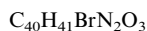
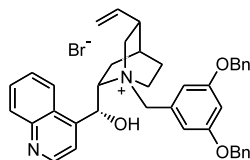


Patricia Mazón, Rafael Chinchilla, Carmen Nájera,*
Gabriela Guillena, Rob Kreiter, Robertus J. M. Klein Gebbink
and Gerard van Koten*

Tetrahedron: Asymmetry 13 (2002) 2181



N-[3,5-Di(benzyloxy)benzyl]cinchonidinium bromide

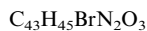
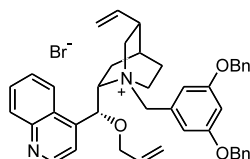
Mp 215°C

$[\alpha]_{\text{D}}^{25} = -160$ (*c* 1, CHCl₃)

Source of chirality: (–)-cinchonidine

Patricia Mazón, Rafael Chinchilla, Carmen Nájera,*
Gabriela Guillena, Rob Kreiter, Robertus J. M. Klein Gebbink
and Gerard van Koten*

Tetrahedron: Asymmetry 13 (2002) 2181



O(9)-Allyl-*N*-(3,5-dimethoxybenzyl)cinchonidinium bromide

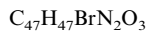
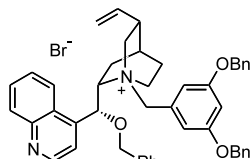
Mp 164°C

$[\alpha]_{\text{D}}^{25} = -136$ (*c* 1, CHCl₃)

Source of chirality: (–)-cinchonidine

Patricia Mazón, Rafael Chinchilla, Carmen Nájera,*
Gabriela Guillena, Rob Kreiter, Robertus J. M. Klein Gebbink
and Gerard van Koten*

Tetrahedron: Asymmetry 13 (2002) 2181



O(9)-Benzyl-*N*-(3,5-dimethoxybenzyl)cinchonidinium bromide

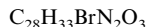
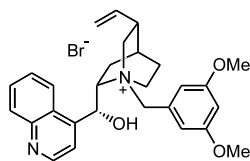
Mp 154°C

$[\alpha]_{\text{D}}^{25} = -60$ (*c* 1, CHCl₃)

Source of chirality: (–)-cinchonidine

Patricia Mazón, Rafael Chinchilla, Carmen Nájera,*
Gabriela Guillena, Rob Kreiter, Robertus J. M. Klein Gebbink
and Gerard van Koten*

Tetrahedron: Asymmetry 13 (2002) 2181



N-(3,5-Dimethoxybenzyl)cinchonidinium bromide

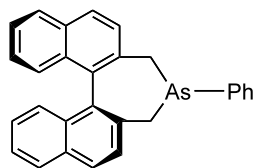
Mp 203°C

$[\alpha]_{\text{D}}^{25} = -201$ (*c* 1, CHCl₃)

Source of chirality: (–)-cinchonidine

Wei-Min Dai,* Anxin Wu and Huafeng Wu

Tetrahedron: Asymmetry 13 (2002) 2187



$C_{28}H_{21}As$

4,5-Dihydro-4-phenyl-3*H*-dinaphtho[2,1-*c*:1',2'-*e*]arsepin

Mp = 150–155°C (CH₂Cl₂–hexane)

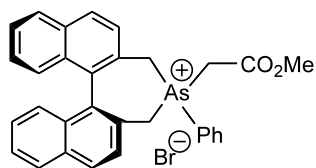
$[\alpha]_D^{20} = -213.2$ (*c* 1.43, CHCl₃)

Source of chirality: (*S*)-(-)-1,1'-bi-2-naphthol

Absolute configuration: *S*

Wei-Min Dai,* Anxin Wu and Huafeng Wu

Tetrahedron: Asymmetry 13 (2002) 2187



$C_{31}H_{26}AsBrO_2$

4-Carbomethoxymethyl-4,5-dihydro-4-phenyl-3*H*-dinaphtho[2,1-*c*:1',2'-*e*]arsepinium bromide

Mp = 189–190°C (MeOH)

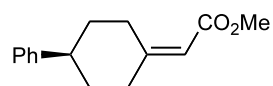
$[\alpha]_D^{20} = -79.5$ (*c* 0.40, MeOH)

Source of chirality: (*S*)-(-)-1,1'-bi-2-naphthol

Absolute configuration: *S*

Wei-Min Dai,* Anxin Wu and Huafeng Wu

Tetrahedron: Asymmetry 13 (2002) 2187



$C_{15}H_{18}O_2$

Methyl (4-phenylcyclohexylidene)acetate

Ee = 25.4%

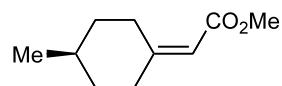
$[\alpha]_D^{20} = -32.5$ (*c* 0.71, CHCl₃)

Source of chirality: asymmetric synthesis (Wittig)

Absolute configuration: *R*

Wei-Min Dai,* Anxin Wu and Huafeng Wu

Tetrahedron: Asymmetry 13 (2002) 2187



$C_{10}H_{16}O_2$

Methyl (4-methylcyclohexylidene)acetate

Ee = 33.5%

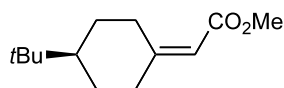
$[\alpha]_D^{20} = -21.1$ (*c* 0.64, CHCl₃)

Source of chirality: asymmetric synthesis (Wittig)

Absolute configuration: *R*

Wei-Min Dai,* Anxin Wu and Huafeng Wu

Tetrahedron: Asymmetry 13 (2002) 2187



$C_{13}H_{22}O_2$

Methyl (4-*tert*-butylcyclohexylidene)acetate

Ee = 40.0%

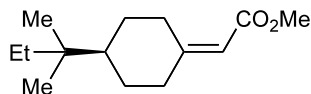
$[\alpha]_D^{20} = -26.5$ (c 0.51, $CHCl_3$)

Source of chirality: asymmetric synthesis (Wittig)

Absolute configuration: *R*

Wei-Min Dai,* Anxin Wu and Huafeng Wu

Tetrahedron: Asymmetry 13 (2002) 2187



$C_{14}H_{24}O_2$

Methyl [4-(1',1'-dimethylpropyl)cyclohexylidene]acetate

Ee = 39.2%

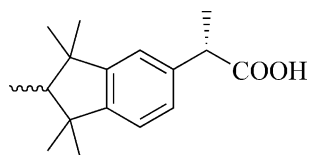
$[\alpha]_D^{20} = -24.7$ (c 1.21, $CHCl_3$)

Source of chirality: asymmetric synthesis (Wittig)

Absolute configuration: *R*

Alessandra Ciappa, Ugo Matteoli and Alberto Scrivanti*

Tetrahedron: Asymmetry 13 (2002) 2193



$C_{17}H_{24}O_2$

(2*S*,2'*RS*)-2-(1,1,2,3,3-Pentamethylindan-5-yl)propionic acid

E.e. = 89%

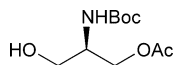
$[\alpha]_D^{25} = +36.4$ (c 1.0, $CHCl_3$)

Source of chirality: asymmetric hydrogenation

Absolute configuration: 2*S*,2'*RS*

Claudia Neri and Jonathan M. J. Williams*

Tetrahedron: Asymmetry 13 (2002) 2197



$C_{10}H_{19}NO_5$

(*R*)-(+)-3-*O*-Acetyl-2-*N*-(*tert*-butoxycarbonyl)serinol

E.e. >99% (by HPLC)

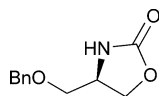
$[\alpha]_D^{30} = +3.5$ (c 0.56, $CHCl_3$)

Source of chirality: lipase-catalysed kinetic resolution

Absolute configuration: *R*

Claudia Neri and Jonathan M. J. Williams*

Tetrahedron: Asymmetry 13 (2002) 2197



$C_{11}H_{13}NO_3$

(*R*)-(+)-4-Benzyloxymethyl-2-oxazolidinone

E.e. >99% (by HPLC)

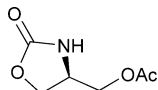
$[\alpha]_D^{20} = +25.0$ (*c* 0.08, $CHCl_3$)

