Source of Chirality : Enantioselective enzymic resolution.
Absolute Configuration : 1S, 2S (by conversion to (S)-(-)-2-cyclohepten-1-ol and comparison of sign of rotation with the literature*).
* Kasai, M.; Ziffer, H. *J. Org. Chem.* **1983**, *48*, 712-715.

A.K. Gupta, R.J. Kazlauskas

Tetrahedron: Asymmetry **1992**, *3*, 243

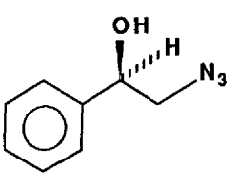


$C_{10}H_{16}O_4$

ee = 99.7±0.1% (by ^{1}NMR with (+)-Eu(hfc)$_3$).
$[\alpha]_D$ = +16.1 (c 0.42, CH_3OH) [lit.* +12.4° (c 1.20, $CHCl_3$)]
Source of Chirality : Enantioselective enzymic resolution.
Absolute Configuration : 1S, 2S
* Kasai, M.; Kawai, K.; Imuta, M.; Ziffer, H. *J. Org. Chem.* **1984**, *49*, 675-679.

A. Guy, J. Doussot, R. Garreau and A. Godefroy-Falguières

Tetrahedron: Asymmetry **1992**, *3*, 247



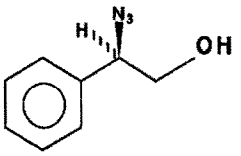
$C_8H_9N_3O$
2-Azido-1-phenylethanol

E.e. = 78 % [determined by comparison of optical rotation with that reported and by nmr of Mosher derivative]
$[\alpha]_D^{23}$ = - 76 (c 1.08, CH_2Cl_2)

Source of chirality : kinetic resolution by β-CD
Absolute configuration R

A. Guy, J. Doussot, R. Garreau and A. Godefroy-Falguières

Tetrahedron: Asymmetry **1992**, *3*, 247



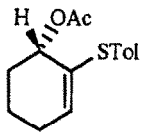
$C_8H_9N_3O$
2-Azido-2-phenylethanol

E.e. = 16 % [determined by comparison of optical rotation with that reported]
$[\alpha]_D^{23}$ = + 27 (c 0.96, CH_2Cl_2)

Source of chirality : kinetic resolution by β-CD
Absolute configuration S

A. B. Bueno, M. C. Carreño, J. L. García Ruano and A. Rubio.

Tetrahedron: Asymmetry **1992**, *3*, 251



$C_{15}H_{18}SO_2$

(S)-(-)-2-*p*-tolylsulfenyl-2-cyclohexenyl acetate

E.e.= >97% [by ^{1}H NMR with $Eu(tfc)_3$]

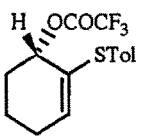
$[\alpha]_D^{25}$= -99.1 (c=0.5, $CHCl_3$)

Source of chirality: asymetric synthesis based on menthyl sulfinate as starting material.

Absolute configuration: *S*

A. B. Bueno, M. C. Carreño, J. L. García Ruano and A. Rubio.

Tetrahedron: Asymmetry **1992**, *3*, 251



$C_{15}H_{18}F_3SO_2$

(S)-(-)-2-*p*-tolylsulfenyl-2-cyclohexenyl trifluoroacetate

E.e.= >97% [by ^{1}H NMR with $Eu(tfc)_3$]

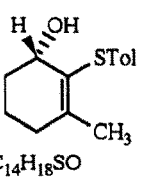
$[\alpha]_D^{25}$= -154 (c=1, $CHCl_3$)

Source of chirality: asymetric synthesis based on menthyl sulfinate as starting material.

Absolute configuration: *S*

A. B. Bueno, M. C. Carreño, J. L. García Ruano and A. Rubio.

Tetrahedron: Asymmetry **1992**, *3*, 251



$C_{14}H_{18}SO$

(S)-(-)-3-methyl-2-*p*-tolylsulfenyl-2-cyclohexenol

E.e.= >97% [by ^{1}H NMR with $Eu(tfc)_3$]

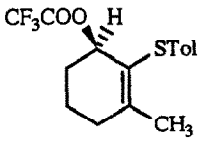
$[\alpha]_D^{25}$= -233 (c=0.9, $CHCl_3$)

Source of chirality: asymetric synthesis based on menthyl sulfinate as starting material.

