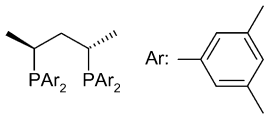
Zsanett Herseczki, Ildikó Gergely, Csaba Hegedüs, Áron Szöllősy and József Bakos*

Tetrahedron: Asymmetry *15 (2004) 1673*



$C_{37}H_{48}P_2$

(2*S*,4*S*)-2,4-Bis[di(3,5-dimethylphenyl)-phosphino]pentane

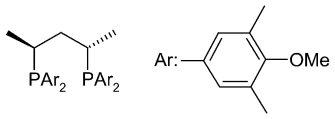
$[\alpha]_D = -105.0$ (*c* 3.0, $CHCl_3$)

Source of chirality: (2*R*,4*R*)-pentanediol

Absolute configuration: (2*S*,4*S*)

Zsanett Herseczki, Ildikó Gergely, Csaba Hegedüs, Áron Szöllősy and József Bakos*

Tetrahedron: Asymmetry *15 (2004) 1673*



$C_{41}H_{54}O_4P_2$

(2*S*,4*S*)-2,4-Bis[di(3,5-dimethyl-4-methoxyphenyl)-phosphino]pentane

$[\alpha]_D = -83.5$ (*c* 4.0, $CHCl_3$)

Source of chirality: (2*R*,4*R*)-pentanediol

Absolute configuration: (2*S*,4*S*)

Kei Shimoda,* Naoji Kubota, Hiroki Hamada, Misato Kaji and Toshifumi Hirata

Tetrahedron: Asymmetry *15 (2004) 1677*

$C_6H_{10}O$

(*S*)-2-Methylcyclopentan-1-one

Ee = 98%

$[\alpha]_D^{25} = +114.9$ (*c* 0.52, $CHCl_3$)

Source of chirality: asymmetric reduction with *Synechococcus* sp. PCC 7942

Absolute configuration: *S*

Kei Shimoda,* Naoji Kubota, Hiroki Hamada, Misato Kaji and Toshifumi Hirata

Tetrahedron: Asymmetry *15 (2004) 1677*

$C_7H_{12}O$

(*S*)-2-Methylcyclohexan-1-one

Ee = 85%

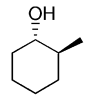
$[\theta]_{288} = +887$ (*c* 0.75, MeOH)

Source of chirality: asymmetric reduction with *Synechococcus* sp. PCC 7942

Absolute configuration: *S*

Kei Shimoda,* Naoji Kubota, Hiroki Hamada, Misato Kaji and Toshifumi Hirata

Tetrahedron: Asymmetry *15 (2004) 1677*



$C_7H_{14}O$

(1*S*,2*S*)-2-Methylcyclohexan-1-ol

Ee >99%

$[\alpha]_D^{25} = +51.2$ (*c* 0.4, MeOH)

Source of chirality: asymmetric reduction with *Synechococcus* sp. PCC 7942

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

Kei Shimoda,* Naoji Kubota, Hiroki Hamada, Misato Kaji and Toshifumi Hirata

Tetrahedron: Asymmetry *15 (2004) 1677*

$C_7H_{14}O$

(1*S*,2*R*)-2-Methylcyclohexan-1-ol

Ee >99%

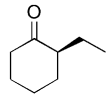
$[\alpha]_D^{25} = +25.7$ (*c* 0.2, MeOH)

Source of chirality: asymmetric reduction with *Synechococcus* sp. PCC 7942

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

Kei Shimoda,* Naoji Kubota, Hiroki Hamada, Misato Kaji and Toshifumi Hirata

Tetrahedron: Asymmetry *15 (2004) 1677*



$C_8H_{14}O$

(*S*)-2-Ethylcyclohexan-1-one

Ee = 83%

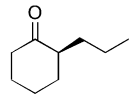
$[\theta]_{288} = +1914$ (*c* 0.32, MeOH)

Source of chirality: asymmetric reduction with *Synechococcus* sp. PCC 7942

Absolute configuration: *S*

Kei Shimoda,* Naoji Kubota, Hiroki Hamada, Misato Kaji and Toshifumi Hirata

Tetrahedron: Asymmetry *15 (2004) 1677*



$C_9H_{16}O$

(*S*)-2-Propylcyclohexan-1-one

Ee = 72%

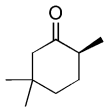
$[\theta]_{288} = +1860$ (*c* 0.15, MeOH)

Source of chirality: asymmetric reduction with *Synechococcus* sp. PCC 7942

Absolute configuration: *S*

Kei Shimoda,* Naoji Kubota, Hiroki Hamada, Misato Kaji and Toshifumi Hirata

Tetrahedron: Asymmetry *15 (2004) 1677*



$C_9H_{16}O$

(*S*)-2,5,5-Trimethylcyclohexan-1-one

Ee = 86%

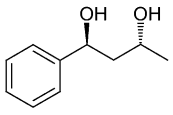
$[\theta]_{288} = +995$ (*c* 0.14, MeOH)

Source of chirality: asymmetric reduction with *Synechococcus* sp. PCC 7942

Absolute configuration: *S*

K. Ahmad, S. Koul, S. C. Taneja,* A. P. Singh, M. Kapoor, Riyaz-ul-Hassan, V. Verma and G. N. Qazi

Tetrahedron: Asymmetry *15 (2004) 1685*



$C_{10}H_{14}O_2$

(1*S*,3*R*)-1-Phenyl butane-1,3-diol

Ee 99% (by HPLC analysis)

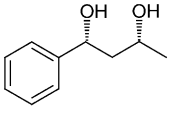
$[\alpha]_D^{25} = -61.6$ (*c* 0.7, $CHCl_3$)

Source of chirality: enzymatic reduction

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

K. Ahmad, S. Koul, S. C. Taneja,* A. P. Singh, M. Kapoor, Riyaz-ul-Hassan, V. Verma and G. N. Qazi

Tetrahedron: Asymmetry *15 (2004) 1685*



$C_{10}H_{14}O_2$

(1*R*,3*R*)-1-Phenyl butane-1,3-diol

Ee 99% (by HPLC analysis)

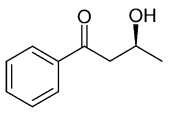
$[\alpha]_D^{25} = +56.5$ (*c* 2.2, $CHCl_3$)

Source of chirality: enzymatic reduction

Absolute configuration: (1*R*,3*R*)

K. Ahmad, S. Koul, S. C. Taneja,* A. P. Singh, M. Kapoor, Riyaz-ul-Hassan, V. Verma and G. N. Qazi

Tetrahedron: Asymmetry *15 (2004) 1685*



$C_{10}H_{12}O_2$

(3*S*)-3-Hydroxy-1-phenyl-1-butanone

Ee 99% (by HPLC analysis)

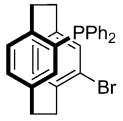
$[\alpha]_D^{25} = +67.5$ (*c* 1.2, $CHCl_3$)

Source of chirality: enzymatic reduction

Absolute configuration: (3*S*)

Thilo Focken, Gerhard Raabe and Carsten Bolm*

Tetrahedron: Asymmetry *15 (2004) 1693*



$C_{28}H_{24}BrP$

(+)-(R_p)-4-Bromo-12-diphenylphosphino[2.2]paracyclophane

Ee = 100%

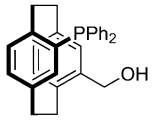
$[\alpha]_D^{25} = +33$ (c 1.0, $CHCl_3$)

Source of chirality: enantiomer separation by HPLC of precursor

Absolute configuration: (R_p)

Thilo Focken, Gerhard Raabe and Carsten Bolm*

Tetrahedron: Asymmetry *15 (2004) 1693*



$C_{29}H_{27}OP$

(+)-(R_p)-4-Diphenylphosphine-12-hydroxymethyl[2.2]paracyclophane

Ee = 100%

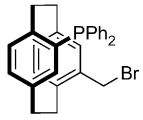
$[\alpha]_D^{25} = +8$ (c 1.0, $CHCl_3$)

Source of chirality: enantiomer separation by HPLC of precursor

Absolute configuration: (R_p)

Thilo Focken, Gerhard Raabe and Carsten Bolm*

Tetrahedron: Asymmetry *15 (2004) 1693*



$C_{29}H_{26}BrP$

(−)-(R_p)-12-Bromomethyl-4-diphenylphosphino[2.2]paracyclophane

Ee = 100%

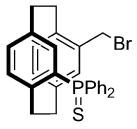
$[\alpha]_D^{25} = -4$ (c 1.0, $CHCl_3$)

Source of chirality: enantiomer separation by HPLC of precursor

Absolute configuration: (R_p)

Thilo Focken, Gerhard Raabe and Carsten Bolm*

Tetrahedron: Asymmetry *15 (2004) 1693*



$C_{29}H_{26}BrPS$

(+)-(S_p)-12-Bromomethyl-4-diphenylthiophosphino[2.2]paracyclophane

Ee = 100%

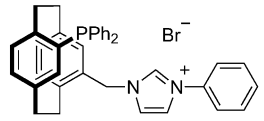
$[\alpha]_D^{25} = +57$ (c 1.1, $CHCl_3$)