Source of chirality: lipase-catalysed kinetic resolution

Absolute configuration: *R*

Claudia Neri and Jonathan M. J. Williams*

Tetrahedron: Asymmetry 13 (2002) 2197



$C_6H_9NO_4$

(*S*)-(-)-4-Acetoxyethyl-2-oxazolidinone

E.e. >98% (by HPLC)

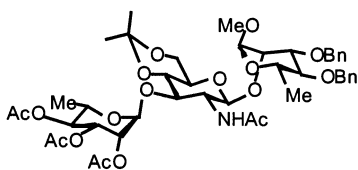
$[\alpha]_D^{20} = -40.7$ (*c* 1.35, $CHCl_3$)

Source of chirality: lipase-catalysed kinetic resolution

Absolute configuration: *S*

Fabienne Segat-Dioury and Laurence A. Mulard*

Tetrahedron: Asymmetry 13 (2002) 2211



$C_{44}H_{59}NO_{17}$

Methyl (2,3,4-tri-*O*-acetyl- α -L-rhamnopyranosyl)-(1 \rightarrow 3)-(2-acetamido-2-deoxy-4,6-*O*-isopropylidene- β -D-glucopyranosyl)-(1 \rightarrow 2)-3,4-di-*O*-benzyl- α -L-rhamnopyranoside

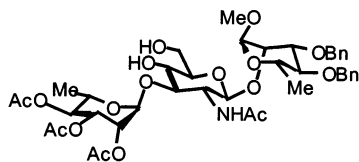
$[\alpha]_D = -15$ (*c* 1.0, chloroform)

Source of chirality: L-rhamnose, D-glucosamine, glycosylation

Absolute configuration of the anomeric centers assigned by NMR spectroscopy

Fabienne Segat-Dioury and Laurence A. Mulard*

Tetrahedron: Asymmetry 13 (2002) 2211



$C_{41}H_{55}NO_{17}$

Methyl (2,3,4-tri-*O*-acetyl- α -L-rhamnopyranosyl)-(1 \rightarrow 3)-(2-acetamido-2-deoxy- β -D-glucopyranosyl)-(1 \rightarrow 2)-3,4-di-*O*-benzyl- α -L-rhamnopyranoside

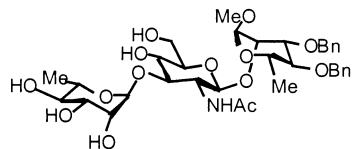
$[\alpha]_D = +4$ (*c* 1.0, chloroform)

Source of chirality: L-rhamnose, D-glucosamine, glycosylation

Absolute configuration of the anomeric centers assigned by NMR spectroscopy

Fabienne Segat-Dioury and Laurence A. Mulard*

Tetrahedron: Asymmetry 13 (2002) 2211



$C_{35}H_{49}NO_{14}$

Methyl α -L-rhamnopyranosyl-(1 \rightarrow 3)-(2-acetamido-2-deoxy- β -D-glucopyranosyl)-(1 \rightarrow 2)-3,4-di-O-benzyl- α -L-rhamnopyranoside

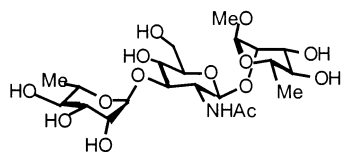
$[\alpha]_D = -25$ (c 1.0, chloroform)

Source of chirality: L-rhamnose, D-glucosamine, glycosylation

Absolute configuration of the anomeric centers assigned by NMR spectroscopy

Fabienne Segat-Dioury and Laurence A. Mulard*

Tetrahedron: Asymmetry 13 (2002) 2211



$C_{21}H_{37}NO_{14}$

Methyl α -L-rhamnopyranosyl-(1 \rightarrow 3)-(2-acetamido-2-deoxy- β -D-glucopyranosyl)-(1 \rightarrow 2)- α -L-rhamnopyranoside

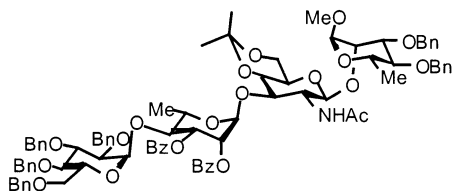
$[\alpha]_D = -51$ (c 1.0, water)

Source of chirality: L-rhamnose, D-glucosamine, glycosylation

Absolute configuration of the anomeric centers assigned by NMR spectroscopy

Fabienne Segat-Dioury and Laurence A. Mulard*

Tetrahedron: Asymmetry 13 (2002) 2211



$C_{86}H_{95}NO_{21}$

Methyl (2,3,4,6-tetra-*O*-benzyl- α -D-glucopyranosyl)-(1 \rightarrow 4)-(2,3-di-*O*-benzoyl- α -L-rhamnopyranosyl)-(1 \rightarrow 3)-(2-acetamido-2-deoxy-4,6-*O*-isopropylidene- β -D-glucopyranosyl)-(1 \rightarrow 2)-3,4-di-*O*-benzyl- α -L-rhamnopyranoside

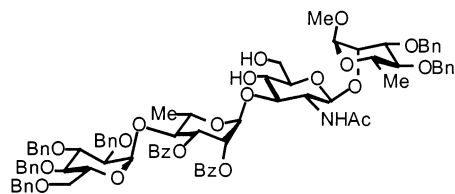
$[\alpha]_D = +85$ (c 1.0, chloroform)

Source of chirality: L-rhamnose, D-glucose, D-glucosamine, glycosylation

Absolute configuration of the anomeric centers assigned by NMR spectroscopy

Fabienne Segat-Dioury and Laurence A. Mulard*

Tetrahedron: Asymmetry 13 (2002) 2211



$C_{83}H_{91}NO_{21}$

Methyl (2,3,4,6-tetra-*O*-benzyl- α -D-glucopyranosyl)-(1 \rightarrow 4)-(2,3-di-*O*-benzoyl- α -L-rhamnopyranosyl)-(1 \rightarrow 3)-(2-acetamido-2-deoxy- β -D-glucopyranosyl)-(1 \rightarrow 2)-3,4-di-*O*-benzyl- α -L-rhamnopyranoside

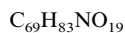
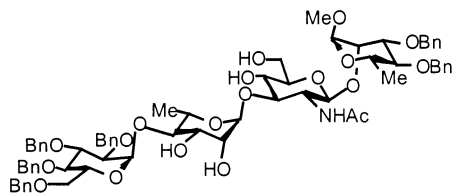
$[\alpha]_D = +79$ (c 1.0, chloroform)

Source of chirality: L-rhamnose, D-glucose, D-glucosamine, glycosylation

Absolute configuration of the anomeric centers assigned by NMR spectroscopy

Fabienne Segat-Dioury and Laurence A. Mulard*

Tetrahedron: Asymmetry 13 (2002) 2211



Methyl (2,3,4,6-tetra-*O*-benzyl- α -D-glucopyranosyl)-(1 \rightarrow 4)- α -L-rhamnopyranosyl-(1 \rightarrow 3)-(2-acetamido-2-deoxy- β -D-glucopyranosyl)-(1 \rightarrow 2)-3,4-di-*O*-benzyl- α -L-rhamnopyranoside

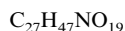
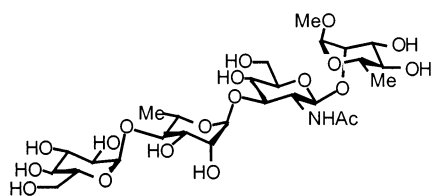
$[\alpha]_D = +38$ (*c* 1.0, chloroform)

Source of chirality: L-rhamnose, D-glucose, D-glucosamine, glycosylation

Absolute configuration of the anomeric centers assigned by NMR spectroscopy

Fabienne Segat-Dioury and Laurence A. Mulard*

Tetrahedron: Asymmetry 13 (2002) 2211



Methyl α -D-glucopyranosyl-(1 \rightarrow 4)- α -L-rhamnopyranosyl-(1 \rightarrow 3)-(2-acetamido-2-deoxy- β -D-glucopyranosyl)-(1 \rightarrow 2)- α -L-rhamnopyranoside

