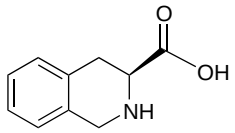
Remedios Sánchez, Héctor Luna,* Herminia I. Pérez, Norberto Manjarrez and Aida Solís

Tetrahedron: Asymmetry *12 (2001) 1399*



$C_{10}H_{11}NO_2$

(3*S*)-1,2,3,4-Tetrahydroisoquinoline-3-carboxylic acid

E.e. = 89%

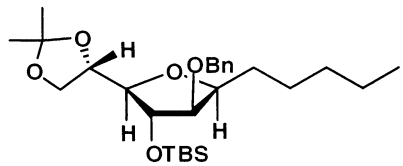
$[\alpha]_D = -138$ (*c* 1.0, MeOH)

Source of chirality: resolution by enzymatic hydrolysis

Absolute configuration: *S*

Hidemi Yoda,* Kazuhide Maruyama and Kunihiko Takabe

Tetrahedron: Asymmetry *12 (2001) 1403*



$C_{27}H_{46}O_5Si$

4-Benzyloxy-3-(*tert*-butyldimethylsilyl)oxy-2-(1,2-*O*-isopropylidene)-5-pentyltetrahydrofuran

E.e. >99% (determined by HPLC)

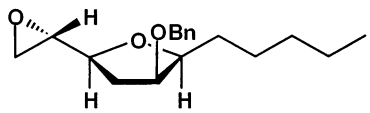
$[\alpha]_D^{23}$ +11.6 (*c* 1.12, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration (2*R*,1*S*,3*R*,4*R*,5*S*)

Hidemi Yoda,* Kazuhide Maruyama and Kunihiko Takabe

Tetrahedron: Asymmetry *12 (2001) 1403*



$C_{18}H_{26}O_3$

4-Benzyloxy-2-(1,2-epoxy)-5-pentyltetrahydrofuran

E.e. >99% (determined by HPLC)

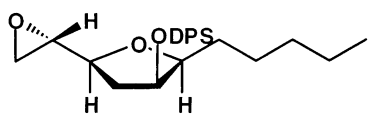
$[\alpha]_D^{25}$ +44.9 (*c* 0.97, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration (2*S*,1*S*,4*S*,5*S*)

Hidemi Yoda,* Kazuhide Maruyama and Kunihiko Takabe

Tetrahedron: Asymmetry *12 (2001) 1403*



$C_{27}H_{38}O_3Si$

4-(*tert*-Butyldiphenylsilyl)oxy-2-(1,2-epoxy)-5-pentyltetrahydrofuran

E.e. >99% (determined by HPLC)

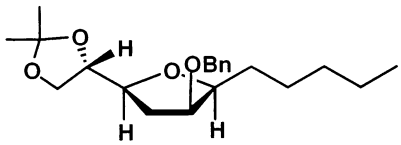
$[\alpha]_D^{24}$ +33.2 (*c* 0.66, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration (2*S*,1*S*,3*S*,5*S*)

Hidemi Yoda,* Kazuhide Maruyama and Kunihiko Takabe

Tetrahedron: Asymmetry *12 (2001) 1403*



$C_{21}H_{32}O_4$

4-Benzyloxy-2-(1,2-*O*-isopropylidene)-5-pentyltetrahydrofuran

E.e. >99% (determined by HPLC)

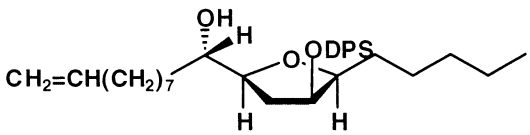
$[\alpha]_D^{23}$ +21.5 (*c* 1.01, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration (2*S*,1*S*,4*S*,5*S*)

Hidemi Yoda,* Kazuhide Maruyama and Kunihiko Takabe

Tetrahedron: Asymmetry *12 (2001) 1403*



$C_{35}H_{54}O_3Si$

7-(*tert*-Butyldiphenylsilyl)oxy-6,9-epoxynonadec-18-ene-10-ol

E.e. >99% (determined by HPLC)

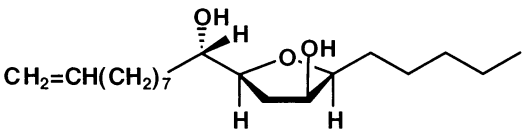
$[\alpha]_D^{24.5}$ +20.6 (*c* 0.32, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration (6*S*,7*S*,9*S*,10*S*)

Hidemi Yoda,* Kazuhide Maruyama and Kunihiko Takabe

Tetrahedron: Asymmetry *12 (2001) 1403*



$C_{35}H_{54}O_3Si$

6,9-Epoxynonadec-18-ene-7,10-diol

E.e. >99% (determined by HPLC)

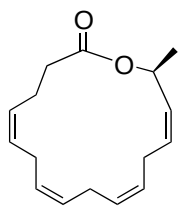
$[\alpha]_D^{23.2}$ +23.7 (*c* 0.42, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration (6*S*,7*S*,9*S*,10*S*)

Trond Vidar Hansen and Yngve Stenstrøm*

Tetrahedron: Asymmetry *12 (2001) 1407*



$C_{16}H_{22}O_2$

(16*S*)-(−)-Methyloxacyclohexadeca-(5*Z*,8*Z*,11*Z*,14*Z*)-tetraen-2-one

E.e. = 98.0%

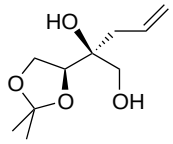
$[\alpha]_D^{25} = -55.5$ (*c* 0.3, $CHCl_3$)

Source of chirality: 3-butyn-(2*S*)-acetate

Absolute configuration: (16*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



$C_{10}H_{18}O_4$

2-(2,2-Dimethyl-1,3-dioxolan-4-yl)-4-pentene-1,2-diol

E.e. >96% (by preparation method)

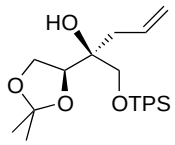
$[\alpha]_D^{22} = +7.1$ ($c = 4.8$, $CHCl_3$)

Source of chirality: synthesis from L-erythrulose

Absolute configuration: (2*S*,4′*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



$C_{26}H_{36}O_4Si$

1-*O*-(*t*-Butyldiphenylsilyl)-2-(2,2-dimethyl-1,3-dioxolan-4-yl)-4-pentene-1,2-diol

E.e. >96% (by preparation method)