Source of chirality: enantiomer separation by HPLC of precursor

Absolute configuration: (S_p)

Thilo Focken, Gerhard Raabe and Carsten Bolm*

Tetrahedron: Asymmetry *15 (2004) 1693*



Ee = 100%

$[\alpha]_D^{25} = -134$ (*c* 1.0, $CHCl_3$)

Source of chirality: enantiomer separation by HPLC of precursor

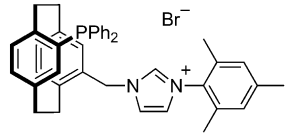
Absolute configuration: (R_p)

$C_{38}H_{34}BrN_2P$

(−)-(R_p)-3-(4-Diphenylphosphino[2.2]paracyclophan-12-ylmethyl)-1-phenylimidazolium bromide

Thilo Focken, Gerhard Raabe and Carsten Bolm*

Tetrahedron: Asymmetry *15 (2004) 1693*



Ee = 100%

$[\alpha]_D^{25} = -90$ (*c* 0.85, $CHCl_3$)

Source of chirality: enantiomer separation by HPLC of precursor

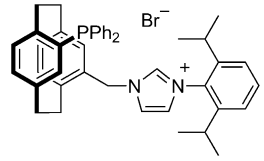
Absolute configuration: (R_p)

$C_{41}H_{40}BrN_2P$

(−)-(R_p)-3-(4-Diphenylphosphino[2.2]paracyclophan-12-ylmethyl)-1-(2,4,6-trimethylphenyl)imidazolium bromide

Thilo Focken, Gerhard Raabe and Carsten Bolm*

Tetrahedron: Asymmetry *15 (2004) 1693*



Ee = 100%

$[\alpha]_D^{25} = -62$ (*c* 1.4, $CHCl_3$)

Source of chirality: enantiomer separation by HPLC of precursor

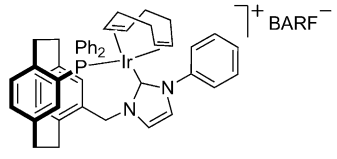
Absolute configuration: (R_p)

$C_{44}H_{46}BrN_2P$

(−)-(R_p)-3-(4-Diphenylphosphino[2.2]paracyclophan-12-ylmethyl)-1-(2,6-diisopropylphenyl)imidazolium bromide

Thilo Focken, Gerhard Raabe and Carsten Bolm*

Tetrahedron: Asymmetry *15 (2004) 1693*



Ee = 100%

$[\alpha]_D^{25} = -0.8$ (*c* 2.2, $CHCl_3$)

Source of chirality: enantiomer separation by HPLC of precursor

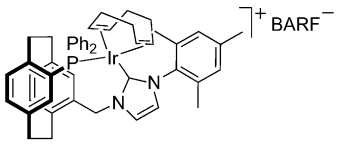
Absolute configuration: (R_p)

$C_{78}H_{57}BF_{24}IrN_2P$

(+)-(R_p)-(η^4-1,5-Cyclooctadiene)(1-phenyl-3-(4-(diphenylphosphanyl)[2.2]paracyclophan-12-ylmethyl)imidazolin-2-ylidene)iridium(I) tetrakis(3,5-bis(trifluoromethyl)phenyl)borate

Thilo Focken, Gerhard Raabe and Carsten Bolm*

Tetrahedron: Asymmetry *15 (2004) 1693*



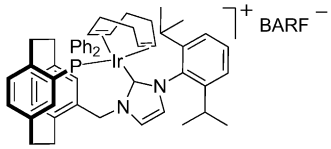
Ee = 100%
$[\alpha]_D^{25} = +68$ (*c* 1.8, $CHCl_3$)
Source of chirality: enantiomer separation by HPLC of precursor
Absolute configuration: (R_p)

$C_{81}H_{63}BF_{24}IrN_2P$

(+)-(R_p)-(η^4-1,5-Cyclooctadiene)(1-(2,4,6-trimethylphenyl)-3-(4-(diphenylphosphanyl)[2.2]paracyclophan-12-yl-methyl)imidazolin-2-ylidene)iridium(I) tetrakis(3,5-bis(trifluoromethyl)phenyl)borate

Thilo Focken, Gerhard Raabe and Carsten Bolm*

Tetrahedron: Asymmetry *15 (2004) 1693*



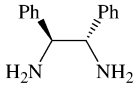
Ee = 100%
$[\alpha]_D^{25} = +68$ (*c* 1.1, $CHCl_3$)
Source of chirality: enantiomer separation by HPLC of precursor
Absolute configuration: (R_p)

$C_{84}H_{69}BF_{24}IrN_2P$

(+)-(R_p)-(η^4-1,5-Cyclooctadiene)(1-(2,6-diisopropylphenyl)-3-(4-(diphenylphosphanyl)[2.2]paracyclophan-12-yl-methyl)imidazolin-2-ylidene)iridium(I) tetrakis(3,5-bis(trifluoromethyl)phenyl)borate

You-Gui Li, Qing-Shan Tian, Jun Zhao, Yan Feng, Min-Jie Li and Tian-Pa You*

Tetrahedron: Asymmetry *15 (2004) 1707*



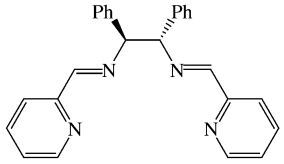
Ee = 100%
$[\alpha]_D^{20} = -106.5$ (*c* 1.0, CH_3OH)
Source of chirality: asymmetric synthesis
Absolute configuration: (1*S*,2*S*)

$C_{14}H_{16}N_2$

(1*S*,2*S*)-1,2-Diphenylethylenediimine

You-Gui Li, Qing-Shan Tian, Jun Zhao, Yan Feng, Min-Jie Li and Tian-Pa You*

Tetrahedron: Asymmetry *15 (2004) 1707*



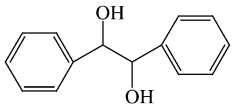
Ee = 100%
$[\alpha]_D^{20} = -12.7$ (*c* 1.0, C_2H_5OH)
Source of chirality: asymmetric synthesis
Absolute configuration: (1*S*,2*S*)

$C_{26}H_{22}N_4$

(1*S*,2*S*)-*N*,*N*′-Bis(pyridylmethene)-1,2-diphenylethylenediimine

You-Gui Li, Qing-Shan Tian, Jun Zhao, Yan Feng, Min-Jie Li and Tian-Pa You*

Tetrahedron: Asymmetry *15 (2004) 1707*



$C_{14}H_{14}O_2$

1,2-Diphenylethane-1,2-diol

Dl/meso = 93/7

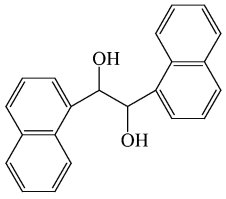
Ee = 88%

$[\alpha]_D^{20} = -82.5$ (*c* 1.0, $CHCl_3$)

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

You-Gui Li, Qing-Shan Tian, Jun Zhao, Yan Feng, Min-Jie Li and Tian-Pa You*

Tetrahedron: Asymmetry *15 (2004) 1707*



$C_{22}H_{18}O_2$

1,2-Di(1-naphthyl)ethane-1,2-diol

Dl/meso = 95/5

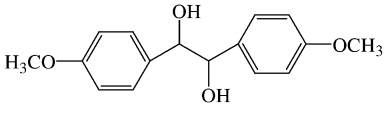
Ee = 80%

$[\alpha]_D^{20} = -41.0$ (*c* 1.0, C_2H_5OH)

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

You-Gui Li, Qing-Shan Tian, Jun Zhao, Yan Feng, Min-Jie Li and Tian-Pa You*

Tetrahedron: Asymmetry *15 (2004) 1707*



$C_{16}H_{18}O_{24}$

1,2-Di(4-methoxylphenyl)ethane-1,2-diol

Dl/meso = 98/2

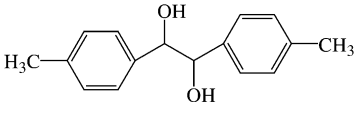
Ee = 91%

$[\alpha]_D^{20} = -105.0$ (*c* 1.0, C_2H_5OH)

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

You-Gui Li, Qing-Shan Tian, Jun Zhao, Yan Feng, Min-Jie Li and Tian-Pa You*

Tetrahedron: Asymmetry *15 (2004) 1707*



$C_{16}H_{18}O_2$

1,2-Di(4-methylphenyl)ethane-1,2-diol

Dl/meso = 95/5

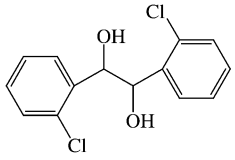
Ee = 90%

$[\alpha]_D^{20} = -91.5$ (*c* 1.0, C_2H_5OH)