Absolute configuration: *S*

A. B. Bueno, M. C. Carreño, J. L. García Ruano and A. Rubio.

Tetrahedron: Asymmetry **1992**, *3*, 251



$C_{16}H_{17}F_3SO_2$

E.e.= >97% [by ^{1}H NMR with Eu(tfc)$_3$]

$[\alpha]_D^{25}$= +207 (c=1, $CHCl_3$)

Source of chirality: asymetric synthesis based on menthyl sulfinate as starting material.

Absolute configuration: *S*

(R)-(+)-*3*-methyl-2-*p*-tolylsulfenyl-2-cyclohexenyl trifluoroacetate

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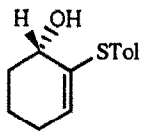
A. B. Bueno, M. C. Carreño, J. L. García Ruano and A. Rubio.

Tetrahedron: Asymmetry **1992**, *3*, 251



$C_{13}H_{16}SO$

E.e.= >97% [by ^{1}H NMR with Eu(tfc)$_3$]

$[\alpha]_D^{25}$= -215 (c=1.2, $CHCl_3$)

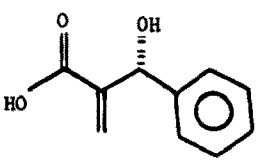
Source of chirality: asymetric synthesis based on menthyl sulfinate as starting material.

Absolute configuration: *S*

(S)-(-)-2-*p*-tolylsulfenyl-2-cyclohexenol

S.E. Drewes, N.D. Emslie, J.S. Field, A.A. Khan and N. Ramesar

Tetrahedron: Asymmetry **1992**, *3*, 255



$C_{10}H_{10}O_3$

3-Hydroxy-2-methylene-3-phenylpropanoic Acid

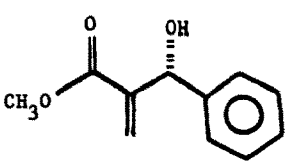
$[\alpha]_D^{25}$ = -23.2 (c 1.05, $CHCl_3$)

Source of chirality: Resolution

Absolute configuration: 3R

S.E. Drewes, N.D. Emslie, J.S. Field, A.A. Khan and N. Ramesar

Tetrahedron: Asymmetry **1992**, *3*, 255



$C_{11}H_{12}O_3$

Methyl 3-hydroxy-2-methylene-3-phenylpropanoate

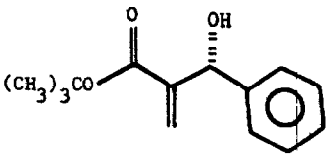
$[\alpha]_D^{26}$ = -111.1 (c 1.11, MeOH)

Source of chirality: Resolution

Absolute configuration: 3R

S.E. Drewes, N.D. Emslie, J.S. Field, A.A. Khan and N. Ramesar

Tetrahedron: Asymmetry **1992**, *3*, 255



$C_{14}H_{18}O_3$

tert. Butyl 3-hydroxy-2-methylene-3-phenylpropanoate

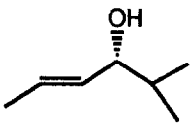
$[\alpha]_D^{26}$ = -93.2 (c 1.09, MeOH)

Source of chirality: Resolution

Absolute configuration: 3R

J.M. Brown, S.W. Leppard & G.C. Lloyd-Jones

Tetrahedron: Asymmetry **1992**, *3*, 261



$C_7H_{14}O$

3R - 2-methyl-4-hexen-3-ol

E.e. = ≥99%

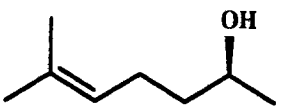
$[\alpha]_D^{20}$ = -8.39 (c=0.405, $CHCl_3$)

Source of chirality Sharpless kinetic resolution

Absolute configuration 3R

F. Secundo, S. Riva, G. Carrea

Tetrahedron: Asymmetry **1992**, *3*, 267



$C_8H_{16}O$

6-methyl-5-hepten-2-ol

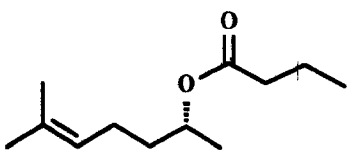
E.e. = 95 % by chiral GLC with a CP-Cyclodextrin-β-2,3,6-M-19 column

Source of chirality : Porcine pancreatic lipase- catalyzed acylation

Absolute configuration : S

F. Secundo, S. Riva, G. Carrea

Tetrahedron: Asymmetry **1992**, *3*, 267



$C_{12}H_{22}O_2$

6-methyl-5-hepten-2-ol butanoate

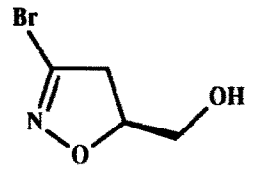
E.e. = 94 % by chiral GLC with a CP-Cyclodextrin-β-2,3,6-M-19 column