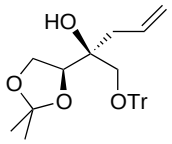
$[\alpha]_D^{22} = +2.8$ ($c = 4$, $CHCl_3$)

Source of chirality: synthesis from L-erythrulose

Absolute configuration: (2*S*,4′*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



$C_{29}H_{32}O_4$

1-*O*-(Trityl)-2-(2,2-Dimethyl-1,3-dioxolan-4-yl)-4-pentene-1,2-diol

E.e. >96% (by preparation method)

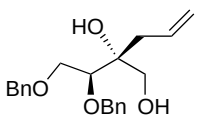
$[\alpha]_D^{22} = -7.1$ ($c = 6.6$, $CHCl_3$)

Source of chirality: synthesis from L-erythrulose

Absolute configuration: (2*S*,4′*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



$C_{21}H_{26}O_4$

2-[1,2-Bis(benzyloxy)ethyl]-4-pentene-1,2-diol

E.e. >96% (by preparation method)

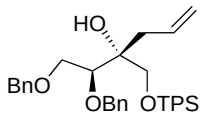
$[\alpha]_D^{22} = +24.7$ ($c = 2.2$, $CHCl_3$)

Source of chirality: synthesis from L-erythrulose

Absolute configuration: (2*R*,1′*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



$C_{37}H_{44}O_4Si$

1-*O*-(*t*-Butyldiphenylsilyl)-2-[1,2-bis(benzyloxy)ethyl]-4-pentene-1,2-diol

E.e. >96% (by preparation method)

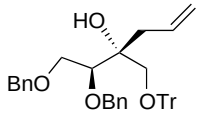
$[\alpha]_D^{22} = -2.4$ ($c = 11.8$, $CHCl_3$)

Source of chirality: synthesis from L-erythrulose

Absolute configuration: (2*R*,1′*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



$C_{40}H_{40}O_4$

1-*O*-Trityl-2-[1,2-bis(benzyloxy)ethyl]-4-pentene-1,2-diol

E.e. >96% (by preparation method)

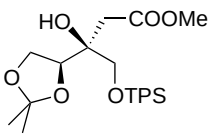
$[\alpha]_D^{22} = -2.4$ ($c = 11.4$, $CHCl_3$)

Source of chirality: synthesis from L-erythrulose

Absolute configuration: (2*R*,1′*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



$C_{26}H_{36}O_6Si$

Methyl 4-(*t*-butyldiphenylsilyloxy)-3-(2,2-dimethyl-1,3-dioxolan-4-yl)-3-hydroxybutanoate

E.e. >96% (by preparation method)

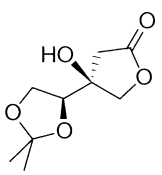
$[\alpha]_D^{22} = -9.2$ ($c = 0.35$, $CHCl_3$)

Source of chirality: synthesis from L-erythrulose

Absolute configuration: (3*S*,4′*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



$C_9H_{14}O_5$

4-(2,2-Dimethyl-1,3-dioxolan-4-yl)-4-hydroxytetrahydrofuran-2-one

E.e. >96% (by preparation method)

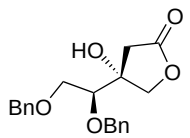
$[\alpha]_D^{22} = -35.4$ ($c = 1.4$, $CHCl_3$)

Source of chirality: synthesis from L-erythrulose

Absolute configuration: (4*S*,4′*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



$C_{20}H_{23}O_5$

4-[1,2-Bis(benzyloxy)ethyl]-4-hydroxy-tetrahydrofuran-2-one

E.e. >96% (by preparation method)

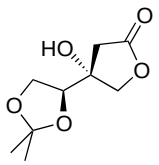
$[\alpha]_D^{22} = +46.5$ ($c = 2$, $CHCl_3$)

Source of chirality: synthesis from L-erythrulose

Absolute configuration: (4*R*,1′*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



$C_9H_{14}O_5$

4-(2,2-Dimethyl-1,3-dioxolan-4-yl)-4-hydroxy-tetrahydrofuran-2-one

E.e. >96% (by preparation method)

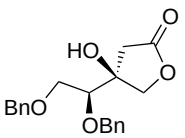
$[\alpha]_D^{22} = +9.1$ ($c = 1.5$, $CHCl_3$)

Source of chirality: synthesis from L-erythrulose

Absolute configuration: (4*R*,4′*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



$C_{20}H_{23}O_5$

4-[1,2-Bis(benzyloxy)ethyl]-4-hydroxy-tetrahydrofuran-2-one

E.e. >96% (by preparation method)

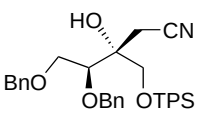
$[\alpha]_D^{22} = +26.7$ ($c = 3.4$, $CHCl_3$)

Source of chirality: synthesis from L-erythrulose

Absolute configuration: (4*S*,1′*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



$C_{35}H_{39}NO_4Si$

4,5-Bis(benzyloxy)-3-(*t*-butyldiphenylsilyloxymethyl]-3-hydroxypentanenitrile

E.e. >96% (by preparation method)

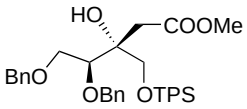
$[\alpha]_D^{22} = +6.7$ ($c = 4.2$, $CHCl_3$)

Source of chirality: synthesis from L-erythrulose

Absolute configuration: (3*R*,4*S*)

Miguel Carda,* Encarna Castillo, Santiago Rodríguez, Florenci González and J. Alberto Marco*

Tetrahedron: Asymmetry *12 (2001) 1417*



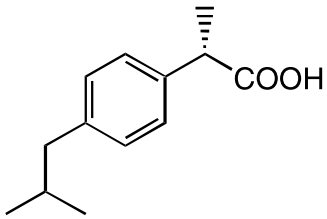
E.e. >96% (by preparation method)
$[\alpha]_D^{22} = +7.5$ ($c = 2.2$, $CHCl_3$)
Source of chirality: synthesis from L-erythrulose
Absolute configuration: (3*R*,4*S*)

$C_{36}H_{42}O_6Si$

Methyl 4,5-bis(benzyloxy)-3-(*t*-butyldiphenylsilyloxymethyl]-3-hydroxypentanoate

Ish Kumar, Kavita Manju and Ravinder S. Jolly*

Tetrahedron: Asymmetry *12 (2001) 1431*



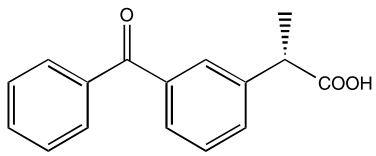
E.e. >99%
Source of chirality: biocatalyzed resolution
Absolute configuration: *S*