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

You-Gui Li, Qing-Shan Tian, Jun Zhao, Yan Feng, Min-Jie Li and Tian-Pa You*

Tetrahedron: Asymmetry *15 (2004) 1707*



$C_{14}H_{12}O_2Cl_2$

1,2-Di(2-chlorophenyl)ethane-1,2-diol

Dl/meso = 92/8

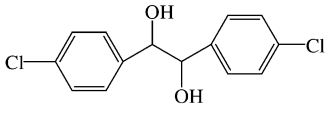
Ee = 60%

$[\alpha]_D^{20} = -38$ (*c* 0.5, $CHCl_3$)

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

You-Gui Li, Qing-Shan Tian, Jun Zhao, Yan Feng, Min-Jie Li and Tian-Pa You*

Tetrahedron: Asymmetry *15 (2004) 1707*



$C_{14}H_{12}O_2Cl_2$

1,2-Di(4-chlorophenyl)ethane-1,2-diol

Dl/meso = 87/13

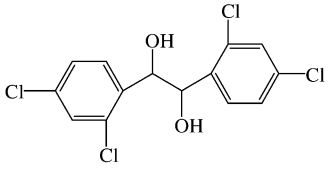
Ee = 68%

$[\alpha]_D^{20} = -42.5$ (*c* 0.5, $CHCl_3$)

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

You-Gui Li, Qing-Shan Tian, Jun Zhao, Yan Feng, Min-Jie Li and Tian-Pa You*

Tetrahedron: Asymmetry *15 (2004) 1707*



$C_{14}H_{10}O_2Cl_4$

1,2-Di(2,4-dichlorophenyl)ethane-1,2-diol

Dl/meso = 93/7

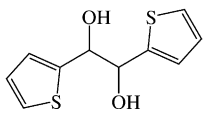
Ee = 74%

$[\alpha]_D^{20} = -58.0$ (*c* 1.0, $CHCl_3$)

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

You-Gui Li, Qing-Shan Tian, Jun Zhao, Yan Feng, Min-Jie Li and Tian-Pa You*

Tetrahedron: Asymmetry *15 (2004) 1707*



$C_{10}H_{10}O_2S_2$

1,2-Di(2-thiophenyl)ethane-1,2-diol

Dl/meso = 89/11

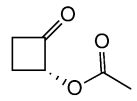
Ee = 53%

$[\alpha]_D^{20} = -26.0$ (*c* 1.0, C_2H_5OH)

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

Damien Hazelard, Antoine Fadel* and Georges Morgant

Tetrahedron: Asymmetry *15 (2004) 1711*

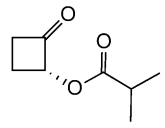


$C_6H_8O_3$
2-Acetoxy-cyclobutanone

Ee >89%
$[\alpha]_D^{20} = +77$ (c 1, $CHCl_3$)
Source of chirality: enzymatic reaction
Absolute configuration: (2*R*)

Damien Hazelard, Antoine Fadel* and Georges Morgant

Tetrahedron: Asymmetry *15 (2004) 1711*

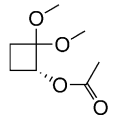


$C_8H_{12}O_3$
2-Isobutyroxy-cyclobutanone

Ee = 12%
$[\alpha]_D^{20} = +4.4$ (c 1, $CHCl_3$)
Source of chirality: enzymatic reaction
Absolute configuration: (2*R*)

Damien Hazelard, Antoine Fadel* and Georges Morgant

Tetrahedron: Asymmetry *15 (2004) 1711*

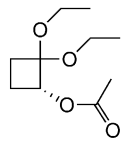


$C_8H_{14}O_4$
2-Acetoxy-cyclobutanone dimethyl acetal

Ee >99%
$[\alpha]_D^{20} = +14.2$ (c 1, $CHCl_3$)
Source of chirality: enzymatic reaction
Absolute configuration: (2*R*)

Damien Hazelard, Antoine Fadel* and Georges Morgant

Tetrahedron: Asymmetry *15 (2004) 1711*

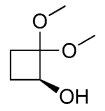


$C_{10}H_{18}O_4$
2-Acetoxy-cyclobutanone diethyl acetal

Ee = 98%
$[\alpha]_D^{20} = +3.5$ (c 1, $CHCl_3$)
Source of chirality: enzymatic reaction
Absolute configuration: (2*R*)

Damien Hazelard, Antoine Fadel* and Georges Morgant

Tetrahedron: Asymmetry *15 (2004) 1711*



$C_6H_{12}O_3$

2-Hydroxy-cyclobutanone dimethyl acetal

Ee = 99.9%

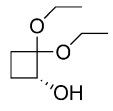
$[\alpha]_D^{20} = +12.7$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic reaction

Absolute configuration: (2*S*)

Damien Hazelard, Antoine Fadel* and Georges Morgant

Tetrahedron: Asymmetry *15 (2004) 1711*



$C_8H_{16}O_3$

2-Hydroxy-cyclobutanonediethyl acetal

Ee = 98%

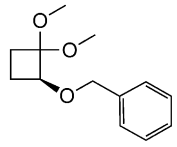
$[\alpha]_D^{20} = -22$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic reaction

Absolute configuration: (2*R*)

Damien Hazelard, Antoine Fadel* and Georges Morgant

Tetrahedron: Asymmetry *15 (2004) 1711*



$C_{13}H_{18}O_3$

2-Benzyloxy-cyclobutanone dimethyl acetal

Ee >99.5%

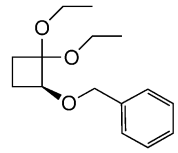
$[\alpha]_D^{20} = +28.1$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic reaction

Absolute configuration: (2*S*)

Damien Hazelard, Antoine Fadel* and Georges Morgant

Tetrahedron: Asymmetry *15 (2004) 1711*



$C_{15}H_{22}O_3$

2-Benzyloxy-cyclobutanone diethyl acetal

Ee = 64%

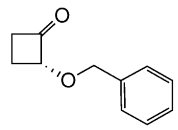
$[\alpha]_D^{20} = +11.6$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic reaction

Absolute configuration: (2*S*)

Damien Hazelard, Antoine Fadel* and Georges Morgant

Tetrahedron: Asymmetry *15 (2004) 1711*



$C_{11}H_{12}O_2$

2-Benzyloxy-cyclobutanone

Ee >99%

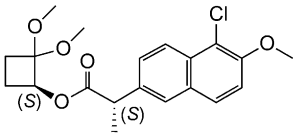
$[\alpha]_D^{20} = +81.2$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic reaction

Absolute configuration: (2*R*)

Damien Hazelard, Antoine Fadel* and Georges Morgant

Tetrahedron: Asymmetry *15 (2004) 1711*



$C_{20}H_{23}Cl_1O_2$

2-[2′-(5″-Chloro-6″-methoxynaphthalen-2″-yl)-propionyloxy]-cyclobutanone dimethyl acetal

De >99%

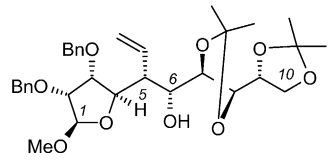
$[\alpha]_D^{20} = +5.4$ (*c* 1, $CHCl_3$)

Source of chirality: enzymatic reaction

Absolute configuration: (2*S*,2′*S*) by X-ray analysis

Sławomir Jarosz,* Katarzyna Szewczyk, Anna Gaweł and Roman Luboradzki

Tetrahedron: Asymmetry *15 (2004) 1719*



$C_{33}H_{44}O_9$

Methyl 2,3-di-*O*-benzyl-5-deoxy-7,8:9,10-di-*O*-isopropylidene-(5*R*)-vinyl-β-D-*ribo*-D-*manno*-deca-1,4-furanoside

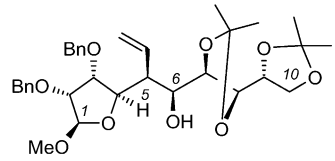
$[\alpha]_D = +8.6$ (*c* 1.50, $CHCl_3$)

Source of chirality: chiral pool

Absolute configuration: (1*R*,2*R*,3*R*,4*R*,5*R*,6*R*,7*R*,8*R*,9*R*)

Sławomir Jarosz,* Katarzyna Szewczyk, Anna Gaweł and Roman Luboradzki

Tetrahedron: Asymmetry *15 (2004) 1719*



$C_{33}H_{44}O_9$

Methyl 2,3-di-*O*-benzyl-5-deoxy-7,8:9,10-di-*O*-isopropylidene-(5*R*)-vinyl-β-D-*ribo*-D-*gluco*-deca-1,4-furanoside

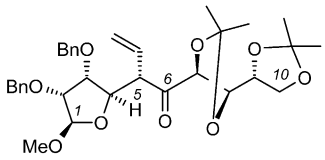
$[\alpha]_D = +16.6$ (*c* 1.50, $CHCl_3$)

Source of chirality: chiral pool

Absolute configuration: (1*R*,2*R*,3*R*,4*R*,5*S*,6*S*,7*R*,8*R*,9*R*)

