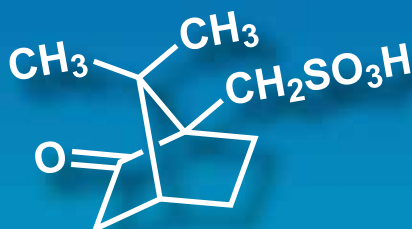
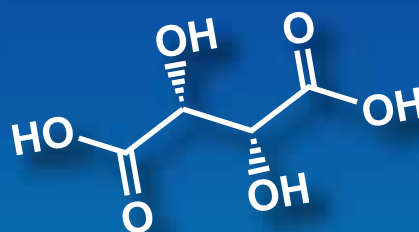
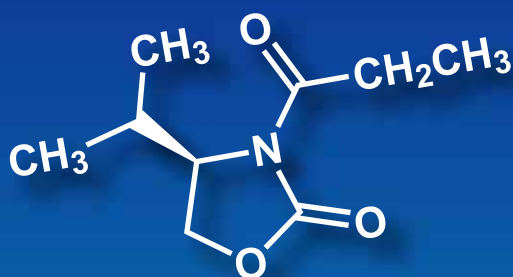


手性助剂和光学拆分剂

Chiral Auxiliaries and Optical Resolving Agents



手性助剂

光学拆分剂

手性助剂和光学拆分剂

大多数生物活性物质都具有旋光性。例如，如果合成外消旋化合物，那么它的对映体可能没有活性，甚至具有不想要的生物活性。因此，获得高光学纯化合物的方法已经被开发出来。合成对映体纯化合物的方法大致分为三种。