$C_{13}H_{18}O_2$

(*S*)-2-(4-Isobutylphenyl)propanoic acid (ibuprofen)

Ish Kumar, Kavita Manju and Ravinder S. Jolly*

Tetrahedron: Asymmetry *12 (2001) 1431*



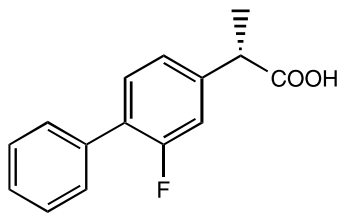
E.e. >99%
Source of chirality: biocatalyzed resolution
Absolute configuration: *S*

$C_{16}H_{14}O_3$

(*S*)-2-(3-Benzoylphenyl)propanoic acid (ketoprofen)

Ish Kumar, Kavita Manju and Ravinder S. Jolly*

Tetrahedron: Asymmetry *12 (2001) 1431*



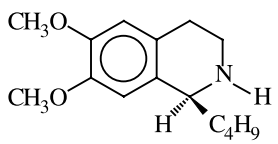
E.e. >99%
Source of chirality: biocatalyzed resolution
Absolute configuration: *S*

$C_{15}H_{13}FO_2$

(*S*)-2-(2-Fluoro-4-biphenyl)propanoic acid (flurbiprofen)

Maria Chrzanowska* and Joanna Sokołowska

Tetrahedron: Asymmetry *12 (2001) 1435*



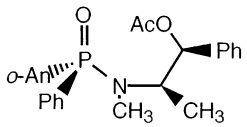
E.e. = 46.5%
$[\alpha]_D^{20} = -20.3$ ($c = 0.73$, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: *S*

$C_{15}H_{23}NO_2$
(*S*)-1-*n*-Butyl-6,7-dimethoxy-1,2,3,4-tetrahydroisoquinoline

---

Jacques Uziel, Christophe Darcel, Dominique Moulin, Christophe Bauduin and Sylvain Jugé*

Tetrahedron: Asymmetry *12 (2001) 1441*



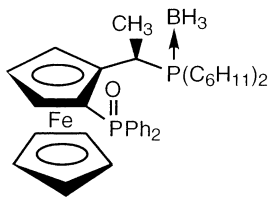
$[\alpha]_D^{20} = +1.5$ (c 0.6, $CHCl_3$)
Source of chirality: (+)-ephedrine starting material

$C_{25}H_{28}NO_4P$
(*Sp*)-(+)-*N*-Methyl-*N*-[(1*S*,2*R*)(1-acetoxy-2-methyl-1-phenyl-prop-2-yl)]-amino-*o*-anisylphenyl phosphine oxide

---

Jacques Uziel, Christophe Darcel, Dominique Moulin, Christophe Bauduin and Sylvain Jugé*

Tetrahedron: Asymmetry *12 (2001) 1441*



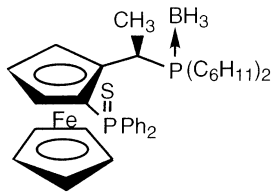
$[\alpha]_D^{20} = -127.5$ (c 0.5, $CHCl_3$)

$C_{36}H_{47}BFeOP_2$
(*R*)-(−)-1-(Dicyclohexylphosphino borane)-1-[2-(diphenylphosphino oxide)-ferrocenyl] ethane

---

Jacques Uziel, Christophe Darcel, Dominique Moulin, Christophe Bauduin and Sylvain Jugé*

Tetrahedron: Asymmetry *12 (2001) 1441*

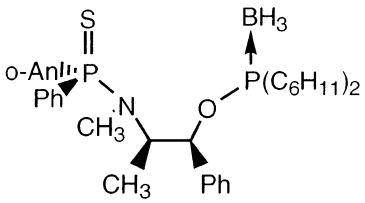


$[\alpha]_D^{20} = -6.6$ (c 0.7, $CHCl_3$)

$C_{36}H_{47}BFeP_2S$
(*R*)-(−)-1-(Dicyclohexylphosphino borane)-1-[2-(diphenylphosphino sulfide)-ferrocenyl] ethane

Jacques Uziel, Christophe Darcel, Dominique Moulin, Christophe Bauduin and Sylvain Jugé*

Tetrahedron: Asymmetry *12 (2001) 1441*



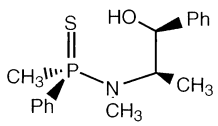
$C_{35}H_{50}BNO_2P_2S$

(*S*p)-(−)-*N*-Methyl-*N*-{(1*R*,2*S*)-[1-(dicyclohexylphosphinito borane)-1-phenyl]prop-2-yl}amino-*o*-anisyl phenylphosphine sulphide

$[\alpha]_D^{20} = -16.2$ (*c* 1, $CHCl_3$)

Jacques Uziel, Christophe Darcel, Dominique Moulin, Christophe Bauduin and Sylvain Jugé*

Tetrahedron: Asymmetry *12 (2001) 1441*



$C_{17}H_{22}NOPS$

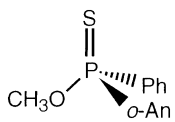
(*R*p)-(−)-*N*-Methyl-*N*-[(1*R*,2*S*)-1-hydroxy-1-phenylprop-2-yl]amino methylphenylphosphine sulfide

$[\alpha]_D^{20} = -1.4$ (*c* 0.5, $CHCl_3$)

Source of chirality: (+)-ephedrine as starting material

Jacques Uziel, Christophe Darcel, Dominique Moulin, Christophe Bauduin and Sylvain Jugé*

Tetrahedron: Asymmetry *12 (2001) 1441*



$C_{14}H_{15}O_2PS$

(*S*)-(−)-(*O*-Methyl)-*o*-anisylphenylthiophosphinate

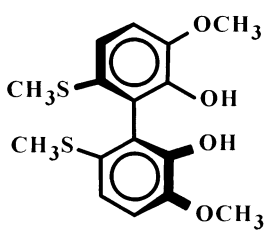
E.e. 90%

$[\alpha]_D^{20} = -42.5$ (*c* 1.4, $CHCl_3$)

Source of chirality: (−)-ephedrine as starting material

Giovanna Delogu,* Davide Fabbri, Maria Antonietta Dettori, Alessandra Forni and Gianluigi Casalone