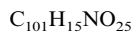
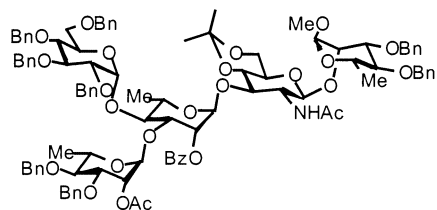
$[\alpha]_D = +3$ (*c* 1.0, water)

Source of chirality: L-rhamnose, D-glucose, D-glucosamine, glycosylation

Absolute configuration of the anomeric centers assigned by NMR spectroscopy

Fabienne Segat-Dioury and Laurence A. Mulard*

Tetrahedron: Asymmetry 13 (2002) 2211



Methyl (2-*O*-acetyl-3,4-di-*O*-benzyl- α -L-rhamnopyranosyl)-(1 \rightarrow 3)-[2,3,4,6-tetra-*O*-benzyl- α -D-glucopyranosyl-(1 \rightarrow 4)]-(2-*O*-benzoyl- α -L-rhamnopyranosyl)-(1 \rightarrow 3)-(2-acetamido-2-deoxy-4,6-*O*-isopropylidene- β -D-glucopyranosyl)-(1 \rightarrow 2)-3,4-di-*O*-benzyl- α -L-rhamnopyranoside

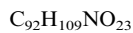
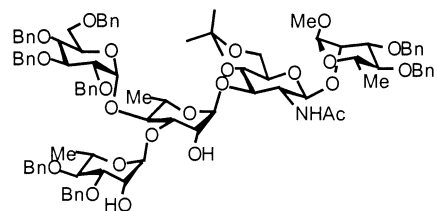
$[\alpha]_D = +26$ (*c* 1.0, chloroform)

Source of chirality: L-rhamnose, D-glucose, D-glucosamine, glycosylation

Absolute configuration of the anomeric centers assigned by NMR spectroscopy

Fabienne Segat-Dioury and Laurence A. Mulard*

Tetrahedron: Asymmetry 13 (2002) 2211



Methyl (3,4-di-*O*-benzyl- α -L-rhamnopyranosyl)-(1 \rightarrow 3)-[2,3,4,6-tetra-*O*-benzyl- α -D-glucopyranosyl-(1 \rightarrow 4)]- α -L-rhamnopyranosyl-(1 \rightarrow 3)-(2-acetamido-2-deoxy-4,6-*O*-isopropylidene- β -D-glucopyranosyl)-(1 \rightarrow 2)-3,4-di-*O*-benzyl- α -L-rhamnopyranoside

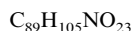
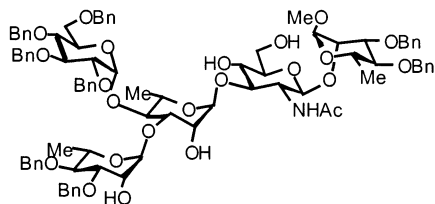
$[\alpha]_D = +21$ (*c* 1.0, chloroform)

Source of chirality: L-rhamnose, D-glucose, D-glucosamine, glycosylation

Absolute configuration of the anomeric centers assigned by NMR spectroscopy

Fabienne Segat-Dioury and Laurence A. Mulard*

Tetrahedron: Asymmetry 13 (2002) 2211



Methyl (3,4-di-*O*-benzyl- α -L-rhamnopyranosyl)-(1 \rightarrow 3)-[2,3,4,6-tetra-*O*-benzyl- α -D-glucopyranosyl-(1 \rightarrow 4)]- α -L-rhamnopyranosyl-(1 \rightarrow 3)-(2-acetamido-2-deoxy- β -D-glucopyranosyl)-(1 \rightarrow 2)-3,4-di-*O*-benzyl- α -L-rhamnopyranoside

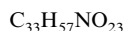
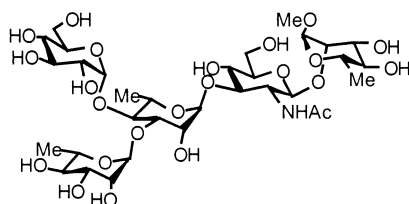
$[\alpha]_D = +22$ (*c* 1.0, chloroform)

Source of chirality: L-rhamnose, D-glucose, D-glucosamine, glycosylation

Absolute configuration of the anomeric centers assigned by NMR spectroscopy

Fabienne Segat-Dioury and Laurence A. Mulard*

Tetrahedron: Asymmetry 13 (2002) 2211



Methyl α -L-rhamnopyranosyl-(1 \rightarrow 3)-[α -D-glucopyranosyl-(1 \rightarrow 4)]- α -L-rhamnopyranosyl-(1 \rightarrow 3)-(2-acetamido-2-deoxy- β -D-glucopyranosyl)-(1 \rightarrow 2)- α -L-rhamnopyranoside

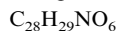
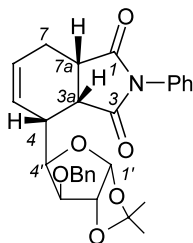
$[\alpha]_D = -12$ (*c* 1.0, water)

Source of chirality: L-rhamnose, D-glucose, D-glucosamine, glycosylation

Absolute configuration of the anomeric centers assigned by NMR spectroscopy

Sławomir Jarosz,* Katarzyna Szewczyk, Stanisław Skóra,
Zbigniew Ciunik and Agnieszka Pietrzak

Tetrahedron: Asymmetry 13 (2002) 2223



4-(3'-*O*-Benzyl-1',2'-*O*-isopropylidene- α -D-xylo-tetros-4-yl)-2-phenyl-(3*aS*,4*R*,7*aS*)-tetrahydro-*iso*-indole-1,3-dione

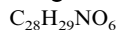
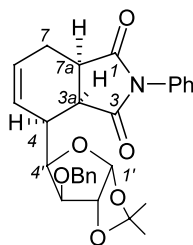
$[\alpha]_D = -4.2$ (*c* 1.5, $CHCl_3$)

Source of chirality: chiral pool

Absolute configuration: 3*aS*,4*R*,7*aS*

Sławomir Jarosz,* Katarzyna Szewczyk, Stanisław Skóra,
Zbigniew Ciunik and Agnieszka Pietrzak

Tetrahedron: Asymmetry 13 (2002) 2223



4-(3'-*O*-Benzyl-1',2'-*O*-isopropylidene- α -D-xylo-tetros-4-yl)-2-phenyl-(3*aR*,4*S*,7*aR*)-tetrahydro-*iso*-indole-1,3-dione

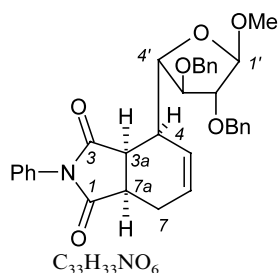
$[\alpha]_D = -40.3$ (*c* 1.3, $CHCl_3$)

Source of chirality: chiral pool

Absolute configuration: 3*aR*,4*S*,7*aR*

Sławomir Jarosz,* Katarzyna Szewczyk, Stanisław Skóra,
Zbigniew Ciunik and Agnieszka Pietrzak

Tetrahedron: Asymmetry 13 (2002) 2223

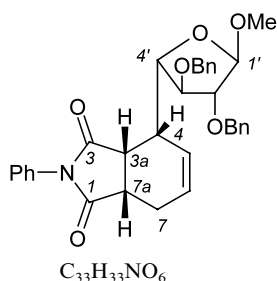


4-(Methyl 2',3'-di-*O*-benzyl- β -*L*-arabino-tetrosid-4-yl)-2-phenyl-(3*aR*,4*S*,7*aR*)-tetrahydro-*iso*-indole-1,3-dione

$[\alpha]_D$ 82.2 (*c* 1.4, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration: 3*aR*,4*S*,7*aR*

Sławomir Jarosz,* Katarzyna Szewczyk, Stanisław Skóra,
Zbigniew Ciunik and Agnieszka Pietrzak

Tetrahedron: Asymmetry 13 (2002) 2223

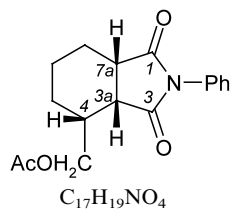


4-(Methyl 2',3'-di-*O*-benzyl- β -*L*-arabino-tetrosid-4-yl)-2-phenyl-(3*aS*,4*R*,7*aS*)-tetrahydro-*iso*-indole-1,3-dione