Source of chirality : Porcine pancreatic lipase- catalyzed acylation

Absolute configuration : R

F. Secundo, S. Riva, G. Carrea

Tetrahedron: Asymmetry **1992**, *3*, 267



E.e. = 86 % by chiral HPLC with a Chiralcel OB column

Source of chirality : Lipase PS catalyzed acylation

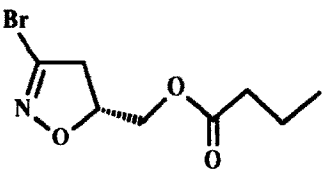
Absolute configuration : S

$C_4H_6BrNO_2$

3-Bromo-5-hydroxymethyl-Δ^2-isoxazoline

F. Secundo, S. Riva, G. Carrea

Tetrahedron: Asymmetry **1992**, *3*, 267



E.e. = 86 % by chiral HPLC with a Chiralcel OB column

Source of chirality : Lipase PS catalyzed acylation

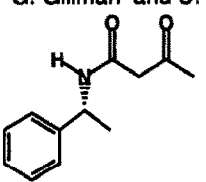
Absolute configuration : R

$C_8H_{12}BrNO_3$

3-Bromo-5-hydroxymethyl-Δ^2-isoxazoline butanoate

T. Hudlicky, G. Gillman and C. Andersen

Tetrahedron: Asymmetry **1992**, *3*, 281



$C_{12}H_{15}O_2N$

N-(1(R)-phenylethyl)-3-oxobutyramide

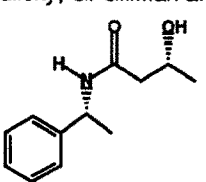
Source of Chirality: (R)-(+) 1-phenyl-ethylamine (Aldrich)

ee=98%, $[\alpha]_D^{25}$=+113.65 (c=0.32, MeOH)

absolute configuration: R

T. Hudlicky, G. Gillman and C. Andersen

Tetrahedron: Asymmetry **1992**, *3*, 281



$C_{12}H_{17}NO_2$

N-(1(R)-phenylethyl)-3(R)-hydroxybutyramide

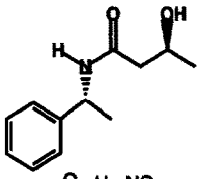
Source of Chirality: (R)-(+)-1-phenyl-ethylamine (Aldrich)

ee=98%, $[\alpha]_D^{25}$=+73.33 (c=3.3, MeOH)

absolute configuration: 1(R), 3(R)

Tetrahedron: Asymmetry **1992**, *3*, 281

T. Hudlicky, G. Gillman and C. Andersen



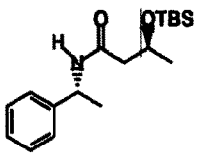
$C_{12}H_{17}NO_2$

N-(1(R)-phenylethyl)-3(S)-hydroxybutyramide

Source of Chirality:
a: (R)-(+)-1-phenylethylamine (Aldrich)
ee=98%, $[\alpha]_D^{25}$=+110.81 (c=3.34 MeOH)
b: yeast reduction of racemate
ee=84.6%, $[\alpha]_D^{25}$ =+95.65 (c=0.32 MeOH)
absolute configuration: 1(R), 3(S)

Tetrahedron: Asymmetry **1992**, *3*, 281

T. Hudlicky, G. Gillman and C. Andersen



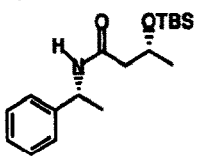
$C_{18}H_{31}NO_2Si$

N-(1(R)-phenylethyl)-3(S)-t-butyldimethylsilyloxybutyramide

Source of Chirality: (R)-(+)-1-phenyl-ethylamine (Aldrich)
ee=98%, $[\alpha]_D^{25}$=+91.22 (c=28.8 MeOH)
absolute configuration: 1(R), 3(S)

Tetrahedron: Asymmetry **1992**, *3*, 281

T. Hudlicky, G. Gillman and C. Andersen



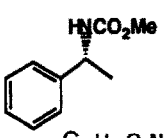
$C_{18}H_{31}O_2SiN$

N-(1(R)-phenylethyl)-3(R)-t-butyldimethylsilyloxybutyramide

Source of Chirality: (R)-(+) 1-phenyl-ethylamine (Aldrich)
ee=98%, $[\alpha]_D^{25}$=+34.4 (c=15.0 MeOH)
absolute configuration: 1(R), 3(R)