Sławomir Jarosz,* Katarzyna Szewczyk, Anna Gaweł and Roman Luboradzki

Tetrahedron: Asymmetry *15 (2004) 1719*



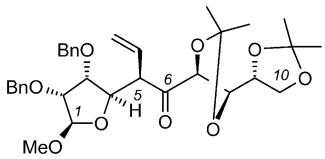
$[\alpha]_D = -53.1$ (c 1.50, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration:
(1*R*,2*R*,3*R*,4*R*,5*S*,7*S*,8*S*,9*R*)

$C_{33}H_{42}O_9$

Methyl 2,3-di-*O*-benzyl-5-deoxy-7,8:9,10-di-*O*-isopropylidene-(5*S*)-vinyl-6-oxo-β-D-*ribo*-D-*arabino*-deca-1,4-furanoside

Sławomir Jarosz,* Katarzyna Szewczyk, Anna Gaweł and Roman Luboradzki

Tetrahedron: Asymmetry *15 (2004) 1719*



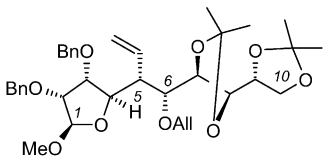
$[\alpha]_D = +32.2$ (c 1.50, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration:
(1*R*,2*R*,3*R*,4*R*,5*R*,7*S*,8*S*,9*R*)

$C_{33}H_{42}O_9$

Methyl 2,3-di-*O*-benzyl-5-deoxy-7,8:9,10-di-*O*-isopropylidene-(5*R*)-vinyl-6-oxo-β-D-*ribo*-D-*arabino*-deca-1,4-furanoside

Sławomir Jarosz,* Katarzyna Szewczyk, Anna Gaweł and Roman Luboradzki

Tetrahedron: Asymmetry *15 (2004) 1719*



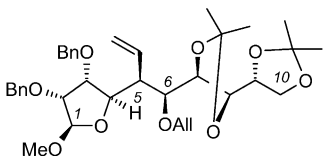
$[\alpha]_D = -6.0$ (c 1.50, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration:
(1*R*,2*R*,3*R*,4*R*,5*R*,6*R*,7*R*,8*R*,9*R*)

$C_{33}H_{44}O_9$

Methyl 6-*O*-allyl-2,3-di-*O*-benzyl-5-deoxy-7,8:9,10-di-*O*-isopropylidene-(5*R*)-vinyl-β-D-*ribo*-D-*manno*-deca-1,4-furanoside

Sławomir Jarosz,* Katarzyna Szewczyk, Anna Gaweł and Roman Luboradzki

Tetrahedron: Asymmetry *15 (2004) 1719*



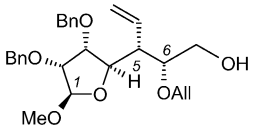
$[\alpha]_D = +12.3$ (c 1.50, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration:
(1*R*,2*R*,3*R*,4*R*,5*S*,6*S*,7*R*,8*R*,9*R*)

$C_{33}H_{44}O_9$

Methyl 6-*O*-allyl-2,3-di-*O*-benzyl-5-deoxy-7,8:9,10-di-*O*-isopropylidene-(5*S*)-vinyl-β-D-*ribo*-D-*gluco*-deca-1,4-furanoside

Sławomir Jarosz,* Katarzyna Szewczyk, Anna Gaweł and Roman Luboradzki

Tetrahedron: Asymmetry *15 (2004) 1719*



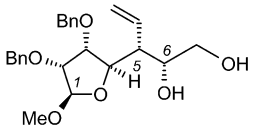
$[\alpha]_D = -19.1$ (c 1.50, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration:
(1*R*,2*R*,3*R*,4*R*,5*R*,6*R*)

$C_{27}H_{34}O_6$

Methyl 6-*O*-allyl-2,3-di-*O*-benzyl-5-deoxy-5-vinyl-β-D-*ribo*-L-*threo*-hept-1,4-furanoside

Sławomir Jarosz,* Katarzyna Szewczyk, Anna Gaweł and Roman Luboradzki

Tetrahedron: Asymmetry *15 (2004) 1719*



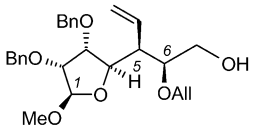
$[\alpha]_D = +10.1$ (c 1.50, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration:
(1*R*,2*R*,3*R*,4*R*,5*R*,6*R*)

$C_{27}H_{34}O_6$

Methyl 2,3-di-*O*-benzyl-5-deoxy-5-vinyl-β-D-*ribo*-L-*threo*-hept-1,4-furanoside

Sławomir Jarosz,* Katarzyna Szewczyk, Anna Gaweł and Roman Luboradzki

Tetrahedron: Asymmetry *15 (2004) 1719*



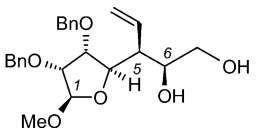
$[\alpha]_D = +48.3$ (c 1.50, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration:
(1*R*,2*R*,3*R*,4*R*,5*S*,6*S*)

$C_{27}H_{34}O_6$

Methyl 6-*O*-allyl-2,3-di-*O*-benzyl-5-deoxy-5-vinyl-β-D-*ribo*-D-*threo*-hept-1,4-furanoside

Sławomir Jarosz,* Katarzyna Szewczyk, Anna Gaweł and Roman Luboradzki

Tetrahedron: Asymmetry *15 (2004) 1719*



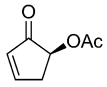
$[\alpha]_D = +30.5$ (c 1.50, $CHCl_3$)
Source of chirality: chiral pool
Absolute configuration:
(1*R*,2*R*,3*R*,4*R*,5*S*,6*S*)

$C_{27}H_{34}O_6$

Methyl 2,3-di-*O*-benzyl-5-deoxy-5-vinyl-β-D-*ribo*-D-*threo*-hept-1,4-furanoside

Cihangir Tanyeli,* Engin Turkut and İdris Mecidoğlu Akhmedov

Tetrahedron: Asymmetry *15 (2004) 1729*



$C_7H_8O_3$

(*S*)-5-Acetoxy-2-cyclopentenone

Ee = 96%

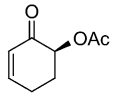
$[\alpha]_D^{25} = +60.3$ (*c* 0.2, $CHCl_3$)

Source of chirality: enzymatic resolution

Absolute configuration: 5*S*

Cihangir Tanyeli,* Engin Turkut and İdris Mecidoğlu Akhmedov

Tetrahedron: Asymmetry *15 (2004) 1729*



$C_8H_{10}O_3$

(*S*)-6-Acetoxy-2-cyclohexenone

Ee = 97%

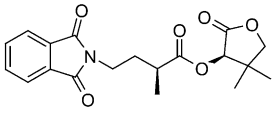
$[\alpha]_D^{25} = -88.7$ (*c* 0.5, MeOH)

Source of chirality: enzymatic resolution

Absolute configuration: 6*S*

Rujee K. Duke,* Mary Chebib, David E. Hibbs, Kenneth N. Mewett and Graham A. R. Johnston

Tetrahedron: Asymmetry *15 (2004) 1745*



$C_{19}H_{21}NO_6$

[(2*R*)-(3,3-Dimethylbutyro-1,4-lactonyl)]-(2*S*)-methyl-4-phthalimidobutanoate

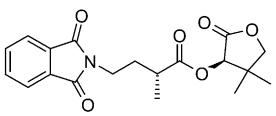
$[\alpha]_D^{25} = +13.6$ (*c* 1, $CHCl_3$)

Source of chirality: resolution

Absolute configuration: (2*S*,2′*R*)

Rujee K. Duke,* Mary Chebib, David E. Hibbs, Kenneth N. Mewett and Graham A. R. Johnston

Tetrahedron: Asymmetry *15 (2004) 1745*



$C_{19}H_{21}NO_6$

[(2*R*)-(3,3-Dimethylbutyro-1,4-lactonyl)]-(2*S*)-methyl-4-phthalimidobutanoate

$[\alpha]_D^{25} = -3.3$ (*c* 1, $CHCl_3$)

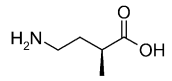
Source of chirality: resolution

Absolute configuration: (2*R*,2′*R*)

Rujee K. Duke,* Mary Chebib, David E. Hibbs, Kenneth N. Mewett and Graham A. R. Johnston

Tetrahedron: Asymmetry *15 (2004) 1745*

$[\alpha]_D^{25} = +2.5$ (c 1, H_2O)
Source of chirality: resolution
Absolute configuration: *S*

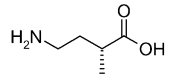


$C_5H_{11}NO_2$
(*S*)-4-Amino-2-methylbutanoic acid

Rujee K. Duke,* Mary Chebib, David E. Hibbs, Kenneth N. Mewett and Graham A. R. Johnston

Tetrahedron: Asymmetry *15 (2004) 1745*

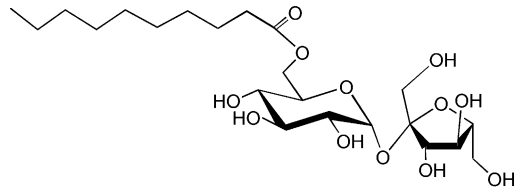
$[\alpha]_D^{25} = -2.7$ (c 1, H_2O)
Source of chirality: resolution
Absolute configuration: *R*