$[\alpha]_D$ -106.0 (*c* 1.0, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration: 3*aS*,4*R*,7*aS*

Sławomir Jarosz,* Katarzyna Szewczyk, Stanisław Skóra,
Zbigniew Ciunik and Agnieszka Pietrzak

Tetrahedron: Asymmetry 13 (2002) 2223

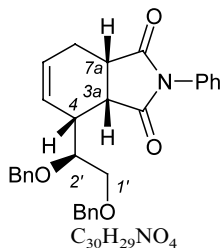


4-(Acetoxymethyl)-2-phenyl-(3*aS*,4*R*,7*aS*)-tetrahydro-*iso*-indole-1,3-dione

$[\alpha]_D$ -12.1 (*c* 3.6, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration: 3*aS*,4*R*,7*aS*

Sławomir Jarosz,* Katarzyna Szewczyk, Stanisław Skóra,
Zbigniew Ciunik and Agnieszka Pietrzak

Tetrahedron: Asymmetry 13 (2002) 2223

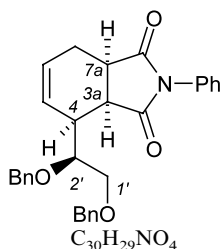


4-[1',2'(S)-Di-*O*-benzyloxyethane-2'-yl]-2-phenyl-(3*aS*,4*R*,7*aS*)-tetrahydro-*iso*-indole-1,3-dione

$[\alpha]_D$ -87.3 (*c* 2.1, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration: 2'*S*,3*aS*,4*R*,7*aS*

Sławomir Jarosz,* Katarzyna Szewczyk, Stanisław Skóra,
Zbigniew Ciunik and Agnieszka Pietrzak

Tetrahedron: Asymmetry 13 (2002) 2223

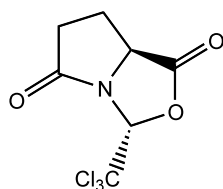


4-[1',2'(S)-Di-O-benzyloxyethane-2'-yl]-2-phenyl-(3aR,4S,7aR)-tetrahydro-*iso*-indole-1,3-dione

$[\alpha]_D +11.5$ (*c* 2.1, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration: 2'*S*,3a*R*,4*S*,7a*R*

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229

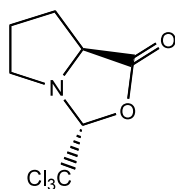


(2*R*,5*S*)-2-Trichloromethyl-1-aza-3-oxobicyclo-[3,3,0]-octan-4,8-dione

Mp = 229.2°C
 $[\alpha]_D^{22} = +43.5$ (*c* 2, C_6H_6)

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229

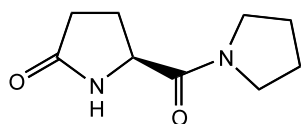


(2*R*,5*S*)-2-Trichloromethyl-1-aza-3-oxobicyclo-[3,3,0]-octan-4-one

Mp = 107.6°C (from EtOH)
 $[\alpha]_D^{22} = +32.7$ (*c* 2, C_6H_6)

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229

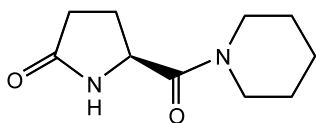


(5*S*)-(Pyrrolidine-1-carbonyl)-pyrrolidin-2-one

Mp = 114.3°C (from EtOAc)
 $[\alpha]_D^{20} = -43.6$ (*c* 2, H_2O)

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229



$C_{10}H_{16}N_2O_2$

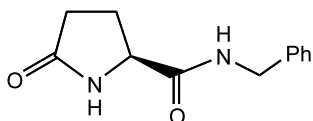
(5*S*)-(Piperidine-1-carbonyl)-pyrrolidin-2-one

Mp = 58°C (from EtOAc)

$[\alpha]_D^{20} = -46.7$ (c 2, H₂O)

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229



$C_{12}H_{14}N_2O_2$

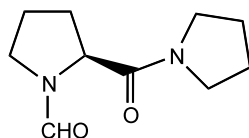
5-oxo-Pyrrolidine-(2*S*)-carboxylic acid benzylamide

Mp = 138.3°C (from EtOAc)

$[\alpha]_D^{22} = -29.6$ (c 2, H₂O)

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229



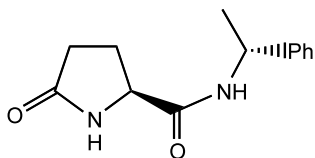
$C_{10}H_{16}N_2O_2$

(*S*)-2-(Pyrrolidine-1-carbonyl)-pyrrolidine-1-carbaldehyde

$[\alpha]_D^{21} = -79$ (c 2, EtOH)

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229



$C_{13}H_{16}N_2O_2$

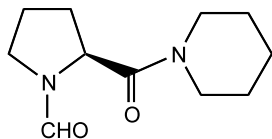
5-oxo-Pyrrolidine-(2*S*)-carboxylic acid-(*R*)-phenylethylamide

Mp = 153°C (from EtOAc)

$[\alpha]_D^{20} = +103.5$ (c 1.7, H₂O)

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229

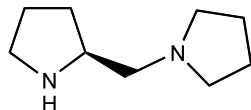


(*S*)-2-(Piperidine-1-carbonyl)-pyrrolidine-1-carbaldehyde

$$[\alpha]_D^{21} = -69.5 \text{ (} c \text{ 1.05, EtOH)}$$

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229

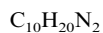
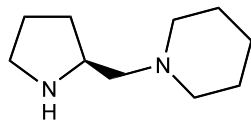


(*S*)-2-(1-Pyrrolidinylmethyl)pyrrolidine

$$\text{Bp} = 30^\circ\text{C}/7.6 \times 10^{-2} \text{ mmHg}$$
$$[\alpha]_D^{20} = +8.9 \text{ (} c \text{ 2.4, EtOH)}$$

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229

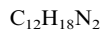
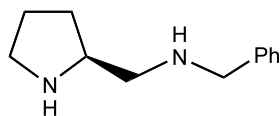


(*S*)-2-(1-Piperidinylmethyl)pyrrolidine

$$\text{Kugelrohr distillation, } 110^\circ\text{C}/7.6 \text{ mmHg}$$
$$[\alpha]_D^{21} = +15 \text{ (} c \text{ 7.75, EtOH)}$$

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229

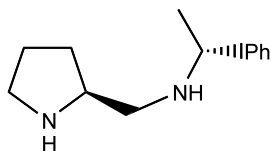


(*S*)-2-(1-Benzylmethyl)pyrrolidine

$$\text{Kugelrohr distillation, bp: } 120^\circ\text{C}/5 \times 10^{-2} \text{ mmHg}$$
$$[\alpha]_D^{20} = +15.6 \text{ (} c \text{ 1.01, EtOH)}$$

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229



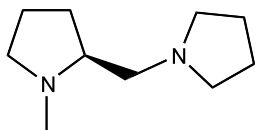
$C_{13}H_{20}N_2$

(*S*)-2-((1*R*)-Phenylethylmethyl)pyrrolidine

Kugelrohr distillation, bp: 113°C/7.6×10⁻² mmHg
[α]_D²⁰ = +54.4 (c 1.02, EtOH)

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229



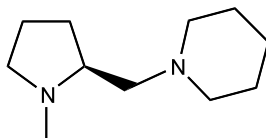
$C_{10}H_{20}N_2$

(*S*)-*N*-Methyl-2-(1-pyrrolidinomethyl)pyrrolidine

Bp = 50°C/0.7 mmHg
[α]_D²⁰ = -83.6 (c 0.63, EtOH)

Mohamed Amedjkouh* and Per Ahlberg

Tetrahedron: Asymmetry 13 (2002) 2229



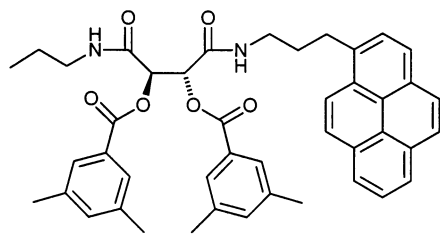
$C_{11}H_{22}N_2$

(*S*)-*N*-Methyl-2-(1-piperidinylmethyl)pyrrolidine

Bp = 55°C/0.6 mmHg
[α]_D²⁰ = -65.1 (c 0.55, EtOH)