Tetrahedron: Asymmetry **1992**, *3*, 281

T. Hudlicky, G. Gillman and C. Andersen



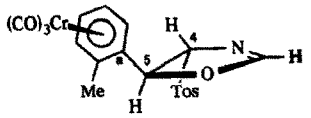
$C_{12}H_{15}O_2N$

Methyl N-(1(R)-phenylethyl)carbamate

Source of Chirality: (R)-(+)-1-phenyl-ethylamine (Aldrich)
ee=98%, $[\alpha]_D^{25}$=+88.58 (c=1.13, MeOH)
absolute configuration: R

A. Solladié-Cavallo, S. Quazzotti, S. Colonna, A. Manfredi, J. Fischer, A. DeCian

Tetrahedron: Asymmetry **1992**, *3*, 287



$C_{20}H_{17}CrNO_6S$

5-[(o-Tolyl)-chromium-tricarbonyl]
-4-(p-toluensulfonyl) oxazoline

E.e. = about 100% (from 200MHz ^{1}H NMR)

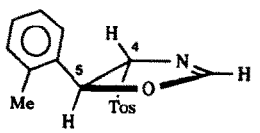
$[\alpha]_D$ = -299 (c, 2.9; $CHCl_3$)

Source of chirality: Diastereoselective addition on optically pure arene-$Cr(CO)_3$

Absolute configuration: a*R*,4*S*,5*R* (from ^{1}H NMR and correlation with natural Halostachine)

A. Solladié-Cavallo, S. Quazzotti, S. Colonna, A. Manfredi, J. Fischer, A. DeCian

Tetrahedron: Asymmetry **1992**, *3*, 287



$C_{17}H_{17}NO_3S$

5-(o-Tolyl)-4-(p-toluensulfonyl)
oxazoline

E.e. = about 100% (from 200MHz ^{1}H NMR)

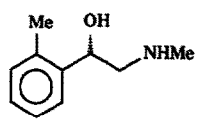
$[\alpha]_D$ = -170 (c, 3.1; $CHCl_3$)

Source of chirality: Diastereoselective addition on optically pure arene-$Cr(CO)_3$

Absolute configuration: 4*S*,5*S* (from ^{1}H NMR and correlation with natural Halostachine)

A. Solladié-Cavallo, S. Quazzotti, S. Colonna, A. Manfredi, J. Fischer, A. DeCian

Tetrahedron: Asymmetry **1992**, *3*, 287



$C_{10}H_{15}NO$

N-Methyl-2-hydroxy-2-(o-tolyl)
ethylamine

E.e. = about 100% (from 200MHz ^{1}H NMR)

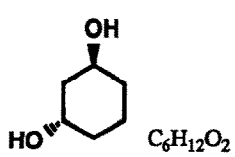
$[\alpha]_D$ = +42 (c, 3.8; $CHCl_3$)

Source of chirality: Diastereoselective addition on optically pure arene-$Cr(CO)_3$

Absolute configuration: *S* (from the fact that natural (-)-Halostachine is *R*)

H. Suemune, K. Matsuno, M. Uchida, and K. Sakai*

Tetrahedron: Asymmetry **1992**, *3*, 297



$C_6H_{12}O_2$

(*S*,*S*)-Cyclohexane-1,3-diol

E.e.=87% [by ^{1}H NMR of a precursor]

$[\alpha]_D^{25}$ +3.0 (c=1.0, $CHCl_3$)

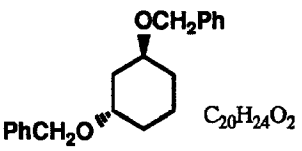
Source of chirality: enantioselective enzymatic hydrolysis of a precursor.