$C_5H_{11}NO_2$
(*R*)-4-Amino-2-methylbutanoic acid

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*

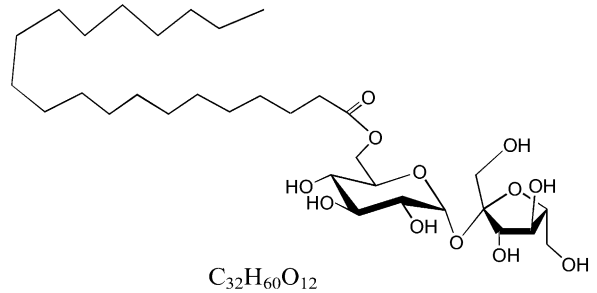


Ee = 100%
$[\alpha]_D^{25} = +44$ (c 1, MeOH)
Source of chirality: sucrose

$C_{22}H_{40}O_{12}$
6-*O*-Decanoylsucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*

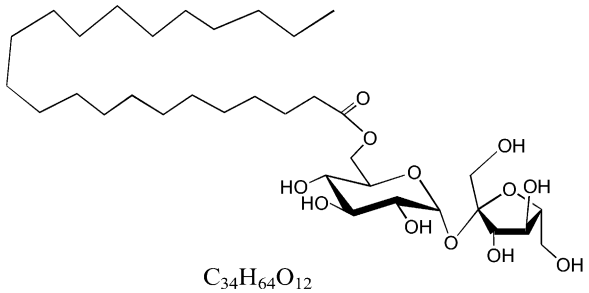


Ee = 100%
$[\alpha]_D^{25} = +33$ (c 0.5, THF)
Source of chirality: sucrose

$C_{32}H_{60}O_{12}$
6-*O*-Eicosanoylsucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



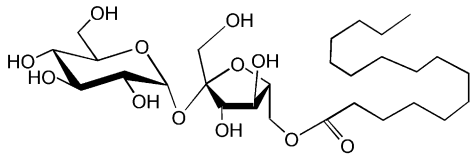
$C_{34}H_{64}O_{12}$

6-*O*-Docosanoylsucrose

Ee = 100%
$[\alpha]_D^{25} = +31$ (*c* 1, THF)
Source of chirality: sucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



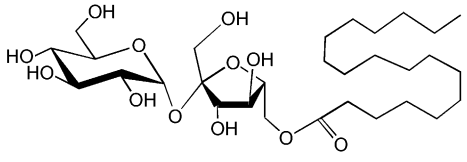
$C_{28}H_{52}O_{12}$

6′-*O*-Palmitoylsucrose

Ee = 100%
$[\alpha]_D^{25} = +42$ (*c* 1, MeOH)
Source of chirality: sucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



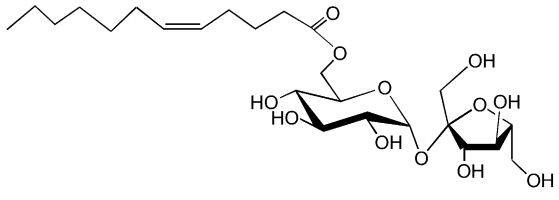
$C_{30}H_{56}O_{12}$

6′-*O*-Stearoylsucrose

Ee = 100%
$[\alpha]_D^{25} = +42$ (*c* 0.3, MeOH)
Source of chirality: sucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



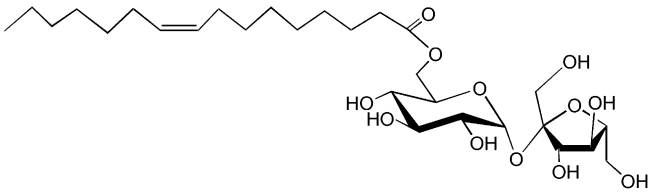
$C_{24}H_{42}O_{12}$

6-*O*-Dodec-5*c*-enoylsucrose

Ee = 100%
$[\alpha]_D^{25} = +43$ (*c* 2, MeOH)
Source of chirality: sucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



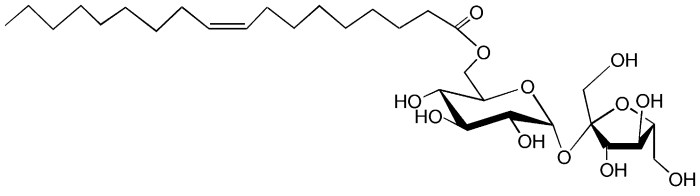
Ee = 100%
$[\alpha]_D^{25} = +32$ (*c* 0.2, MeOH)
Source of chirality: sucrose

$C_{28}H_{50}O_{12}$

6-*O*-Hexadec-9*c*-enoylsucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



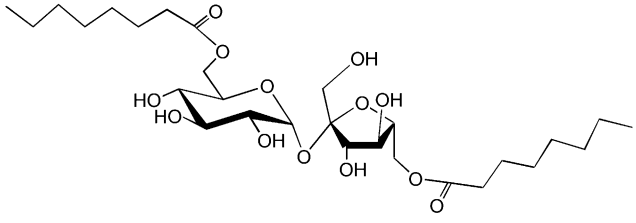
Ee = 100%
$[\alpha]_D^{25} = +39$ (*c* 0.8, MeOH)
Source of chirality: sucrose

$C_{30}H_{54}O_{12}$

6-*O*-Octadec-9*c*-enoylsucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



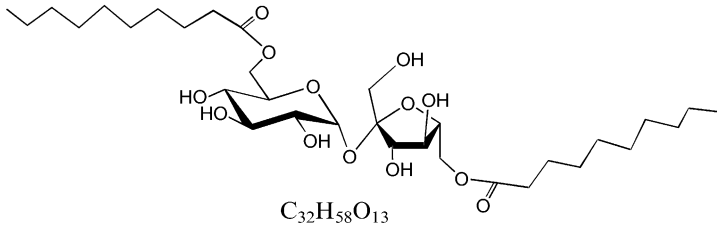
Ee = 100%
$[\alpha]_D^{25} = +52$ (*c* 1, THF)
Source of chirality: sucrose

$C_{28}H_{50}O_{13}$

6,6′-Di-*O*-octanoylsucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



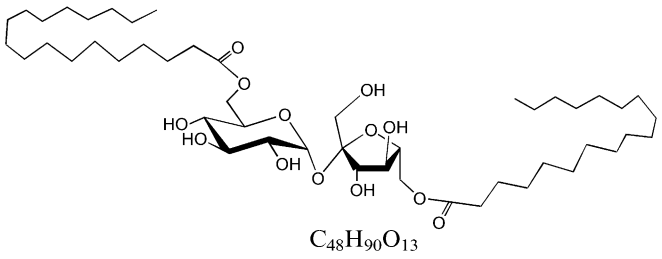
Ee = 100%
$[\alpha]_D^{25} = +49$ (*c* 1, THF)
Source of chirality: sucrose

$C_{32}H_{58}O_{13}$

6,6′-Di-O-decanoylsucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



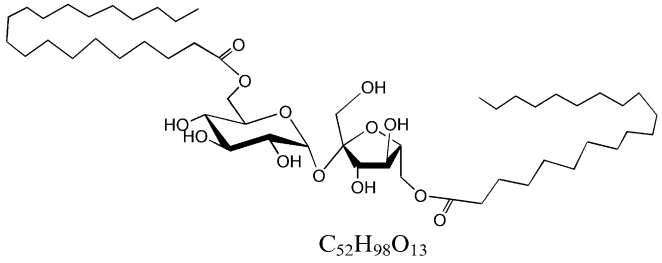
$C_{48}H_{90}O_{13}$

6,6′-Di-*O*-stearoylsucrose

Ee = 100%
$[\alpha]_D^{25} = +39$ (*c* 0.4, THF)
Source of chirality: sucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



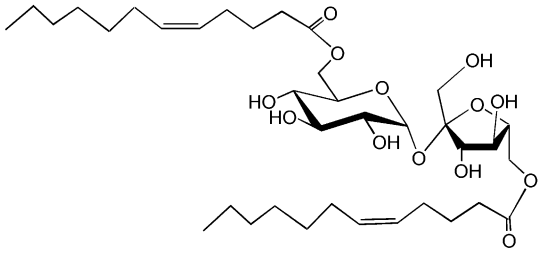
$C_{52}H_{98}O_{13}$

6,6′-Di-*O*-eicosanoylsucrose

Ee = 100%
$[\alpha]_D^{25} = +37$ (*c* 0.2, THF)
Source of chirality: sucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