Tetrahedron: Asymmetry *12 (2001) 1451*



$C_{16}H_{18}O_4S_2$

(*P*)-(+)-6,6′-Bis(methylthio)-3,3′-dimethoxy-[1,1′-biphenyl]-2,2′-diol

E.e. = 99% [by ^1H NMR of the corresponding diastereomer]

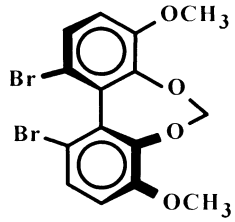
$[\alpha]_D^{20}$ +16.3 (*c* 0.5, $CHCl_3$)

Source of chirality: (−)-(1*R*,2*S*,5*R*)-menthyl chloroformate (e.e. 99%)

Absolute configuration: *P*

Giovanna Delogu,* Davide Fabbri, Maria Antonietta Dettori, Alessandra Forni and Gianluigi Casalone

Tetrahedron: Asymmetry *12 (2001) 1451*



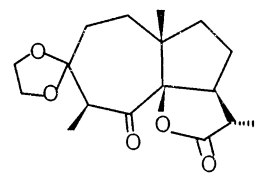
$C_{15}H_{12}Br_2O_4$

P-(−)-1,11-Dibromo-4,8-bis(methoxy)dibenzo[2,1-*d*:1′,2′-*f*][1,3]dioxepine

E.e. = 99% [derived from (*P*)-(+)-6,6′-dibromo-3,3′-dimethoxy-2,2′-dihydroxy-1,1′-biphenyl, 99% e.e.]
$[\alpha]_D^{20}$ −393.2 (*c* 1, $CHCl_3$)
Source of chirality: (−)-(1*R*,2*S*,5*R*)-menthyl chloroformate (e.e. 99%)
Absolute configuration: *P*

Wu Jiong Xia, De Run Li, Lei Shi and Yong Qiang Tu*

Tetrahedron: Asymmetry *12 (2001) 1459*



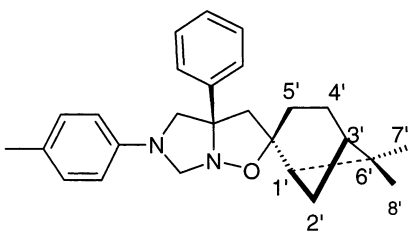
$C_{17}H_{24}O_5$

(−)-(4*S*,6*R*,7*S*,10*S*,11*S*)-3,3-Ethylenedioxy-5-keto-6-hydroxy-12-salvialatone

E.e. 100%
$[\alpha]_D^{25} = -91$ (*c* 0.01, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: (4*S*,6*R*,7*S*,10*S*,11*S*)

Necdet Coşkun,* Fatma Tirli Tat and Özden Özel Güven

Tetrahedron: Asymmetry *12 (2001) 1463*

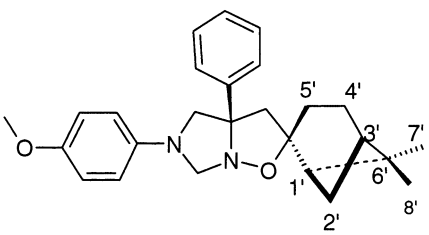


$C_{26}H_{32}N_2O$

$[\alpha]_D^{20} = +212$ (*c* = 0.50, $CHCl_3$)
Source of chirality: (1*S*)-(−)-β-pinene
Absolute configuration: (2*R*,3a*R*)

Necdet Coşkun,* Fatma Tirli Tat and Özden Özel Güven

Tetrahedron: Asymmetry *12 (2001) 1463*

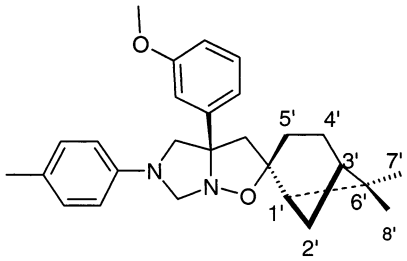


$C_{26}H_{32}N_2O_2$

$[\alpha]_D^{20} = +92$ (*c* = 0.50, $CHCl_3$)
Source of chirality: (1*S*)-(−)-β-pinene
Absolute configuration: (2*R*,3a*R*)

Necdet Coşkun,* Fatma Tirli Tat and Özden Özel Güven

Tetrahedron: Asymmetry *12 (2001) 1463*

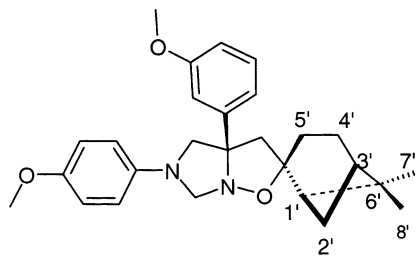


$C_{27}H_{34}N_2O_2$

$[\alpha]_D^{20} = +137.5$ ($c = 0.40$, $CHCl_3$)
Source of chirality: (1*S*)-(−)-β-pinene
Absolute configuration: (2*R*,3a*R*)

Necdet Coşkun,* Fatma Tirli Tat and Özden Özel Güven

Tetrahedron: Asymmetry *12 (2001) 1463*

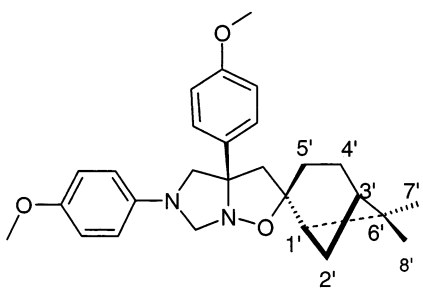


$C_{27}H_{34}N_2O_3$

$[\alpha]_D^{20} = +93.75$ ($c = 0.40$, $CHCl_3$)
Source of chirality: (1*S*)-(−)-β-pinene
Absolute configuration: (2*R*,3a*R*)

Necdet Coşkun,* Fatma Tirli Tat and Özden Özel Güven

Tetrahedron: Asymmetry *12 (2001) 1463*

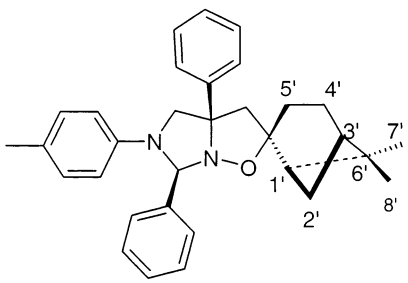


$C_{27}H_{34}N_2O_3$

$[\alpha]_D^{20} = +100$ ($c = 0.40$, $CHCl_3$)
Source of chirality: (1*S*)-(−)-β-pinene
Absolute configuration: (2*R*,3a*R*)