手性池法：

用一种容易获得的手性化合物（如氨基酸或糖）作为起始原料的方法。

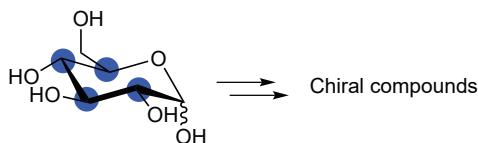
不对称合成：

把不对称点引入到没有不对称点的化合物的方法。这里包括使用非手性助剂参与的合成。

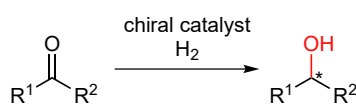
光学拆分：

把一个外消旋化合物拆分为两个对映体的方法。例如直接用手性柱进行分离，或利用光学拆分剂与外消旋化合物形成非对映异构体从而将对映体分离的间接方法。

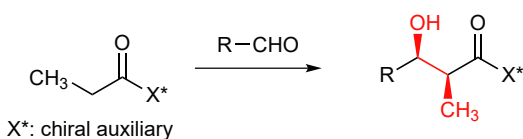
Chiral pool synthesis



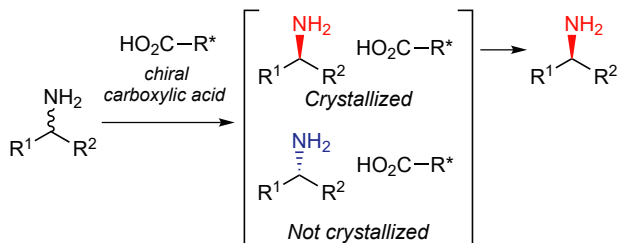
Asymmetric synthesis



Asymmetric synthesis with chiral auxiliaries



Optical resolution

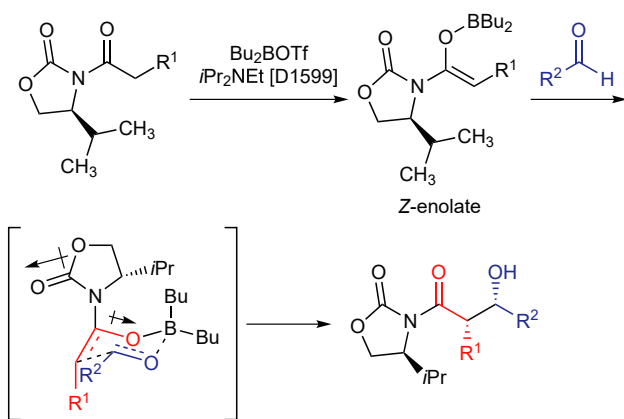


本手册介绍了种类丰富的手性助剂和手性拆分剂。希望对您的光学活性化合物的合成研究有所帮助。此外，TCI还有一些手册介绍了“手性砌块”，“萜烯”，“氨基酸”等用于手性池方法的手性化合物。糖衍生物也在目录“糖化学和生物试剂”以及糖链的分类页面有所介绍。此外，TCI有多种不对称合成催化剂，并收录在“不对称合成”、“不对称有机催化剂”等手册中。

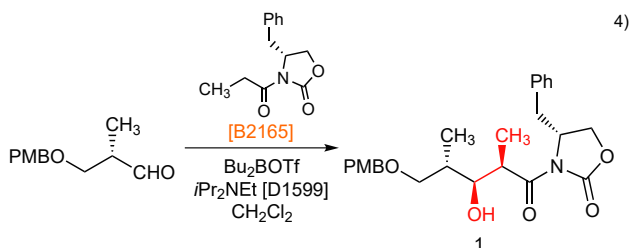
您可以通过“不对称合成”作为关键词搜索相关产品信息。

● 与手性助剂的反应

Evans羟醛反应²⁾是最著名的应用手性助剂¹⁾的人名反应之一，这个反应非常有用，因为这个反应可以高效地将两个不对称碳引入链状化合物中，而且可以预测产物的立体化学。此外，*N*-酰基噁唑烷酮已商品化，可以用氨基酸衍生物制备，手性助剂通过水解或转化为Weinreb酰胺去除，因此使用方便。此外，所有的非对映体都可以通过更换手性助剂和Lewis酸来合成³⁾。

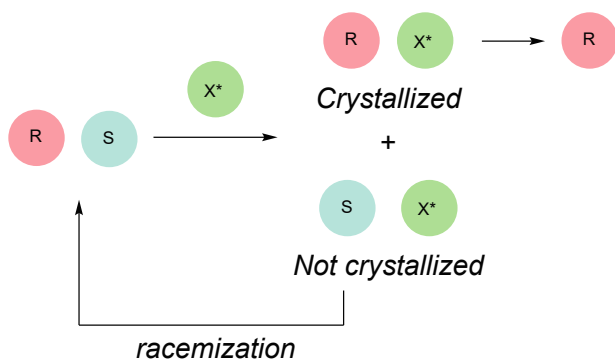


Evans羟醛反应适用于更大规模的反应。例如，Novartis的研究组将该反应用于大规模合成discodermolide⁴⁾，并在30kg规模上实现了以下反应，得到了具有高非对映选择性和对映选择性的中间体1。



● 光学拆分

尽管光学拆分⁵⁾理论上具有以下缺点：一半的物质会丢失；需要对光学拆分试剂和分离试剂进行选择，但是至今仍然用于药品制造中。如果不想要的对映体可以（外）消旋化，就可以再次进行光学拆分，从而提高目标产物的回收率。



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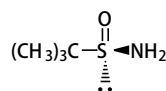
手性助剂

Chiral Auxiliaries

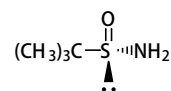
亚磺酰胺

Sulfinamides

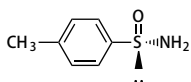
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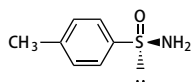
B2908 1g 5g

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T2069 1g 5g

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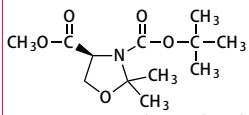
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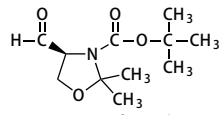
噁唑烷