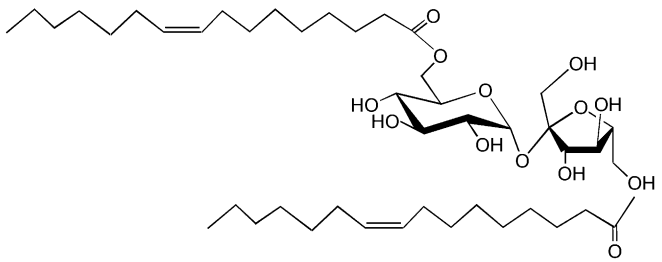
$C_{36}H_{62}O_{13}$

6,6′-Di-*O*-dodec-5*c*-enoylsucrose

Ee = 100%
$[\alpha]_D^{25} = +42$ (*c* 2, THF)
Source of chirality: sucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



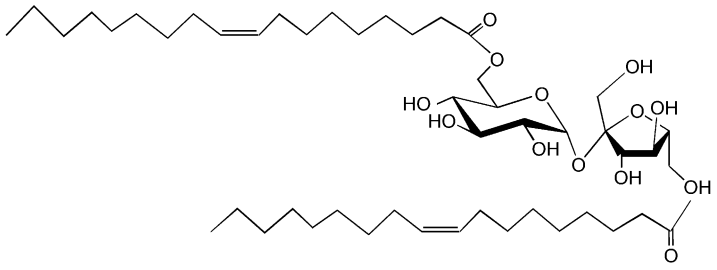
$C_{44}H_{78}O_{13}$

6,6′-Di-*O*-hexadec-9*c*-enoylsucrose

Ee = 100%
$[\alpha]_D^{25} = +38$ (*c* 1, THF)
Source of chirality: sucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



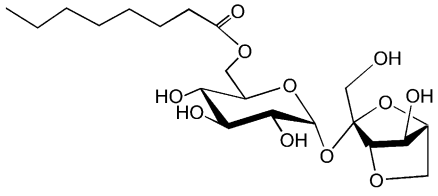
Ee = 100%
$[\alpha]_D^{25} = +35$ (*c* 2, THF)
Source of chirality: sucrose

$C_{48}H_{86}O_{13}$

6,6′-Di-*O*-octadec-9*c*-enoylsucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



Ee = 100%
$[\alpha]_D^{25} = +76$ (*c* 1, THF)
Source of chirality: sucrose

$C_{20}H_{34}O_{11}$

6-*O*-Octanoyl-α-D-glucopyranosyl-3,6-anhydro-β-D-fructofuranoside

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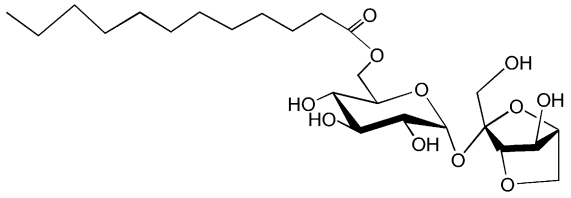
Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



Ee = 100%
$[\alpha]_D^{25} = +68$ (*c* 1, THF)
Source of chirality: sucrose

$C_{24}H_{42}O_{11}$

6-*O*-Lauroyl-α-D-glucopyranosyl-3,6-anhydro-β-D-fructofuranoside

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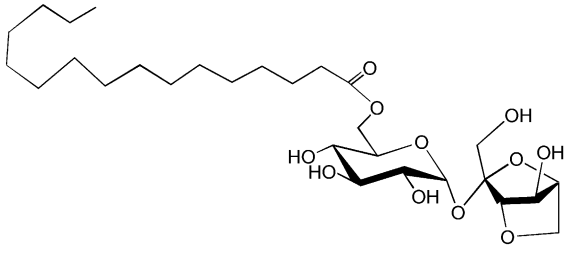
Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



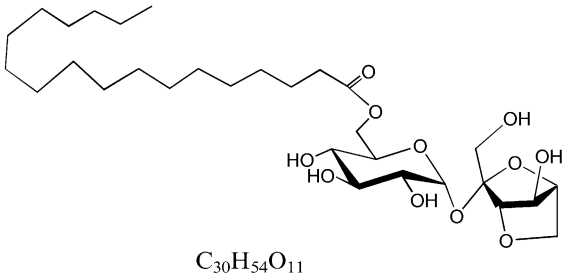
Ee = 100%
$[\alpha]_D^{25} = +67$ (*c* 1, THF)
Source of chirality: sucrose

$C_{28}H_{50}O_{11}$

6-*O*-Palmitoyl-α-D-glucopyranosyl-3,6-anhydro-β-D-fructofuranoside

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



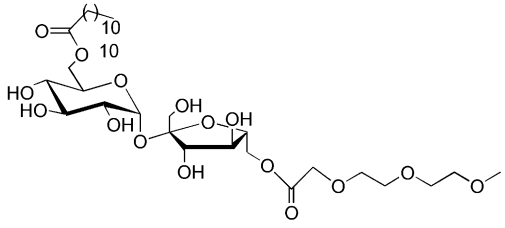
Ee = 100%
$[\alpha]_D^{25} = +62$ (*c* 0.4, THF)
Source of chirality: sucrose

$C_{30}H_{54}O_{11}$

6-*O*-Stearoyl-α-D-glucopyranosyl-3,6-anhydro-β-D-fructofuranoside

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



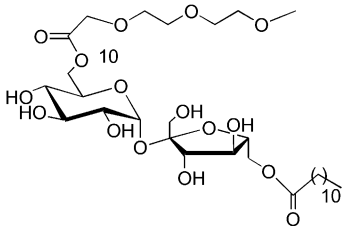
Ee = 100%
$[\alpha]_D^{25} = +11$ (*c* 7, THF)
Source of chirality: sucrose

$C_{31}H_{56}O_{16}$

6-*O*-Lauroyl-6′-*O*-2-[2-(2-methoxyethoxy)ethoxy]acetoxysucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



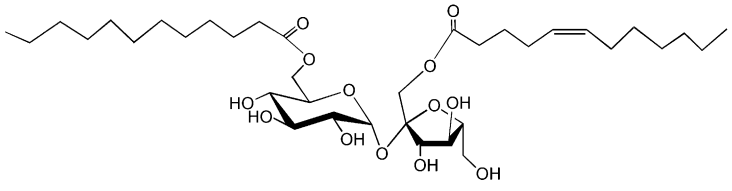
Ee = 100%
$[\alpha]_D^{25} = +9$(*c* 9, THF)
Source of chirality: sucrose

$C_{31}H_{56}O_{16}$

6-*O*-2-[2-(2-Methoxyethoxy)ethoxy]acetoxy-6′-*O*-lauroylsucrose

Valérie Molinier, Juliette Fitremann, Alain Bouchu and Yves Queneau*

Tetrahedron: Asymmetry *15 (2004) 1753*



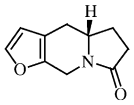
Ee = 100%
$[\alpha]_D^{25} = +31$ (*c* 0.4, THF)
Source of chirality: sucrose

$C_{30}H_{54}O_{11}$

1′-*O*-Dodec-5*c*-enoyl-6-*O*-lauroylsucrose

Fridrich Szemes, Katarína Kadlečíková, Štefan Marchalín, Maria Bobošíková, Vincent Dalla and Adam Daïch*

Tetrahedron: Asymmetry *15 (2004) 1763*



$C_{10}H_{11}NO_2$

(4a*S*)-(+)-4,4a,5,6,7,9-Hexahydrofuro[2,3-*f*]indolizin-7-one

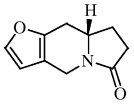
$[\alpha]_D^{25} = +1.4$ (*c* 0.1, EtOH)

Source of chirality: (*S*)-Glutamic acid

Absolute configuration: (4a*S*)

Fridrich Szemes, Katarína Kadlečíková, Štefan Marchalín, Maria Bobošíková, Vincent Dalla and Adam Daïch*

Tetrahedron: Asymmetry *15 (2004) 1763*



$C_{10}H_{11}NO_2$

(8a*S*)-(+)-4,6,7,8,8a,9-Hexahydrofuro[3,2-*f*]indolizin-6-one

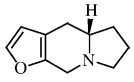
$[\alpha]_D^{25} = +116.7$ (*c* 1, EtOH)

Source of chirality: (*S*)-Glutamic acid

Absolute configuration: (8a*S*)

Fridrich Szemes, Katarína Kadlečíková, Štefan Marchalín, Maria Bobošíková, Vincent Dalla and Adam Daïch*

Tetrahedron: Asymmetry *15 (2004) 1763*



$C_{10}H_{13}NO$

(4a*S*)-(−)-4,4a,5,6,7,9-Hexahydrofuro[2,3-*f*]indolizine

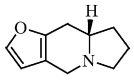
$[\alpha]_D^{25} = -20.5$ (*c* 0.1, EtOH)

Source of chirality: (*S*)-Glutamic acid

Absolute configuration: (4a*S*)

Fridrich Szemes, Katarína Kadlečíková, Štefan Marchalín, Maria Bobošíková, Vincent Dalla and Adam Daïch*

Tetrahedron: Asymmetry *15 (2004) 1763*



$C_{10}H_{13}NO$

(8a*S*)-(+)-4,6,7,8,8a,9-Hexahydrofuro[3,2-*f*]indolizine

$[\alpha]_D^{25} = +110$ (*c* 0.1, EtOH)