Absolute configuration: 1*S*, 3*S*

(assigned by chemical correlation)

H. Suemune, K. Matsuno, M. Uchida, and K. Sakai*

Tetrahedron: Asymmetry **1992**, *3*, 297



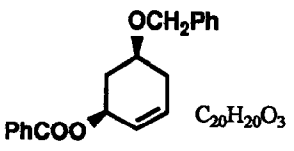
$C_{20}H_{24}O_2$

(*S*,*S*)-1,3-Dibenzyloxycyclohexane

E.e.=87% [by ^{1}H NMR of a precursor]
$[\alpha]_D^{22}$ +11.5 (c=1.0, $CHCl_3$)
Source of chirality: enantioselective enzymatic hydrolysis of a precursor.
Absolute configuration: 1*S*, 3*S*
(assigned by chemical correlation)

H. Suemune, K. Matsuno, M. Uchida, and K. Sakai*

Tetrahedron: Asymmetry **1992**, *3*, 297



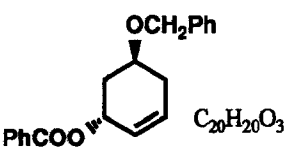
$C_{20}H_{20}O_3$

(3*S*,5*S*)-3-Benzoyloxy-5-benzyloxy-1-cyclohexene

E.e.=87% [by ^{1}H NMR of a precursor]
$[\alpha]_D^{25}$ -125 (c=0.6, $CHCl_3$)
Source of chirality: enantioselective enzymatic hydrolysis of a precursor.
Absolute configuration: 3*S*, 5*S*
(assigned by CD spectrum)

H. Suemune, K. Matsuno, M. Uchida, and K. Sakai*

Tetrahedron: Asymmetry **1992**, *3*, 297



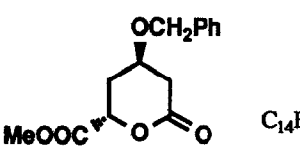
$C_{20}H_{20}O_3$

(3*R*,5*S*)-3-Benzoyloxy-5-benzyloxy-1-cyclohexene

E.e.=87% [by ^{1}H NMR of a precursor]
$[\alpha]_D^{24}$ +100 (c=0.8, $CHCl_3$)
Source of chirality: enantioselective enzymatic hydrolysis of a precursor.
Absolute configuration: 3*R*, 5*S*
(assigned by CD spectrum)

H. Suemune, K. Matsuno, M. Uchida, and K. Sakai*

Tetrahedron: Asymmetry **1992**, *3*, 297



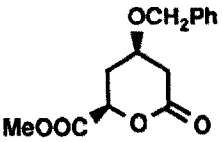
$C_{14}H_{16}O_5$

(4*R*,6*S*)-4-Benzyloxy-6-methoxycarbonyltetrahydro-2-pyranone

E.e.=87% [by ^{1}H NMR of a precursor]
$[\alpha]_D^{24}$ +12.8 (c=0.6, $CHCl_3$)
Source of chirality: enantioselective enzymatic hydrolysis of a precursor.
Absolute configuration: 4*R*, 6*S*
(assigned by chemical correlation)

H. Suemune, K. Matsuno, M. Uchida, and K. Sakai*

Tetrahedron: Asymmetry **1992**, *3*, 297



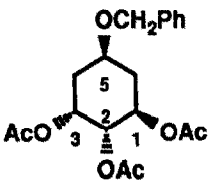
$C_{14}H_{16}O_5$

(4*R*,6*R*)-4-Benzyloxy-6-methoxy-carbonyltetrahydro-2-pyranone

E.e.=87% [by ^{1}H NMR of a precursor]
$[\alpha]_D^{20}$ -11.5 (c=0.5, $CHCl_3$)
Source of chirality: enantioselective enzymatic hydrolysis of a precursor.
Absolute configuration: 4*R*, 6*R*
(assigned by chemical correlation)

H. Suemune, K. Matsuno, M. Uchida, and K. Sakai*

Tetrahedron: Asymmetry **1992**, *3*, 297



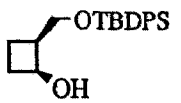
$C_{19}H_{24}O_7$

(1*R*,2*S*,3*R*,5*R*)-1,2,3-Triacetoxy-5-benzyloxycyclohexane

E.e.=87% [by ^{1}H NMR of a precursor]
$[\alpha]_D^{25}$ -16.7 (c=3.1, $CHCl_3$)
Source of chirality: enantioselective enzymatic hydrolysis of a precursor.
Absolute configuration: 1*R*,2*S*,3*R*,5*R*
(assigned by chemical correlation)

M. Sato, H. Ohuchi, Y. Abe, and C. Kaneko

Tetrahedron: Asymmetry **1992**, *3*, 313



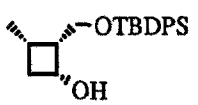
$C_{21}H_{28}O_2Si$

(1*S*,2*S*)-2-(*tert*-Butyldiphenylsiloxymethyl)cyclobutan-1-ol

E.e.=98% [by NMR of the (*R*)-MTPA ester]
$[\alpha]_D^{21}$= -4.5 (*c* 2.47, $CHCl_3$)
Sourse of chirality: kinetic resolution by lipase
Absolute configuration (1*S*,2*S*)
(assigned by conversion to the known compound)