Necdet Coşkun,* Fatma Tirli Tat and Özden Özel Güven

Tetrahedron: Asymmetry *12 (2001) 1463*

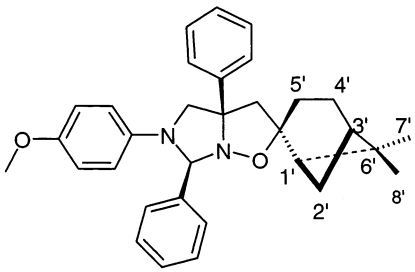


$C_{32}H_{36}N_2O$

$[\alpha]_D^{20} = +80$ ($c = 0.50$, $CHCl_3$)
Source of chirality: (1*S*)-(−)-β-pinene
Absolute configuration: (2*R*,3a*R*,6*S*)

Necdet Coşkun,* Fatma Tirli Tat and Özden Özel Güven

Tetrahedron: Asymmetry *12 (2001) 1463*



$C_{32}H_{36}N_2O_2$

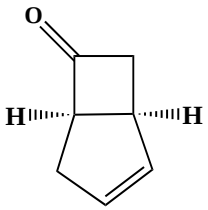
$[\alpha]_D^{20} = (+)97.7$ ($c = 0.44$, $CHCl_3$)

Source of chirality: (1*S*)-(−)-β-pinene

Absolute configuration: (2*R*,3a*R*,6*S*)

Valerio Bertolasi, Olga Bortolini, Marco Fogagnolo, Giancarlo Fantin* and Paola Pedrini

Tetrahedron: Asymmetry *12 (2001) 1479*



C_7H_8O

(−)-(1*S*,5*R*)-Bicyclo[3.2.0]-hept-2-en-6-one

E.e. 95%

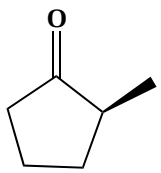
Absolute configuration (−)-(1*S*,5*R*)

Specific rotation $[\alpha]_D^{20} = -60$ (c 1.2, $CHCl_3$)

Source of chirality: enantioselective resolution by inclusion

Valerio Bertolasi, Olga Bortolini, Marco Fogagnolo, Giancarlo Fantin* and Paola Pedrini

Tetrahedron: Asymmetry *12 (2001) 1479*



$C_6H_{10}O$

(+)-(*S*)-2-Methylcyclopentanone

E.e. 13%

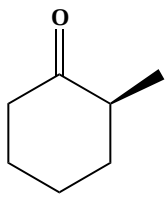
Absolute configuration (+)-(*S*)

Specific rotation $[\alpha]_D^{20} = +16$ (c 1, CH_3OH)

Source of chirality: enantioselective resolution by inclusion

Valerio Bertolasi, Olga Bortolini, Marco Fogagnolo, Giancarlo Fantin* and Paola Pedrini

Tetrahedron: Asymmetry *12 (2001) 1479*



$C_7H_{12}O$

(+)-(*S*)-2-Methylcyclohexanone

E.e. 70%

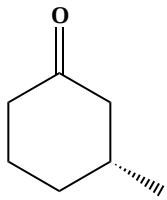
Absolute configuration (+)-(*S*)

Specific rotation $[\alpha]_D^{20} = +12$ (neat)

Source of chirality: enantioselective resolution by inclusion

Valerio Bertolasi, Olga Bortolini, Marco Fogagnolo, Giancarlo Fantin* and Paola Pedrini

Tetrahedron: Asymmetry *12 (2001) 1479*



$C_7H_{12}O$

(+)-(*R*)-3-Methylcyclohexanone

E.e. 90%

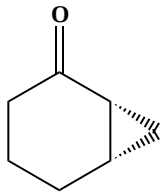
Absolute configuration (+)-(*R*)

Specific rotation $[\alpha]_D^{20} = +12.9$ (*c* 0.01, $CHCl_3$)

Source of chirality: enantioselective resolution by inclusion

Valerio Bertolasi, Olga Bortolini, Marco Fogagnolo, Giancarlo Fantin* and Paola Pedrini

Tetrahedron: Asymmetry *12 (2001) 1479*



$C_7H_{10}O$

(+)-(1*R*,6*S*)-Bicyclo[4.1.0]-heptan-2-one

E.e. 60%

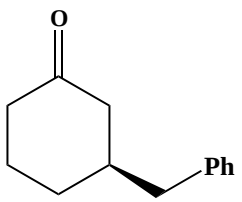
Absolute configuration (+)-(1*R*,6*S*)

Specific rotation $[\alpha]_D^{20} = +11$ (*c* 2, $CHCl_3$)

Source of chirality: enantioselective resolution by inclusion

Valerio Bertolasi, Olga Bortolini, Marco Fogagnolo, Giancarlo Fantin* and Paola Pedrini

Tetrahedron: Asymmetry *12 (2001) 1479*



$C_{13}H_{16}O$

(+)-(*S*)-3-Benzylcyclohexanone

E.e. 70%

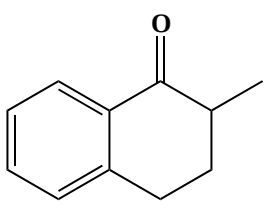
Absolute configuration (+)-(*S*)

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

Source of chirality: enantioselective resolution by inclusion

Valerio Bertolasi, Olga Bortolini, Marco Fogagnolo, Giancarlo Fantin* and Paola Pedrini

Tetrahedron: Asymmetry *12 (2001) 1479*



$C_{11}H_{12}O$

(+)-2-Methyl-1-indanone

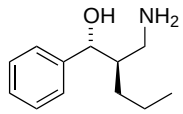
E.e. 30%

Specific rotation $[\alpha]_D^{20} = +10$ (*c* 1, $CHCl_3$)

Source of chirality: enantioselective resolution by inclusion

Juan R. Dehli and Vicente Gotor*

Tetrahedron: Asymmetry *12 (2001) 1485*



$C_{12}H_{19}NO$

(1*R*,2*R*)-2-(Aminomethyl)-1-phenylpentan-1-ol

E.e. 98%; d.r. 99:1

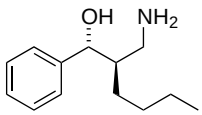
$[\alpha]_D^{20} = +10.6$ (*c* 2.0, EtOH)