Source of chirality: (*S*)-Glutamic acid

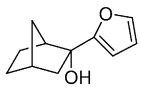
Absolute configuration: (8a*S*)

Fridrich Szemes, Katarína Kadlečíková, Štefan Marchalín,
Maria Bobošíková, Vincent Dalla and Adam Daïch*

Tetrahedron: Asymmetry *15 (2004) 1763*

Alessandra Lattanzi,* Patrizia Iannece and Arrigo Scettri

Tetrahedron: Asymmetry *15 (2004) 1779*



Ee >99%
$[\alpha]_D^{24} = +1.5$ (*c* 0.81, $CHCl_3$)
Source of chirality: stereoselective synthesis
Absolute configuration: 2*R*

$C_{11}H_{14}O_2$
(1*S*,2*R*,4*R*)-2-*endo*-Hydroxy-2-*exo*-(2′-furyl)-bicyclo-[2.2.1] heptane

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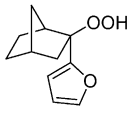
Alessandra Lattanzi,* Patrizia Iannece and Arrigo Scettri

Tetrahedron: Asymmetry *15 (2004) 1779*



Ee >99%
$[\alpha]_D^{26} = +36.4$ (*c* 1.00, $CHCl_3$)
Source of chirality: stereoselective synthesis
Absolute configuration: 2*S*

$C_{11}H_{14}O_3$
(1*S*,2*S*,4*R*)-2-*exo*-Hydroperoxy-2-*endo*-(2′-furyl)-bicyclo-[2.2.1] heptane

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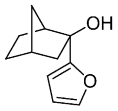
Alessandra Lattanzi,* Patrizia Iannece and Arrigo Scettri

Tetrahedron: Asymmetry *15 (2004) 1779*



Ee >99%
$[\alpha]_D^{24} = +47.9$ (*c* 0.80, $CHCl_3$)
Source of chirality: stereoselective synthesis
Absolute configuration: 2*S*

$C_{11}H_{14}O_2$
(1*S*,2*S*,4*R*)-2-*exo*-Hydroxy-2-*endo*-(2′-furyl)-bicyclo-[2.2.1] heptane

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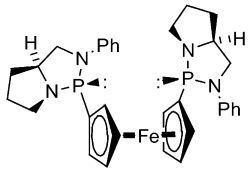
Guy J. Clarkson, Jeffrey R. Ansell, David J. Cole-Hamilton, Peter J. Pogorzelec, John Whittell and Martin Wills*

Tetrahedron: Asymmetry *15 (2004) 1787*

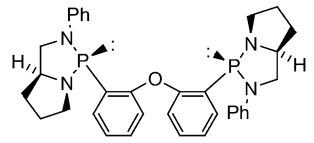


Ee = 100%
$[\alpha]_D^{17} = -96.2$ (*c* 1.0, chloroform)
Source of chirality: glutamic acid of (*S*)-configuration

$C_{32}H_{36}FeN_4P_2$
FerriESPHOS

Guy J. Clarkson, Jeffrey R. Ansell, David J. Cole-Hamilton, Peter J. Pogorzelec, John Whittell and Martin Wills*

Tetrahedron: Asymmetry *15 (2004) 1787*



$C_{34}H_{36}FeN_4OP_2$

DiPhenESPHOS

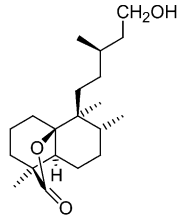
Ee = 100%

$[\alpha]_D^{18} = -397.5$ (*c* 1.0, chloroform)

Source of chirality: glutamic acid of (*S*)-configuration

Jesús M. L. Rodilla,* Maria L. A. Silva, David Díez, Julio G. Urones and Francisca Sanz

Tetrahedron: Asymmetry *15 (2004) 1793*



$C_{20}H_{34}O_3$

(13*S*)-5-*epi*-15-Hydroxy-*ent*-haliman-18,10β-olide

Ee, de >95% (NMR)

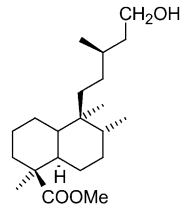
$[\alpha]_D^{20} = -24.6$ (*c* 0.90, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: 13*S*

Jesús M. L. Rodilla,* Maria L. A. Silva, David Díez, Julio G. Urones and Francisca Sanz

Tetrahedron: Asymmetry *15 (2004) 1793*



$C_{21}H_{36}O_3$

Methyl (13*S*)-15-hydroxy-*ent*-halim-5(10)-en-18-oate

Ee, de >95% (NMR)

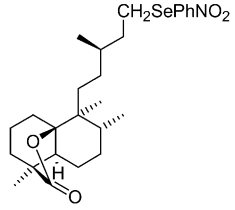
$[\alpha]_D^{20} = -32.2$ (*c* 0.25, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: 13*S*

Jesús M. L. Rodilla,* Maria L. A. Silva, David Díez, Julio G. Urones and Francisca Sanz

Tetrahedron: Asymmetry *15 (2004) 1793*



$C_{26}H_{37}O_4NSe$

(13*S*)-5-*epi*-15-*o*-Nitrophenylseleno-*ent*-haliman-18,10β-olide

Ee, de >95% (NMR)

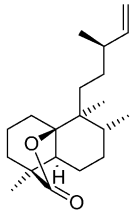
$[\alpha]_D^{20} = -20.3$ (*c* 1.48, $CHCl_3$)

Source of chirality: asymmetric synthesis

Absolute configuration: 13*S*

Jesús M. L. Rodilla,* Maria L. A. Silva, David Díez,
Julio G. Urones and Francisca Sanz

Tetrahedron: Asymmetry *15 (2004) 1793*



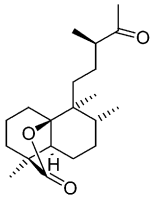
$C_{20}H_{32}O_2$

(13*S*)-5-*epi*-ent-Halim-14-en-18,10β-olide

Ee, de >95% (NMR)
$[\alpha]_D^{20} = -27.5$ (*c* 0.80, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: 13*S*

Jesús M. L. Rodilla,* Maria L. A. Silva, David Díez,
Julio G. Urones and Francisca Sanz

Tetrahedron: Asymmetry *15 (2004) 1793*



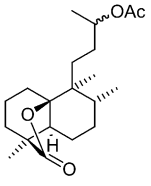
$C_{14}H_{18}O_5S$

(13*S*)-5-*epi*-14-Oxo-*ent*-haliman-18,10β-olide

Ee, de >95% (NMR)
$[\alpha]_D^{20} = -26.4$ (*c* 0.76, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: 13*S*

Jesús M. L. Rodilla,* Maria L. A. Silva, David Díez,
Julio G. Urones and Francisca Sanz

Tetrahedron: Asymmetry *15 (2004) 1793*



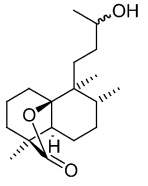
$C_{20}H_{32}O_4$

(13*S* and 13*R*)-5-*epi*-13-Acetoxy-14,15-di-*nor*-*ent*-haliman-18,10β-olide

Ee, de >95% (NMR)
$[\alpha]_D^{20} = -25.0$ (*c* 0.48, $CHCl_3$)
Source of chirality: mixture of enantiomers
Absolute configuration: 13*S* and 13*R*

Jesús M. L. Rodilla,* Maria L. A. Silva, David Díez,
Julio G. Urones and Francisca Sanz

Tetrahedron: Asymmetry *15 (2004) 1793*



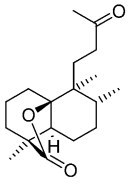
$C_{18}H_{30}O_3$

(13*S* and 13*R*)-5-*epi*-14,15-Di-*nor*-13-hydroxy-*ent*-haliman-18,10β-olide

Ee, de >95% (NMR)
$[\alpha]_D^{20} = -13.4$ (*c* 0.89, $CHCl_3$)
Source of chirality: mixture of enantiomers
Absolute configuration: 13*S* and 13*R*

Jesús M. L. Rodilla,* Maria L. A. Silva, David Díez,
Julio G. Urones and Francisca Sanz

Tetrahedron: Asymmetry *15 (2004) 1793*



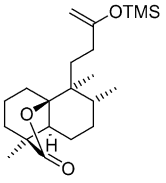
$C_{18}H_{28}O_3$

5-*epi*-14,15-Di-*nor*-13-oxo-*ent*-haliman-18,10β-olide

Ee, de >95% (NMR)
$[\alpha]_D^{20} = -18.4$ (*c* 0.76, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: shown in the figure

Jesús M. L. Rodilla,* Maria L. A. Silva, David Díez,
Julio G. Urones and Francisca Sanz