M. Sato, H. Ohuchi, Y. Abe, and C. Kaneko

Tetrahedron: Asymmetry **1992**, *3*, 313



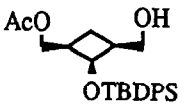
$C_{22}H_{30}O_2Si$

(1*R*,2*R*,3*S*)-2-(*tert*-Butyldiphenylsiloxymethyl)-3-methylcyclobutan-1-ol

E.e.=≥98% [by NMR of the (*R*)-MTPA ester]
$[\alpha]_D^{24}$= -10.55 (*c* 4.90, $CHCl_3$)
Sourse of chirality: kinetic resolution by lipase
Absolute configuration (1*R*,2*R*,3*S*)
(assigned by conversion to the known compound)

M. Sato, H. Ohuchi, Y. Abe, and C. Kaneko

Tetrahedron: Asymmetry **1992,** *3*, 313



E.e.=95% [by NMR of the (*R*)-MTPA ester]

$[\alpha]_D^{23}$= +32.9 (c 2.56, $CHCl_3$)

Source of chirality: acetylation by lipase

Absolute configuration (1*R*,2*R*,3*S*)

$C_{24}H_{32}O_4Si$ (assigned by conversion to the known compound)

(1*R*,2*R*,3*S*)-1-Acetoxymethyl-2-(*tert*-butyldiphenylsiloxy)-3-hydroxymethylcyclobutane

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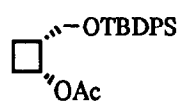
M. Sato, H. Ohuchi, Y. Abe, and C. Kaneko

Tetrahedron: Asymmetry **1992,** *3*, 313



E.e.=90% [by NMR of the (*R*)-MTPA ester]

$[\alpha]_D^{21}$= +22.8 (c 2.68, $CHCl_3$)

Source of chirality: kinetic resolution by lipase

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

$C_{23}H_{30}O_3Si$ (assigned by conversion to the known compound)

(1*R*,2*R*)-1-Acetoxy-2-(*tert*-butyldiphenylsiloxymethyl)cyclobutane

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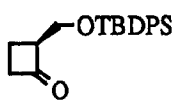
Tetrahedron: Asymmetry **1992,** *3*, 313

M. Sato, H. Ohuchi, Y. Abe, and C. Kaneko



$[\alpha]_D^{20}$= -24.1 (*c* 2.37, $CHCl_3$)

Source of Chirality: kinetic resolution by lipase

Absolute configration (*S*)

(assigned by conversion to the known compound)

$C_{21}H_{26}O_2Si$

(*S*)-2-(*tert*-Butyldiphenylsiloxymethyl)cyclobutan-1-one

Tetrahedron: Asymmetry **1992,** *3*, 313

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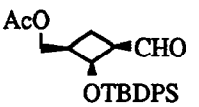

$[\alpha]_D^{19}$= -26.1 (*c* 1.38, $CHCl_3$)

Source of Chirality: acetylation by lipase

Absolute configration (1*R*,2*S*,3*R*)

(assigned by conversion to the known compound)

$C_{24}H_{30}O_4Si$

(1R,2S,3R)-3-Acetoxymethyl-2-(*tert*-Butyldiphenylsiloxy)cyclobutanal

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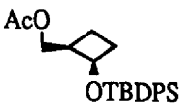
Tetrahedron: Asymmetry **1992,** *3*, 313



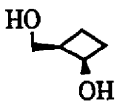
$[\alpha]_D^{21}$= +35.9 (*c* 2.63, $CHCl_3$)
Source of chirality: acetylation by lipase
Absolute configration (1*R*,2*R*)
(assigned by conversion to the known compound)

$C_{23}H_{30}O_3Si$

(1*R*,2*R*)-1-Acetoxymethyl-2-(*tert*-butyldiphenylsiloxy)cyclobutane

M. Sato, H. Ohuchi, Y. Abe, and C. Kaneko

Tetrahedron: Asymmetry **1992,** *3*, 313



$[\alpha]_D^{23}$= -27.6 (*c* 0.37, $CHCl_3$)
Source of chirality: acetylation by lipase
Absolute configration (1*R*,2*R*)
(assigned by conversion to the known compound)

$C_5H_{10}O_2$

(1*R*,2*R*)-2-Hydroxymethylcyclobutan-1-ol