Oxazolidines

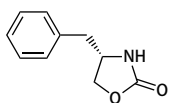
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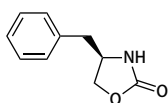
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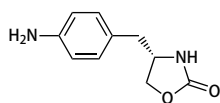
B1754 5g 25g

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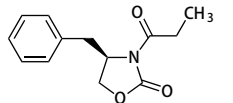
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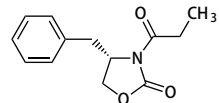
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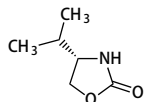
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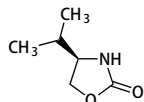
B2166 1g 5g

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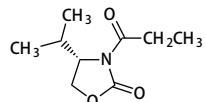
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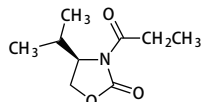
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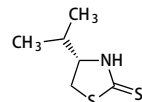
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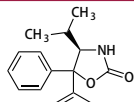
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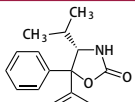
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(S)-4-Isopropylthiazolidine-2-thione
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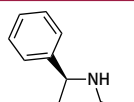
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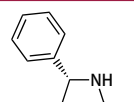
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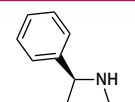
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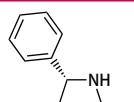
P1308 5g 25g

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P1959 1g

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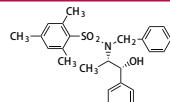
P1960 1g

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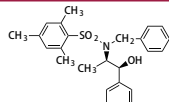
氨基醇衍生物

Aminoalcohol Derivatives

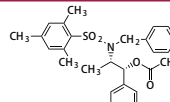
B2103 1g 5g

(1R,2S)-*N*-Benzyl-*N*-(mesitylenesulfonyl)-norephedrine
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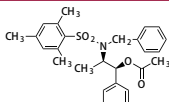
B2104 1g 5g

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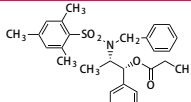
A1534 1g

(1R,2S)-*N*-Benzyl-*N*-(mesitylenesulfonyl)-*O*-acetylnorephedrine
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A1535 1g

(1S,2R)-*N*-Benzyl-*N*-(mesitylenesulfonyl)-*O*-acetylnorephedrine
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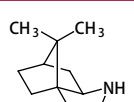
P1371 1g

(1R,2S)-*N*-Benzyl-*N*-(mesitylenesulfonyl)-*O*-propionylnorephedrine
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樟脑磺内酰胺

Camphorsultams

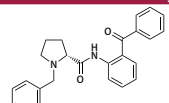
C1325 1g 5g

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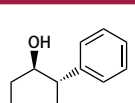
其它

Others

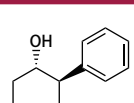
B5518 1g 5g

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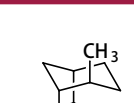
T1490 100mg 1g

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CAS RN: 98919-68-7

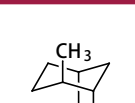
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(1S,2R)-(+)-*trans*-2-Phenyl-1-cyclohexanol
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T2578 1g 5g

(1R,4R,5R)-4,7,7-Trimethyl-6-thiabicyclo[3.2.1]octane
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T2579 1g 5g