Tetrahedron: Asymmetry *15 (2004) 1793*



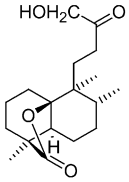
$C_{21}H_{36}O_3Si$

5-*epi*-14,15-Di-*nor*-13-trimethylsililoxy-*ent*-halim-13(16)-en-18,10β-olide

Ee, de >95% (NMR)
$[\alpha]_D^{20} = -21.4$ (*c* 0.80, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: shown in the figure

Jesús M. L. Rodilla,* Maria L. A. Silva, David Díez,
Julio G. Urones and Francisca Sanz

Tetrahedron: Asymmetry *15 (2004) 1793*



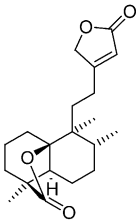
$C_{18}H_{28}O_4$

5-*epi*-14,15-Di-*nor*-16-hydroxy-13-oxo-*ent*-haliman-18,10β-olide

Ee, de >95% (NMR)
$[\alpha]_D^{20} = -19.5$ (*c* 0.72, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: shown in the figure

Jesús M. L. Rodilla,* Maria L. A. Silva, David Díez,
Julio G. Urones and Francisca Sanz

Tetrahedron: Asymmetry *15 (2004) 1793*



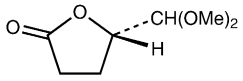
$C_{20}H_{28}O_4$

5-*epi*-*ent*-Halim-13-en-18,10β;15,16-diolide

Ee, de >95% (NMR)
$[\alpha]_D^{20} = -15.4$ (*c* 0.26, $CHCl_3$)
Source of chirality: asymmetric synthesis
Absolute configuration: shown in the figure

Stefan Höck, Florian Koch and Hans-Jürg Borschberg*

Tetrahedron: Asymmetry *15 (2004) 1801*



$C_7H_{12}O_4$

(*S*)-4-(Dimethoxymethyl)butanolide

Ee = 100% [by synthesis from enantiomerically pure L-glutamic acid]

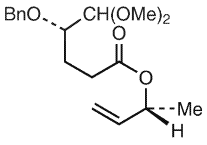
$[\alpha]_D^{25} = +6.5$ (*c* 3.0, $CHCl_3$)

Source of chirality: commercially available L-glutamic acid

Absolute configuration: *S*

Stefan Höck, Florian Koch and Hans-Jürg Borschberg*

Tetrahedron: Asymmetry *15 (2004) 1801*



$C_{18}H_{26}O_5$

(1*R*)-1-Methylprop-2-enyl (4*S*)-4-(benzyloxy)-5,5-dimethoxypentanoate

Ee = 100% [by synthesis from enantiomerically pure L-glutamic acid]

$[\alpha]_D^{25} = -21.0$ (*c* 0.12, $CHCl_3$)

Acid component: source of chirality: L-glutamic acid (commercially available)

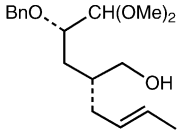
Absolute configuration: *S* (100% ee)

Alcohol component: source of chirality: diethyl tartrate

Absolute configuration: *R* (85% ee)

Stefan Höck, Florian Koch and Hans-Jürg Borschberg*

Tetrahedron: Asymmetry *15 (2004) 1801*



$C_{18}H_{28}O_4$

(2*S*,4*R*,6*E*)-2-(Benzyloxy)-4-(hydroxymethyl)oct-6-enal dimethyl acetal

Ee = 100% [by synthesis from enantiomerically pure L-glutamic acid]

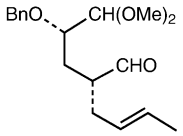
$[\alpha]_D^{25} = -27.3$ (*c* 0.13, $CHCl_3$)

Source of chirality: commercially available L-glutamic acid

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

Stefan Höck, Florian Koch and Hans-Jürg Borschberg*

Tetrahedron: Asymmetry *15 (2004) 1801*



$C_{18}H_{26}O_4$

(2*R*,4*S*)-4-(Benzyloxy)-2-(*E*-but-2-enyl)-5,5-dimethoxypentanal

Ee = 100% [by synthesis from enantiomerically pure L-glutamic acid]

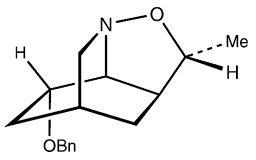
$[\alpha]_D^{25} = -24.2$ (*c* 0.11, $CHCl_3$)

Source of chirality: commercially available L-glutamic acid

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

Stefan Höck, Florian Koch and Hans-Jürg Borschberg*

Tetrahedron: Asymmetry *15 (2004) 1801*

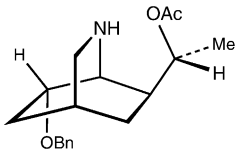


Ee = 100% [by synthesis from enantiomerically pure L-glutamic acid]
$[\alpha]_D^{25} = +15.7$ (*c* 0.1, $CHCl_3$)
Source of chirality: commercially available L-glutamic acid
Absolute configuration: 3*R*,4′*S*,6*R*,8*S*

$C_{16}H_{21}NO_2$
(3*R*,4′*S*,6*R*,8*S*)-8-(Benzyloxy)-3-methyl-2-oxa-1-azatricyclo[4.3.1.$0^{4,9}$]decane

Stefan Höck, Florian Koch and Hans-Jürg Borschberg*

Tetrahedron: Asymmetry *15 (2004) 1801*

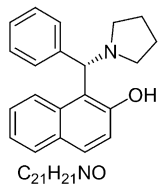


Ee = 100% [by synthesis from enantiomerically pure L-glutamic acid]
$[\alpha]_D^{25} = +62.7$ (*c* 1.2, $CHCl_3$)
Source of chirality: commercially available L-glutamic acid
Absolute configuration: 1*S*,6*S*,7*S*,1′*R*

$C_{18}H_{25}O_3$
(1*S*,6*S*,7*S*,1′*R*)-6-(Benzyloxy)-7-(1′-acetoxyethyl)-2-azabicyclo[2.2.2]octane

Mariappan Periasamy,* Meda Narsi Reddy and Shaik Anwar

Tetrahedron: Asymmetry *15 (2004) 1809*

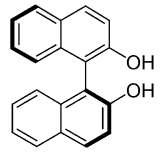


Ee >99%
$[\alpha]_D^{25} = +179.1$ (*c* 1.30, $CHCl_3$)
Source of chirality: resolution
Absolute configuration: *S*

$C_{21}H_{21}NO$
(*S*)-1-(α-Pyrrolidinylbenzyl)-2-naphthol

Mariappan Periasamy,* Meda Narsi Reddy and Shaik Anwar

Tetrahedron: Asymmetry *15 (2004) 1809*

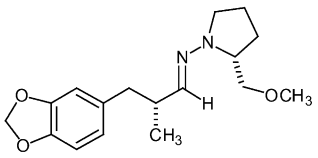


Ee >99%
$[\alpha]_D^{25} = -34$ (*c* 1, THF)
Source of chirality: resolution
Absolute configuration: *S*

$C_{20}H_{14}O_2$
(*S*)-(−)-2,2′-Dihydroxy-1,1′-binaphthyl

Dieter Enders* and Michael Backes

Tetrahedron: Asymmetry *15 (2004) 1813*



De = 90% (chiral HPLC of the corresponding alcohol)
$[\alpha]_D^{25} = +43.7$ (c 1.2, $CHCl_3$)
Source of chirality: asymmetric alkylation

$C_{17}H_{24}O_3N_2$

(2*R*)-3-(1,3-Benzodioxole-6-yl)-*N*-[(*R*)-2-methoxymethylpyrrolidin-1-yl]-2-methylpropan-1-imine

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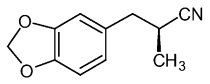
Dieter Enders* and Michael Backes

Tetrahedron: Asymmetry *15 (2004) 1813*



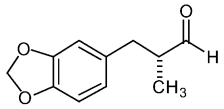
Ee = 90% (chiral HPLC of the corresponding alcohol)
$[\alpha]_D^{24} = +35.2$ (c 0.9, $CHCl_3$)
Source of chirality: asymmetric alkylation

$C_{11}H_{11}O_2N$

(2*S*)-2-Amino-3-(1,3-benzodioxole-5-yl)propannitrile

Dieter Enders* and Michael Backes

Tetrahedron: Asymmetry *15 (2004) 1813*



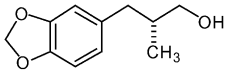
Ee = 90% (chiral HPLC of the corresponding alcohol)
$[\alpha]_D^{24} = +3.3$ (c 1.0, $CHCl_3$)
Source of chirality: asymmetric alkylation

$C_{11}H_{12}O_3$

(2*R*)-3-(1,3-Benzodioxole-5-yl)-2-methylpropanal (*R*)-Tropional®

Dieter Enders* and Michael Backes

Tetrahedron: Asymmetry *15 (2004) 1813*



Ee = 90% (chiral HPLC, $t_R = 22.9$ min)
$[\alpha]_D^{22} = +11.1$ (c 1.3, $CHCl_3$)
Source of chirality: asymmetric alkylation

$C_{11}H_{14}O_3$

(2*R*)-3-(1,3-Benzodioxole-5-yl)-2-methylpropan-1-ol