Joakim Oxelbark* and Sofia Claeson

Tetrahedron: Asymmetry 13 (2002) 2235



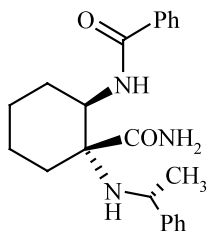
$C_{44}H_{44}N_2O_6$

(*R,R*)-*N*-Propyl-*N'*-3(1-pyrenyl)propyl-*O,O'*-bis(dimethylbenzoyl)tartaramide

[α]_D⁵⁸⁹ = -69 (c 0.26, dioxane)
Source of chirality: (*R,R*)-tartaric acid

Kamalesh P. Pai Fondekar, Franz-J. Volk, S. M. Khaliq-uz-Zaman,
Philippe Bisel and August W. Frahm*

Tetrahedron: Asymmetry 13 (2002) 2241



C₂₂H₂₇N₃O₂

trans-($\alpha R,1R,2R$)-2-Benzoylamino-1-(1-phenylethylamino)cyclohexanecarboxamide

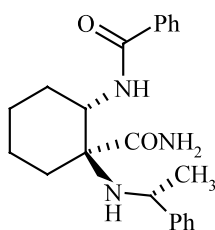
$[\alpha]_D^{20} = -4.3$ (c 1.02, methanol)

Source of chirality: asymmetric synthesis

Absolute configuration: $\alpha R,1R,2R$

Kamalesh P. Pai Fondekar, Franz-J. Volk, S. M. Khaliq-uz-Zaman,
Philippe Bisel and August W. Frahm*

Tetrahedron: Asymmetry 13 (2002) 2241



C₂₂H₂₇N₃O₂

trans-($\alpha R,1S,2S$)-2-Benzoylamino-1-(1-phenylethylamino)cyclohexanecarboxamide

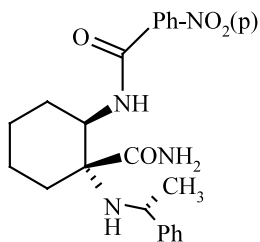
$[\alpha]_D^{20} = +51.2$ (c 1.01, methanol)

Source of chirality: asymmetric synthesis

Absolute configuration: $\alpha R,1S,2S$

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Philippe Bisel and August W. Frahm*

Tetrahedron: Asymmetry 13 (2002) 2241



C₂₂H₂₆N₄O₄

trans-($\alpha R,1R,2R$)-2-*p*-Nitrobenzoylamino-1-(1-phenylethylamino)cyclohexanecarboxamide

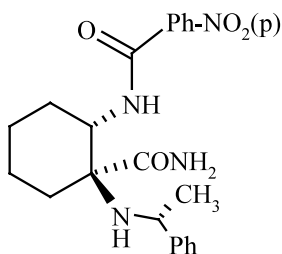
$[\alpha]_D^{20} = -3.4$ (c 0.93, methanol)

Source of chirality: asymmetric synthesis

Absolute configuration: $\alpha R,1R,2R$

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Tetrahedron: Asymmetry 13 (2002) 2241



C₂₂H₂₆N₄O₄

trans-($\alpha R,1S,2S$)-2-*p*-Nitrobenzoylamino-1-(1-phenylethylamino)cyclohexanecarboxamide

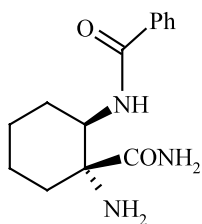
$[\alpha]_D^{20} = +50.0$ (c 1.12, methanol)

Source of chirality: asymmetric synthesis

Absolute configuration: $\alpha R,1S,2S$

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Tetrahedron: Asymmetry 13 (2002) 2241



C₁₄H₁₉N₃O₂

trans-(1*R*,2*R*)-1-Amino-2-benzoylaminocyclohexanecarboxamide

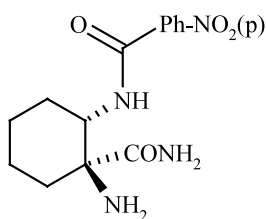
$[\alpha]_D^{20} = +15.3$ (*c* 1.09, methanol)

Source of chirality: asymmetric synthesis

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

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Philippe Bisel and August W. Frahm*

Tetrahedron: Asymmetry 13 (2002) 2241



C₁₄H₁₈N₄O₄

trans-(1*S*,2*S*)-1-Amino-2-*p*-nitrobenzoylaminocyclohexanecarboxamide

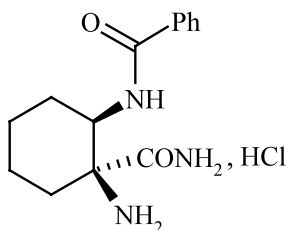
$[\alpha]_D^{20} = -17.1$ (*c* 0.97, methanol)

Source of chirality: asymmetric synthesis

Absolute configuration: 1*S*,2*S*

Kamalesh P. Pai Fondekar, Franz-J. Volk, S. M. Khaliq-uz-Zaman,
Philippe Bisel and August W. Frahm*

Tetrahedron: Asymmetry 13 (2002) 2241



C₁₄H₁₉N₃O₂·HCl

cis-(1*S*,2*R*)-1-Amino-2-benzoylaminocyclohexanecarboxamide hydrochloride

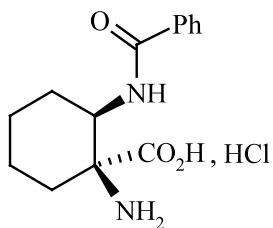
$[\alpha]_D^{20} = +7.4$ (*c* 0.76, methanol)

Source of chirality: asymmetric synthesis

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

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Tetrahedron: Asymmetry 13 (2002) 2241



C₁₄H₁₈N₂O₃·HCl

cis-(1*S*,2*R*)-1-Amino-2-benzoylaminocyclohexanecarboxylic acid hydrochloride

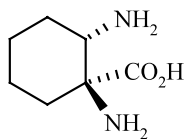
$[\alpha]_D^{20} = +10.4$ (*c* 1.61, methanol)

Source of chirality: asymmetric synthesis

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

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Tetrahedron: Asymmetry 13 (2002) 2241



trans-(1*S*,2*S*)-1,2-Diaminocyclohexanecarboxylic acid

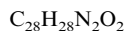
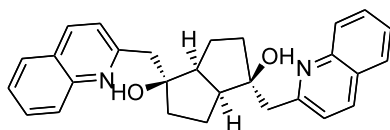
$[\alpha]_D^{20} = -8.0$ (*c* 1.01, H₂O)

Source of chirality: asymmetric synthesis

Absolute configuration: 1*S*,2*S*

Yu-wu Zhong, Xin-sheng Lei and Guo-qiang Lin*

Tetrahedron: Asymmetry 13 (2002) 2251



(1*S*,2*S*,5*S*,6*S*)-2,6-Di-(quinolin-2-ylmethyl)-bicyclo[3.3.0]octan-2,6-diol

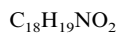
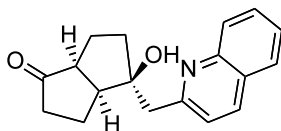
$[\alpha]_D^{20} = +53.1$ (*c* 1.40, CHCl₃)

Source of chirality: enzymatic resolution

Absolute configuration: 1*S*,2*S*,5*S*,6*S*

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Tetrahedron: Asymmetry 13 (2002) 2251



(1*S*,5*S*,6*S*)-6-Hydroxy-6-(quinolin-2-ylmethyl)-bicyclo[3.3.0]octan-2-one

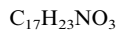
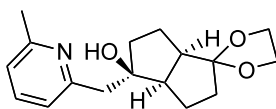
$[\alpha]_D^{20} = +147.6$ (*c* 0.65, CHCl₃)