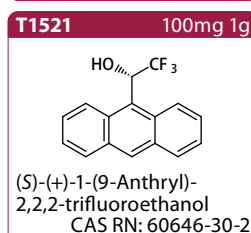
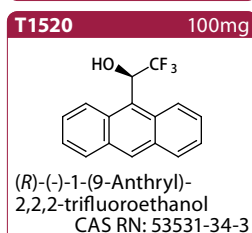
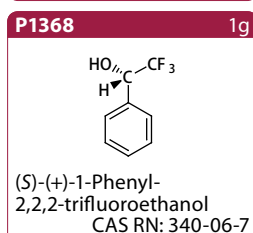
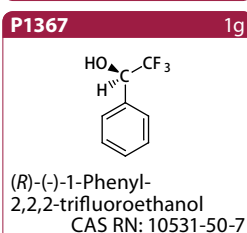
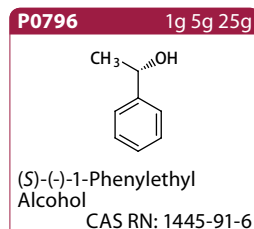
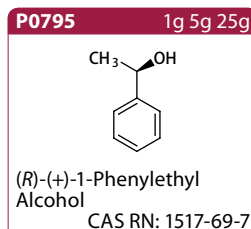
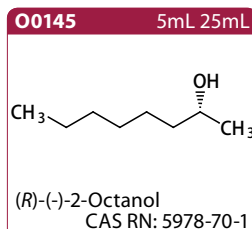
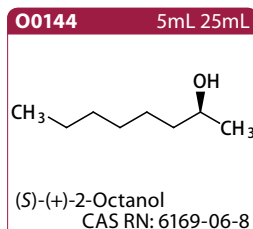
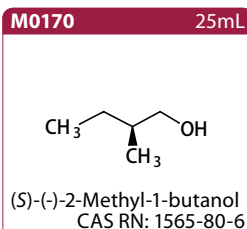
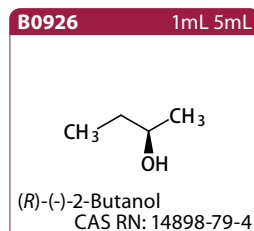
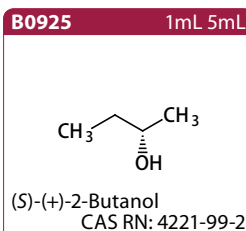
(1S,4S,5S)-4,7,7-Trimethyl-6-thiabicyclo[3.2.1]octane
CAS RN: 1208985-45-8