Source of chirality: enzymatic reduction

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

Juan R. Dehli and Vicente Gotor*

Tetrahedron: Asymmetry *12 (2001) 1485*



$C_{13}H_{21}NO$

(1*R*,2*R*)-2-(Aminomethyl)-1-phenylhexan-1-ol

E.e. 86%; d.r. 93:7

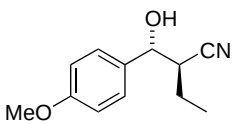
$[\alpha]_D^{20} = +14.5$ (*c* 0.6, EtOH)

Source of chirality: enzymatic reduction

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

Juan R. Dehli and Vicente Gotor*

Tetrahedron: Asymmetry *12 (2001) 1485*



$C_{12}H_{15}NO$

(2*R*,1′*R*)-2-[1-Hydroxy-1-(4-methoxyphenyl)methyl]butanenitrile

E.e. 75%; d.r. 94:6

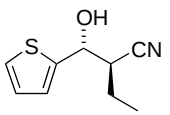
$[\alpha]_D^{20} = +41.0$ (*c* 0.7, $CHCl_3$)

Source of chirality: enzymatic reduction

Absolute configuration: (2*R*,1′*R*)

Juan R. Dehli and Vicente Gotor*

Tetrahedron: Asymmetry *12 (2001) 1485*



$C_9H_{11}NOS$

(2*R*,1′*R*)-2-[1-Hydroxy-1-(2-thienyl)methyl]butanenitrile

E.e. 93%; d.r. 97:3

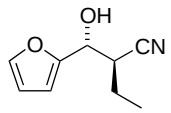
$[\alpha]_D^{20} = +27.0$ (*c* 2.0, $CHCl_3$)

Source of chirality: enzymatic reduction

Absolute configuration: (2*R*,1′*R*)

Juan R. Dehli and Vicente Gotor*

Tetrahedron: Asymmetry *12 (2001) 1485*



$C_9H_{11}NO_2$

(2*R*,1′*R*)-2-[1-(2-Furyl)-1-hydroxymethyl]butanenitrile

E.e. 87%; d.r. 86:14

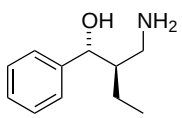
$[\alpha]_D^{20} = +45.3$ (*c* 1.0, $CHCl_3$)

Source of chirality: enzymatic reduction

Absolute configuration: (2*R*,1′*R*)

Juan R. Dehli and Vicente Gotor*

Tetrahedron: Asymmetry *12 (2001) 1485*



$C_{11}H_{17}NO$

(1*R*,2*R*)-2-(Aminomethyl)-1-phenylbutan-1-ol

E.e. 98%; d.r. 98:2

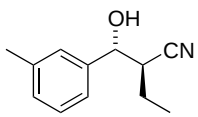
$[\alpha]_D^{20} = +17.9$ (*c* 0.8, EtOH)

Source of chirality: enzymatic reduction

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

Juan R. Dehli and Vicente Gotor*

Tetrahedron: Asymmetry *12 (2001) 1485*



$C_{12}H_{15}NO$

(2*R*,1′*R*)-2-[1-Hydroxy-1-(3-methylphenyl)methyl]butanenitrile

E.e. 70%; d.r. 89:11

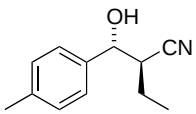
$[\alpha]_D^{20} = +31.7$ (*c* 0.7, $CHCl_3$)

Source of chirality: enzymatic reduction

Absolute configuration: (2*R*,1′*R*)

Juan R. Dehli and Vicente Gotor*

Tetrahedron: Asymmetry *12 (2001) 1485*



$C_{12}H_{15}NO$

(2*R*,1′*R*)-2-[1-Hydroxy-1-(4-methylphenyl)methyl]butanenitrile

E.e. 83%; d.r. 96:4

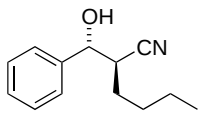
$[\alpha]_D^{20} = +43.1$ (*c* 1.3, $CHCl_3$)

Source of chirality: enzymatic reduction

Absolute configuration: (2*R*,1′*R*)

Juan R. Dehli and Vicente Gotor*

Tetrahedron: Asymmetry *12 (2001) 1485*



$C_{13}H_{17}NO$

(2*R*,1′*R*)-2-(1-Hydroxy-1-phenylmethyl)hexanenitrile

E.e. 86%; d.r. 93:7

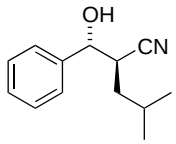
$[\alpha]_D^{20} = +7.3$ (*c* 2.8, EtOH)

Source of chirality: enzymatic reduction

Absolute configuration: (2*R*,1′*R*)

Juan R. Dehli and Vicente Gotor*

Tetrahedron: Asymmetry *12 (2001) 1485*



$C_{13}H_{17}NO$

(2*R*,1′*R*)-2-(1-Hydroxy-1-phenylmethyl)-4-methylpentanenitrile

E.e. 97%; d.r. 97:3

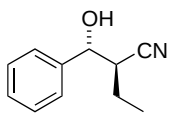
$[\alpha]_D^{20} = +6.3$ (*c* 1.4, EtOH)

Source of chirality: enzymatic reduction

Absolute configuration: (2*R*,1′*R*)

Juan R. Dehli and Vicente Gotor*

Tetrahedron: Asymmetry *12 (2001) 1485*



$C_{11}H_{13}NO$

(2*R*,1′*R*)-2-(1-Hydroxy-1-phenylmethyl)butanenitrile

E.e. 98%; d.r. 98:2

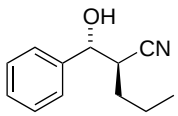
$[\alpha]_D^{20} = +16.8$ (*c* 1.1, EtOH)

Source of chirality: enzymatic reduction

Absolute configuration: (2*R*,1′*R*)

Juan R. Dehli and Vicente Gotor*

Tetrahedron: Asymmetry *12 (2001) 1485*



$C_{12}H_{15}NO$

(2*R*,1′*R*)-2-(1-Hydroxy-1-phenylmethyl)pentanenitrile

E.e. 98%; d.r. 99:1

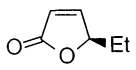
$[\alpha]_D^{20} = +12.8$ (*c* 1.7, EtOH)

Source of chirality: enzymatic reduction

Absolute configuration: (2*R*,1′*R*)

Marcello Tiecco,* Lorenzo Testaferri, Francesca Marini, Silvia Sternativo, Luana Bagnoli, Claudio Santi and Andrea Temperini