Source of chirality: enzymatic resolution

Absolute configuration: 1*S*,5*S*,6*S*

Yu-wu Zhong, Xin-sheng Lei and Guo-qiang Lin*

Tetrahedron: Asymmetry 13 (2002) 2251



(1*R*,5*R*,6*R*)-6-Hydroxy-6-(methylpyridin-2-ylmethyl)-bicyclo[3.3.0]octan-2-one ethylene ketal

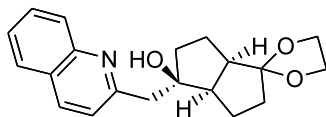
$[\alpha]_D^{20} = -26.2$ (*c* 1.10, CHCl₃)

Source of chirality: enzymatic resolution

Absolute configuration: 1*R*,5*R*,6*R*

Yu-wu Zhong, Xin-sheng Lei and Guo-qiang Lin*

Tetrahedron: Asymmetry 13 (2002) 2251



$C_{20}H_{23}NO_3$

(1*R*,5*R*,6*R*)-6-Hydroxy-6-(quinolin-2-ylmethyl)-bicyclo[3.3.0]octan-2-one ethylene ketal

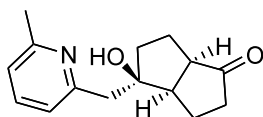
$[\alpha]_D^{20} = -14.6$ (*c* 0.85, $CHCl_3$)

Source of chirality: enzymatic resolution

Absolute configuration: 1*R*,5*R*,6*R*

Yu-wu Zhong, Xin-sheng Lei and Guo-qiang Lin*

Tetrahedron: Asymmetry 13 (2002) 2251



$C_{15}H_{19}NO_2$

(1*R*,5*R*,6*R*)-6-Hydroxy-6-(methylpyridin-2-ylmethyl)-bicyclo[3.3.0]octan-2-one

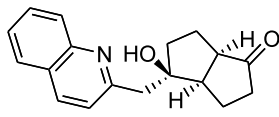
$[\alpha]_D^{20} = -145.7$ (*c* 2.45, $CHCl_3$)

Source of chirality: enzymatic resolution

Absolute configuration: 1*R*,5*R*,6*R*

Yu-wu Zhong, Xin-sheng Lei and Guo-qiang Lin*

Tetrahedron: Asymmetry 13 (2002) 2251



$C_{18}H_{19}NO_2$

(1*R*,5*R*,6*R*)-6-Hydroxy-6-(quinolin-2-ylmethyl)-bicyclo[3.3.0]octan-2-one

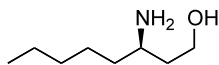
$[\alpha]_D^{20} = -145.6$ (*c* 2.45, $CHCl_3$)

Source of chirality: enzymatic resolution

Absolute configuration: 1*R*,5*R*,6*R*

Dawei Ma,* Xiaotao Pu and Jinyi Wang

Tetrahedron: Asymmetry 13 (2002) 2257



$C_8H_{19}NO$

(*R*)-3-Amino-octanol

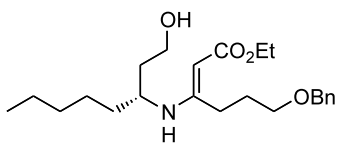
$[\alpha]_D^{20} = -14.4$ (*c* 1.3, $CHCl_3$)

Source of chirality: lithium (*R*)- α -methylbenzylamide

Absolute configuration: *R*

Dawei Ma,* Xiaotao Pu and Jinyi Wang

Tetrahedron: Asymmetry 13 (2002) 2257



$C_{23}H_{37}NO_4$

(*E*)-3-(*N*-(*R*)-1'-Hydroxy-3'-octyl)amino-1-benzyloxyhexenoic acid ethyl ester

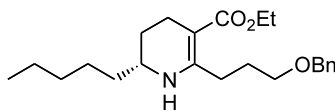
$[\alpha]_D^{20} = +8.9$ (*c* 2.6, $CHCl_3$)

Source of chirality: lithium (*R*)- α -methylbenzylamide

Absolute configuration: *R*

Dawei Ma,* Xiaotao Pu and Jinyi Wang

Tetrahedron: Asymmetry 13 (2002) 2257



$C_{23}H_{35}NO_3$

(*R*)-2-Pentyl-5-ethoxycarbonyl-6-(3-benzyloxypropyl)-1,2,3,4-tetrahydropyridine

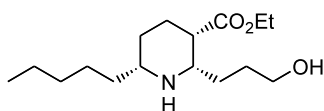
$[\alpha]_D^{20} = +86.5$ (*c* 1.23, $CHCl_3$)

Source of chirality: (*R*)- α -methylbenzylamide

Absolute configuration: *R*

Dawei Ma,* Xiaotao Pu and Jinyi Wang

Tetrahedron: Asymmetry 13 (2002) 2257



$C_{16}H_{31}NO_3$

(1*S*,2*S*,6*R*)-1-(3-Hydroxypropyl)-2-ethoxycarbonyl-6-pentyl-piperidine

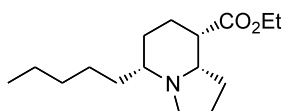
$[\alpha]_D^{20} = -11$ (*c* 0.97, $CHCl_3$)

Source of chirality: (*R*)- α -methylbenzylamide

Absolute configuration: 1*S*,2*S*,6*R*

Dawei Ma,* Xiaotao Pu and Jinyi Wang

Tetrahedron: Asymmetry 13 (2002) 2257



$C_{16}H_{29}NO_2$

(5*R*,8*S*,8*aS*)-5-Pentyl-octahydroindolizidine-8-carboxylic acid, ethyl ester

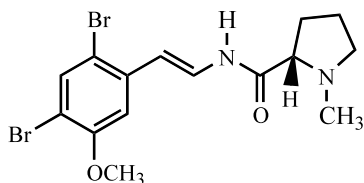
$[\alpha]_D^{20} = -31.5$ (*c* 0.25, $CHCl_3$)

Source of chirality: lithium (*R*)- α -methylbenzylamide

Absolute configuration: 5*R*,8*S*,8*aS*

Moisés Ramírez Osuna, Gerardo Aguirre,* Ratnasamy Somanathan* and Elias Molins

Tetrahedron: Asymmetry 13 (2002) 2261



(2*S*)-*N*-[(*E*)-2-(2,4-Dibromo-5-methoxyphenyl)ethanyl]-1-methyl-2-pyrrolinecarboxamide

Ee = 100%

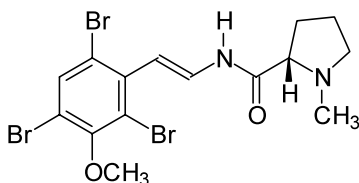
$[\alpha]_D^{25} = -46$ (c, CH_2Cl_2)

Source of chirality: chiral starting material

Absolute configuration: 2*S*

Moisés Ramírez Osuna, Gerardo Aguirre,* Ratnasamy Somanathan* and Elias Molins

Tetrahedron: Asymmetry 13 (2002) 2261



(2*S*)-*N*-[(*E*)-2-(2,4,6-Tribromo-5-methoxyphenyl)ethanyl]-1-methyl-2-pyrrolinecarboxamide

Ee = 100%

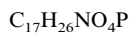
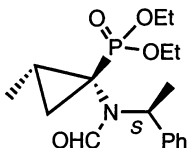
$[\alpha]_D^{25} = -9.8$ (c, CH_2Cl_2)

Source of chirality: chiral starting material

Absolute configuration: 2*S*

Nicolas Tesson, Benoist Dorigneux and Antoine Fadel*

Tetrahedron: Asymmetry 13 (2002) 2267



Diethyl 1-[formyl(1'-methylbenzyl)amino]-2-methyl-cyclopropanephosphonate

E.e. >99% (by GC on chiral column)

$[\alpha]_D^{20} = -14.3$ (c 0.8, $CHCl_3$)

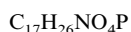
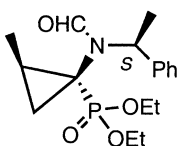
^{31}P NMR ($CDCl_3$): $\delta = 24.30$ ppm

Source of chirality: (*S*)-(1-phenyl)ethylamine

Absolute configuration: (1*S*,2*S*,1'*S*)

Nicolas Tesson, Benoist Dorigneux and Antoine Fadel*

Tetrahedron: Asymmetry 13 (2002) 2267



Diethyl 1-[formyl(1'-methylbenzyl)amino]-2-methyl-cyclopropanephosphonate

E.e. >98% (by GC on chiral column)