光学拆分剂

Optical Resolving Agents

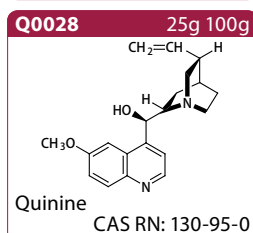
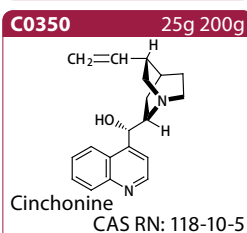
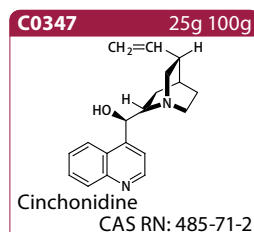
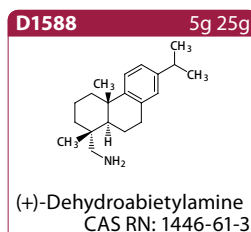
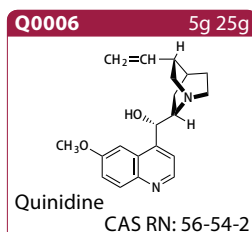
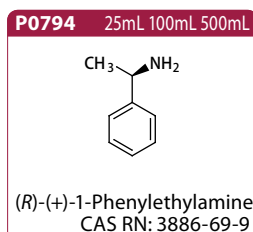
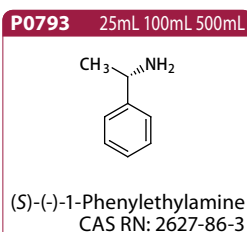
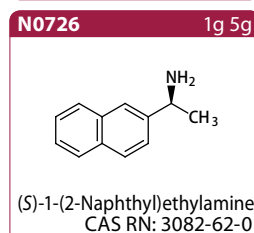
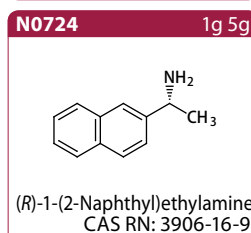
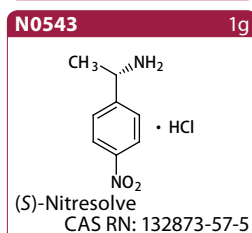
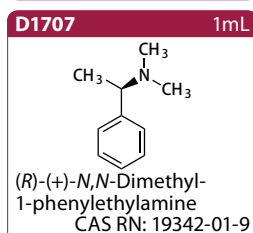
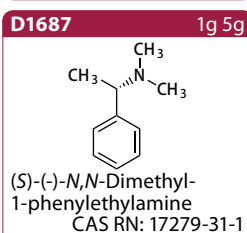
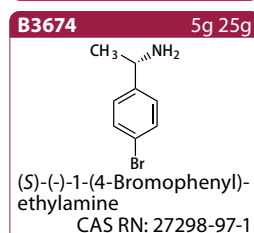
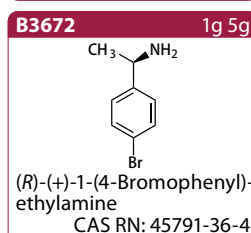
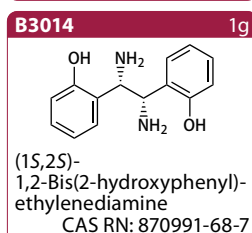
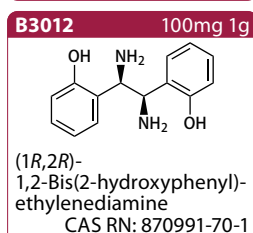
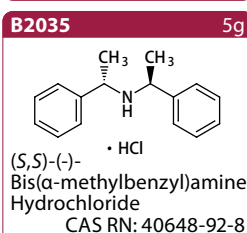
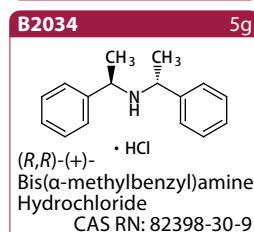
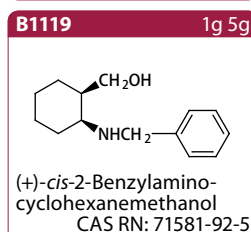
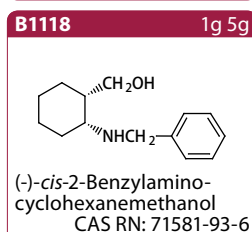
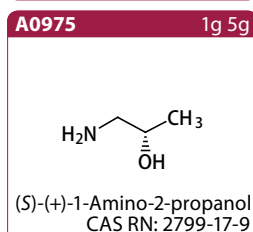
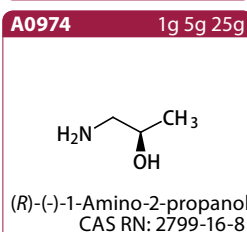
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Alcohols