Tetrahedron: Asymmetry *12 (2001) 1493*



$C_6H_8O_2$

(5*R*)-5-Ethylfuran-2(5*H*)-one

E.e. = 78% (by ^{1}H NMR using 2,2,2-trifluoro-1-(9-antryl)ethanol, and by GC–MS on a Chirasil-DEX column)

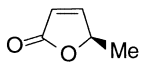
$[\alpha]_D^{29} = -70.0$ (*c* 2.26, CH_2Cl_2)

Source of chirality: asymmetric synthesis

Absolute configuration: *R*

Marcello Tiecco,* Lorenzo Testaferri, Francesca Marini, Silvia Sternativo, Luana Bagnoli, Claudio Santi and Andrea Temperini

Tetrahedron: Asymmetry *12 (2001) 1493*



$C_5H_6O_2$

(5*R*)-5-Methylfuran-2(5*H*)-one

E.e. = 52% (by GC–MS on a Chirasil-DEX column)

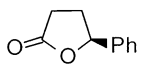
$[\alpha]_D^{26} = -61.2$ (*c* 0.7, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: *R*

Marcello Tiecco,* Lorenzo Testaferri, Francesca Marini, Silvia Sternativo, Luana Bagnoli, Claudio Santi and Andrea Temperini

Tetrahedron: Asymmetry *12 (2001) 1493*



$C_{10}H_{10}O_2$

(5*S*)-5-Phenyldihydrofuran-2(3*H*)-one

E.e. = 90% (by GC–MS on a Chirasil-DEX column)

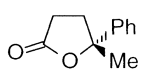
$[\alpha]_D^{29} = -24.8$ (*c* 1.0, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: *S*

Marcello Tiecco,* Lorenzo Testaferri, Francesca Marini, Silvia Sternativo, Luana Bagnoli, Claudio Santi and Andrea Temperini

Tetrahedron: Asymmetry *12 (2001) 1493*



$C_{11}H_{12}O_2$

(5*R*)-5-Methyl-5-phenyldihydrofuran-2(3*H*)-one

E.e. = 78% (by GC–MS on a Chirasil-DEX column)

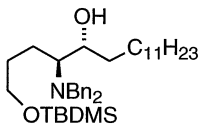
$[\alpha]_D^{32} = +32.4$ (*c* 0.25, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: *R*

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



E.e. = 100%

$[\alpha]_D^{23} = +8.6$ (*c* 1.2, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

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

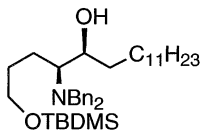
$C_{37}H_{63}NO_2Si$

(4*S*,5*R*)-4-(*N*,*N*-Dibenzylamino)-1-(*tert*-butyldimethylsilyloxy)-5-heptadecanol

---

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



E.e. = 100%

$[\alpha]_D^{23} = +15.2$ (*c* 1.0, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

Absolute configuration: (4*S*,5*S*)

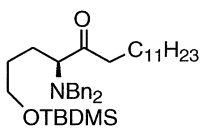
$C_{37}H_{63}NO_2Si$

(4*S*,5*S*)-4-(*N*,*N*-Dibenzylamino)-1-(*tert*-butyldimethylsilyloxy)-5-heptadecanol

---

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



E.e. = 100%

$[\alpha]_D^{23} = -42.2$ (*c* 1.1, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

Absolute configuration: (4*S*)

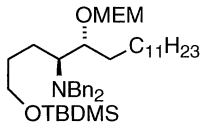
$C_{37}H_{61}NO_2Si$

(4*S*)-4-(*N*,*N*-Dibenzylamino)-1-(*tert*-butyldimethylsilyloxy)-5-heptadecanone

---

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



E.e. = 100%

$[\alpha]_D^{23} = -17.4$ (*c* 1.8, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

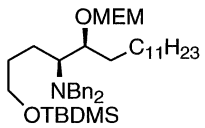
Absolute configuration: (4*S*,5*R*)

$C_{41}H_{71}NO_4Si$

(4*S*,5*R*)-4-(*N*,*N*-Dibenzylamino)-1-(*tert*-butyldimethylsilyloxy)-5-[(2-methoxyethoxy)methoxy]heptadecane

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



E.e. = 100%

$[\alpha]_D^{23} = +16.8$ (*c* 1.1, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

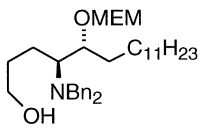
Absolute configuration: (4*S*,5*S*)

$C_{41}H_{71}NO_4Si$

(4*S*,5*S*)-4-(*N*,*N*-Dibenzylamino)-1-(*tert*-butyldimethylsilyloxy)-5-[(2-methoxyethoxy)methoxy]heptadecane

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



E.e. = 100%

$[\alpha]_D^{23} = -33.7$ (*c* 1.1, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

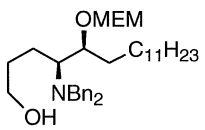
Absolute configuration: (4*S*,5*R*)

$C_{35}H_{57}NO_4$

(4*S*,5*R*)-4-(*N*,*N*-Dibenzylamino)-5-[(2-methoxyethoxy)methoxy]-1-heptadecanol

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



E.e. = 100%

$[\alpha]_D^{23} = +40.7$ (*c* 1.2, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

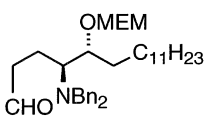
Absolute configuration: (4*S*,5*S*)

$C_{35}H_{57}NO_4$

(4*S*,5*S*)-4-(*N*,*N*-Dibenzylamino)-5-[(2-methoxyethoxy)methoxy]-1-heptadecanol

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



E.e. = 100%

$[\alpha]_D^{23} = -37.4$ (*c* 1.6, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

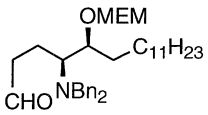
Absolute configuration: (4*S*,5*R*)

$C_{35}H_{55}NO_4$

(4*S*,5*R*)-4-(*N*,*N*-Dibenzylamino)-5-[(2-methoxyethoxy)methoxy]heptadecanal

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



$C_{35}H_{55}NO_4$

(4*S*,5*S*)-4-(*N*,*N*-Dibenzylamino)-5-[(2-methoxyethoxy)methoxy]heptadecanal

E.e. = 100%

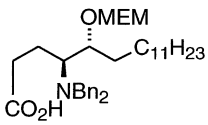
$[\alpha]_D^{23} = +14.6$ (*c* 0.8, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

Absolute configuration: (4*S*,5*S*)