$[\alpha]_D^{20} = +104.7$ (c 1, $CHCl_3$)

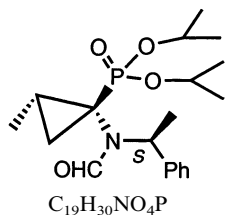
^{31}P NMR ($CDCl_3$): $\delta = 24.78$ ppm

Source of chirality: (*S*)-(1-phenyl)ethylamine

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

Nicolas Tesson, Benoist Dorigneux and Antoine Fadel*

Tetrahedron: Asymmetry 13 (2002) 2267



Diisopropyl 1-[formyl(1'-methylbenzyl)amino]-2-methyl-cyclopropanephosphonate

E.e. >99% (by GC on chiral column)

$[\alpha]_D^{20} -14.5$ (c 1, $CHCl_3$)

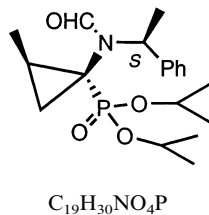
^{31}P NMR ($CDCl_3$): $\delta = 21.98$ ppm

Source of chirality: (*S*)-(1-phenyl)ethylamine

Absolute configuration: (1*S*,2*S*,1'*S*)

Nicolas Tesson, Benoist Dorigneux and Antoine Fadel*

Tetrahedron: Asymmetry 13 (2002) 2267



Diisopropyl 1-[formyl(1'-methylbenzyl)amino]-2-methyl-cyclopropanephosphonate

E.e. >98% (by GC on chiral column)

$[\alpha]_D^{20} +118.7$ (c 1, $CHCl_3$)

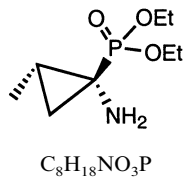
^{31}P NMR ($CDCl_3$): $\delta = 22.50$ ppm

Source of chirality: (*S*)-(1-phenyl)ethylamine

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

Nicolas Tesson, Benoist Dorigneux and Antoine Fadel*

Tetrahedron: Asymmetry 13 (2002) 2267



Diethyl 1-amino-2-methyl-cyclopropanephosphonate

E.e. >99% (by GC on chiral column)

$[\alpha]_D^{20} +24.4$ (c 1, $CHCl_3$)

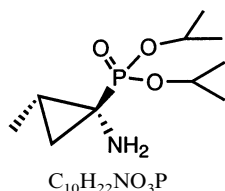
^{31}P NMR ($CDCl_3$): $\delta = 29.28$ ppm

Source of chirality: (*S*)-(1-phenyl)ethylamine for the precursor

Absolute configuration: (1*S*,2*S*) by comparison with the literature

Nicolas Tesson, Benoist Dorigneux and Antoine Fadel*

Tetrahedron: Asymmetry 13 (2002) 2267



Diisopropyl 1-amino-2-methyl-cyclopropanephosphonate

E.e. >99% (by GC on chiral column)

$[\alpha]_D^{20} +19.5$ (c 1.1, $CHCl_3$)

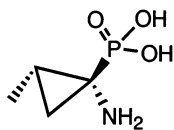
^{31}P NMR ($CDCl_3$): $\delta = 27.72$ ppm

Source of chirality: (*S*)-(1-phenyl)ethylamine for the precursor

Absolute configuration: (1*S*,2*S*) by transformation into known acid

Nicolas Tesson, Benoist Dorigneux and Antoine Fadel*

Tetrahedron: Asymmetry 13 (2002) 2267



C₄H₁₀NO₃P

1-Amino-2-methyl-cyclopropanephosphonate

E.e. >99% (by GC on chiral column)

$[\alpha]_D^{20} +45.2$ (c 0.2, H₂O)

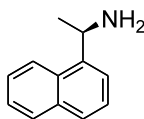
³¹P NMR (D₂O): $\delta = 13.36$ ppm

Source of chirality: (S)-(1-phenyl)ethylamine for the precursor

Relative configuration: (1*S*,2*S*) by comparison with the literature

Marco Pallavicini,* Cristiano Bolchi, Laura Fumagalli,
Ermanno Valoti and Luigi Villa

Tetrahedron: Asymmetry 13 (2002) 2277



C₁₂H₁₃N

(*R*)-1-(1-Naphthyl)ethylamine

E.e. = 97.0%

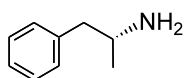
$[\alpha]_D^{20} = +53.5$ (c 2, ethanol)

Source of chirality: chemical resolution with 3-carboxy-2-naphthoate of (*R*)-isopropylidene glycerol

Absolute configuration: *R*

Marco Pallavicini,* Cristiano Bolchi, Laura Fumagalli,
Ermanno Valoti and Luigi Villa

Tetrahedron: Asymmetry 13 (2002) 2277



C₉H₁₃N

(*S*)-1-Phenyl-2-propylamine

E.e. = 78.0%

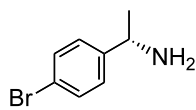
$[\alpha]_D^{20} = +30.5$ (c 1.8, benzene)

Source of chirality: chemical resolution with 3-carboxy-2-naphthoate of (*R*)-isopropylidene glycerol

Absolute configuration: *S*

Marco Pallavicini,* Cristiano Bolchi, Laura Fumagalli,
Ermanno Valoti and Luigi Villa

Tetrahedron: Asymmetry 13 (2002) 2277



C₈H₁₀BrN

(*S*)-1-(4-Bromophenyl)ethylamine

E.e. >99.5%

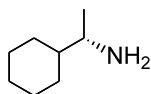
$[\alpha]_D^{20} = -21.0$ (c 2.8, methanol)

Source of chirality: chemical resolution with 3-carboxy-2-naphthoate of (*R*)-isopropylidene glycerol

Absolute configuration: *S*

Marco Pallavicini,* Cristiano Bolchi, Laura Fumagalli,
Ermanno Valoti and Luigi Villa

Tetrahedron: Asymmetry 13 (2002) 2277



$C_8H_{17}N$

(*S*)-1-Cyclohexylethylamine

E.e. = 94.1%

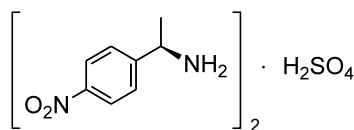
$[\alpha]_D^{20} = +3.8$ (neat)

Source of chirality: chemical resolution with
3-carboxy-2-naphthoate of (*R*)-isopropylidene glycerol

Absolute configuration: *S*

Marco Pallavicini,* Cristiano Bolchi, Laura Fumagalli,
Ermanno Valoti and Luigi Villa

Tetrahedron: Asymmetry 13 (2002) 2277



$C_{16}H_{22}N_4O_8S$

(*R*)-1-(4-Nitrophenyl)ethylamine sulphate

E.e. = 98.9%

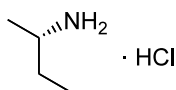
$[\alpha]_D^{20} = +6.6$ (*c* 1.07, 0.05 M NaOH)

Source of chirality: chemical resolution with
3-carboxy-2-naphthoate of (*R*)-isopropylidene glycerol

Absolute configuration: *R*

Marco Pallavicini,* Cristiano Bolchi, Laura Fumagalli,
Ermanno Valoti and Luigi Villa

Tetrahedron: Asymmetry 13 (2002) 2277



$C_4H_{12}ClN$

(*S*)-2-Butylamine hydrochloride

E.e. = 77.9%

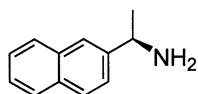
$[\alpha]_D^{20} = -2.6$ (*c* 1.0, EtOH)

Source of chirality: chemical resolution with
3-carboxy-2-naphthoate of (*R*)-isopropylidene glycerol

Absolute configuration: *S*

Marco Pallavicini,* Cristiano Bolchi, Laura Fumagalli,
Ermanno Valoti and Luigi Villa

Tetrahedron: Asymmetry 13 (2002) 2277



$C_{12}H_{13}N$

(*R*)-1-(2-Naphthyl)ethylamine

E.e. = 94.4%

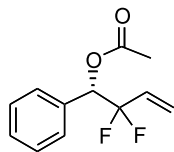
$[\alpha]_D^{25} = +19.9$ (*c* 2.5, ethanol)