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



$C_{35}H_{55}NO_5$

(4*S*,5*R*)-4-(*N*,*N*-Dibenzylamino)-5-[(2-methoxyethoxy)methoxy]heptadecanoic acid

E.e. = 100%

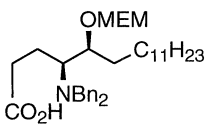
$[\alpha]_D^{23} = -17.3$ (*c* 1.0, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

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

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



$C_{35}H_{55}NO_5$

(4*S*,5*S*)-4-(*N*,*N*-Dibenzylamino)-5-[(2-methoxyethoxy)methoxy]heptadecanoic acid

E.e. = 100%

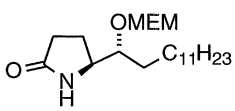
$[\alpha]_D^{23} = +23.1$ (*c* 0.6, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

Absolute configuration: (4*S*,5*S*)

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



$C_{21}H_{41}NO_4$

(5*S*,6*R*)-5-[1-(2-Methoxyethoxymethoxy)tridecyl]pyrrolidin-2-one

E.e. = 100%

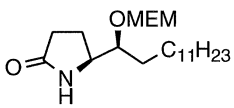
$[\alpha]_D^{23} = -10.0$ (*c* 0.7, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

Absolute configuration: (5*S*,6*R*)

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



$C_{21}H_{41}NO_4$

(5*S*,6*S*)-5-[1-(2-Methoxyethoxymethoxy)tridecyl]pyrrolidin-2-one

E.e. = 100%

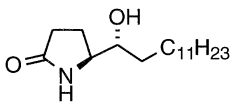
$[\alpha]_D^{23} = +38.1$ (*c* 0.5, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

Absolute configuration: (5*S*,6*S*)

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



$C_{17}H_{33}NO_2$

(5*S*,6*R*)-5-(1-Hydroxytridecyl)pyrrolidin-2-one

E.e. = 100%

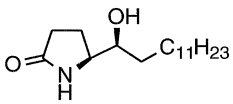
$[\alpha]_D^{23} = +4.9$ (*c* 0.9, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

Absolute configuration: (5*S*,6*R*)

José M. Andrés, Noemí de Elena, Rafael Pedrosa* and Alfonso Pérez-Encabo

Tetrahedron: Asymmetry *12 (2001) 1503*



$C_{17}H_{33}NO_2$

(5*S*,6*S*)-5-(1-Hydroxytridecyl)pyrrolidin-2-one

E.e. = 100%

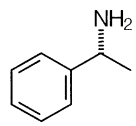
$[\alpha]_D^{23} = +9.3$ (*c* 1.0, $CHCl_3$)

Source of chirality: L-glutamic acid and asymmetric synthesis

Absolute configuration: (5*S*,6*S*)

József Bálint, Gabriella Egri,* Mátyás Czugler, József Schindler, Violetta Kiss, Zoltán Juvancz and Elemér Fogassy

Tetrahedron: Asymmetry *12 (2001) 1511*



$C_8H_{11}N$

(*R*)-α-Phenylethylamine

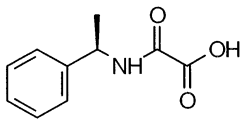
Ee >98% (by chiral GC)

Source of chirality: resolution of racemic mixture

Absolute configuration: *R* (known from literature)

József Bálint, Gabriella Egri,* Mátyás Czugler, József Schindler, Violetta Kiss, Zoltán Juvancz and Elemér Fogassy

Tetrahedron: Asymmetry *12 (2001) 1511*



$C_{10}H_{11}NO_3$

(*R*)-α-Phenylethylamine oxalamic acid

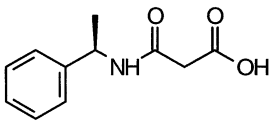
Ee >99% (prepared from enantiopure phenylethylamine)

Source of chirality: enantiopure starting material

Absolute configuration: *R* (starting material of known configuration)

József Bálint, Gabriella Egri,* Mátyás Czugler, József Schindler, Violetta Kiss, Zoltán Juvancz and Elemér Fogassy

Tetrahedron: Asymmetry *12 (2001) 1511*



$C_{11}H_{13}NO_3$

(*R*)-α-Phenylethylamine malonamic acid

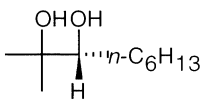
Ee >99% (prepared from enantiopure phenylethylamine)

Source of chirality: enantiopure starting material

Absolute configuration: *R* (starting material of known configuration)

Andreas Steinreiber, Sandra F. Mayer, Robert Saf and Kurt Faber*

Tetrahedron: Asymmetry *12 (2001) 1519*



$C_{10}H_{24}O_2$

(*R*)-2-Methylnonane-2,3-diol

E.e. = 97%

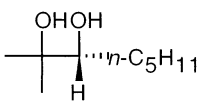
$[\alpha]_D^{20} = +24.4$ (*c* 1.95, $CHCl_3$)

Source of chirality: enantiopure starting material

Absolute configuration: *R*

Andreas Steinreiber, Sandra F. Mayer, Robert Saf and Kurt Faber*

Tetrahedron: Asymmetry *12 (2001) 1519*



$C_9H_{20}O_2$

(*R*)-2-Methyloctane-2,3-diol

E.e. = 92%

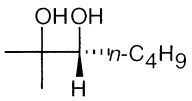
$[\alpha]_D^{20} = +24.9$ (*c* 1.15, $CHCl_3$)

Source of chirality: enantiopure starting material

Absolute configuration: *R*

Andreas Steinreiber, Sandra F. Mayer, Robert Saf and Kurt Faber*

Tetrahedron: Asymmetry *12 (2001) 1519*



$C_8H_{18}O_2$

(*R*)-2-Methylheptane-2,3-diol

E.e. = 87%

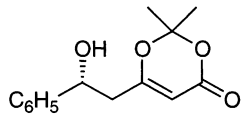
$[\alpha]_D^{20} = +27.5$ (*c* 2.69, $CHCl_3$)

Source of chirality: enzymatic hydrolysis

Absolute configuration: *R*

Margherita De Rosa, Maria Rosaria Acocella, Annunziata Soriente and Arrigo Scettri*

Tetrahedron: Asymmetry *12 (2001) 1529*



$C_{14}H_{16}O_4$

6-[2-Hydroxy-2-phenylethyl]-2,2-dimethyl-[1,3]dioxin-4-one

E.e. = 95%

$[\alpha]_D^{20} = +37.7$ (*c* 1.96, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: (2*R*)