Source of chirality: chemical resolution with
3-carboxy-2-naphthoate of (*R*)-isopropylidene glycerol

Absolute configuration: *R*

Masayuki Kirihara,* Masashi Kawasaki, Hiroki Katsumata,
Hiroko Kakuda, Motoo Shiro and Shigeki Kawabata

Tetrahedron: Asymmetry 13 (2002) 2283



$C_{12}H_{12}F_2O_2$

(*S*)-4-Acetoxy-3,3-difluoro-4-phenylbut-1-ene

Ee = 84%

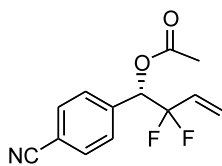
$[\alpha]_D^{23} = +52.2$ (c 1.45, $CHCl_3$)

Source of chirality: lipase-catalyzed resolution

Absolute configuration: *S*

Masayuki Kirihara,* Masashi Kawasaki, Hiroki Katsumata,
Hiroko Kakuda, Motoo Shiro and Shigeki Kawabata

Tetrahedron: Asymmetry 13 (2002) 2283



$C_{13}H_{11}F_2NO_2$

(*S*)-4-Acetoxy-4-(*p*-cyanophenyl)-3,3-difluorobut-1-ene

Ee = 97%

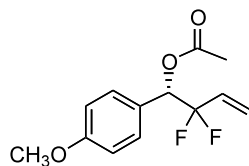
$[\alpha]_D^{30} = +59.2$ (c 1.09, $CHCl_3$)

Source of chirality: lipase-catalyzed resolution

Absolute configuration: *S*

Masayuki Kirihara,* Masashi Kawasaki, Hiroki Katsumata,
Hiroko Kakuda, Motoo Shiro and Shigeki Kawabata

Tetrahedron: Asymmetry 13 (2002) 2283



$C_{13}H_{14}F_2O_3$

(*S*)-4-Acetoxy-3,3-difluoro-4-(*p*-methoxyphenyl)but-1-ene

Ee = 90%

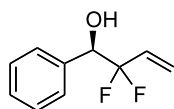
$[\alpha]_D^{23} = +71.3$ (c 1.14, $CHCl_3$)

Source of chirality: lipase-catalyzed resolution

Absolute configuration: *S*

Masayuki Kirihara,* Masashi Kawasaki, Hiroki Katsumata,
Hiroko Kakuda, Motoo Shiro and Shigeki Kawabata

Tetrahedron: Asymmetry 13 (2002) 2283



$C_{12}H_{12}F_2O_2$

(*R*)-2,2-Difluoro-1-phenylbut-3-en-1-ol

Ee = 79%

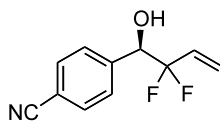
$[\alpha]_D^{23} = -14.7$ (c 1.13, $CHCl_3$)

Source of chirality: lipase-catalyzed resolution

Absolute configuration: *R*

Masayuki Kiriara,* Masashi Kawasaki, Hiroki Katsumata,
Hiroko Kakuda, Motoo Shiro and Shigeki Kawabata

Tetrahedron: Asymmetry 13 (2002) 2283



C₁₁H₉F₂NO

(*R*)-1-(*p*-Cyanophenyl)-2,2-difluorobut-3-en-1-ol

E_e = 88%

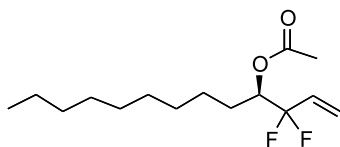
[α]_D²¹ = -7.5 (c 1.07, CHCl₃)

Source of chirality: lipase-catalyzed resolution

Absolute configuration: *R*

Masayuki Kiriara,* Masashi Kawasaki, Hiroki Katsumata,
Hiroko Kakuda, Motoo Shiro and Shigeki Kawabata

Tetrahedron: Asymmetry 13 (2002) 2283



C₁₅H₂₄F₂O₂

(*S*)-4-Acetoxy-3,3-difluorotridec-1-ene

E_e = 67%

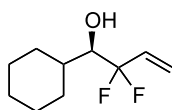
[α]_D²⁵ = -8.2 (c 1.05, CHCl₃)

Source of chirality: lipase-catalyzed resolution

Absolute configuration: *S*

Masayuki Kiriara,* Masashi Kawasaki, Hiroki Katsumata,
Hiroko Kakuda, Motoo Shiro and Shigeki Kawabata

Tetrahedron: Asymmetry 13 (2002) 2283



C₁₀H₁₆F₂O

(*R*)-1-Cyclohexyl-2,2-difluorobut-3-en-1-ol

E_e = 95%

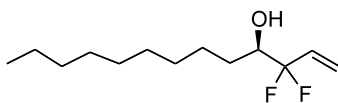
[α]_D²³ = +20.5 (c 1.09, CHCl₃)

Source of chirality: lipase-catalyzed resolution

Absolute configuration: *R*

Masayuki Kiriara,* Masashi Kawasaki, Hiroki Katsumata,
Hiroko Kakuda, Motoo Shiro and Shigeki Kawabata

Tetrahedron: Asymmetry 13 (2002) 2283



C₁₃H₂₄F₂O

(*R*)-3,3-Difluorotridec-1-en-4-ol

E_e = 82%

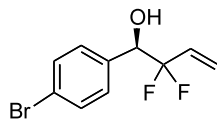
[α]_D²⁵ = +19.7 (c 1.10, CHCl₃)

Source of chirality: lipase-catalyzed resolution

Absolute configuration: *R*

Masayuki Kirihara,* Masashi Kawasaki, Hiroki Katsumata,
Hiroko Kakuda, Motoo Shiro and Shigeki Kawabata

Tetrahedron: Asymmetry 13 (2002) 2283



$C_{10}H_9BrF_2O$

(*R*)-1-(*p*-Bromophenyl)-2,2-difluorobut-3-en-1-ol

Ee=96%

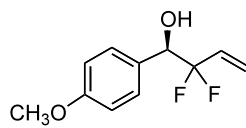
$[\alpha]_D^{24} = -14.3$ (c 1.13, $CHCl_3$)

Source of chirality: lipase-catalyzed resolution

Absolute configuration: *R*

Masayuki Kirihara,* Masashi Kawasaki, Hiroki Katsumata,
Hiroko Kakuda, Motoo Shiro and Shigeki Kawabata

Tetrahedron: Asymmetry 13 (2002) 2283



$C_{11}H_{12}F_2O_2$

(*R*)-2,2-Difluoro-1-(*p*-methoxyphenyl)but-3-en-1-ol

Ee=94%

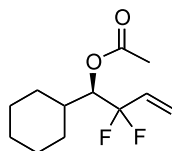
$[\alpha]_D^{23} = -20.2$ (c 1.01, $CHCl_3$)

Source of chirality: lipase-catalyzed resolution

Absolute configuration: *R*

Masayuki Kirihara,* Masashi Kawasaki, Hiroki Katsumata,
Hiroko Kakuda, Motoo Shiro and Shigeki Kawabata

Tetrahedron: Asymmetry 13 (2002) 2283



$C_{12}H_{18}F_2O_2$

(*S*)-4-Acetoxy-4-cyclohexyl-3,3-difluorobut-1-ene

Ee=87%

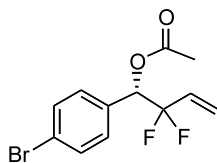
$[\alpha]_D^{25} = +5.3$ (c 1.03, $CHCl_3$)

Source of chirality: lipase-catalyzed resolution

Absolute configuration: *S*

Masayuki Kirihara,* Masashi Kawasaki, Hiroki Katsumata,
Hiroko Kakuda, Motoo Shiro and Shigeki Kawabata

Tetrahedron: Asymmetry 13 (2002) 2283



$C_{12}H_{11}BrF_2O_3$

(*S*)-4-Acetoxy-4-(*p*-bromophenyl)-3,3-difluorobut-1-ene

Ee=97%

$[\alpha]_D^{22} = +53.8$ (c 1.21, $CHCl_3$)

Source of chirality: lipase-catalyzed resolution

Absolute configuration: *S*