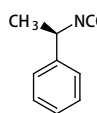
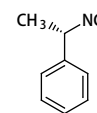
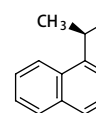
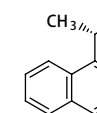
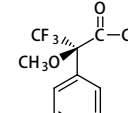
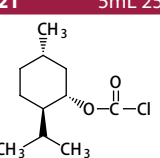
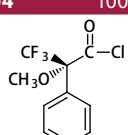
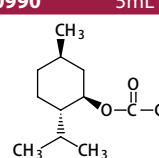
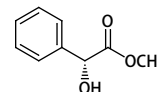
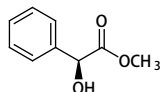
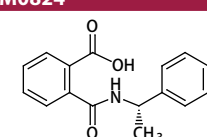
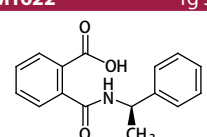
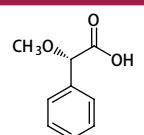
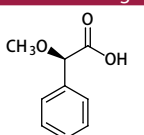
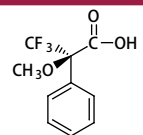
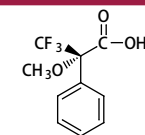
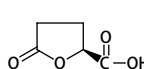
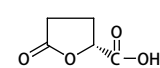
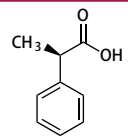
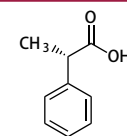
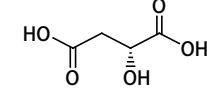
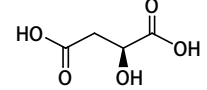
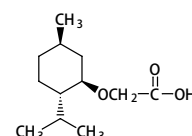
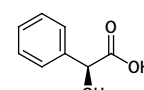
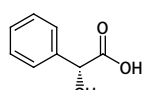
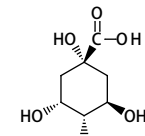
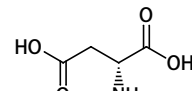
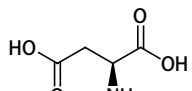
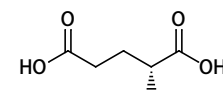
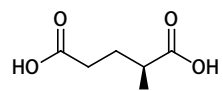
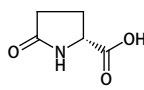
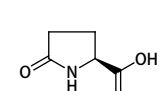
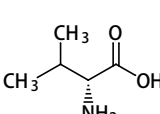
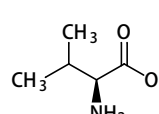
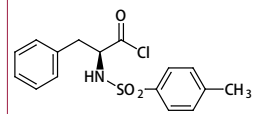
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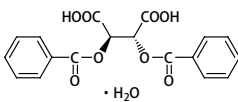
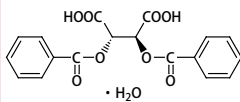
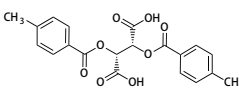
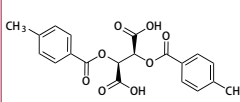
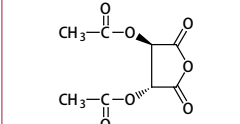
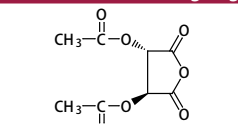
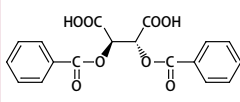
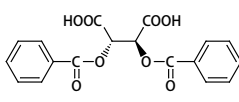
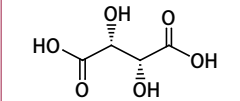
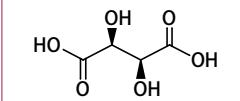
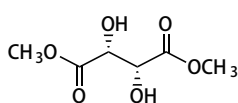
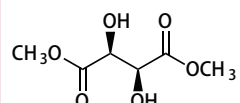
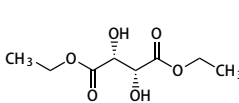
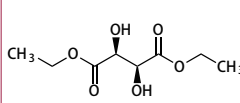
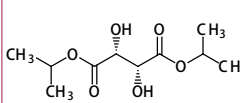
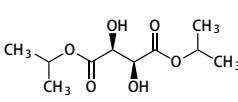
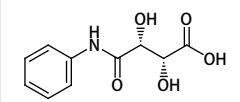
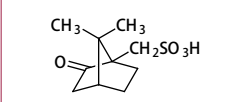
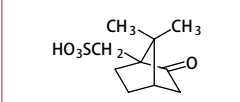
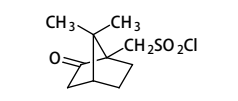
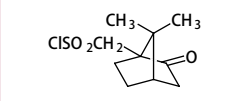
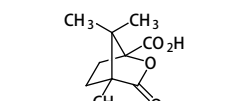
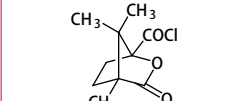
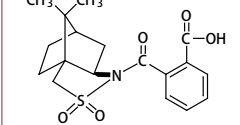
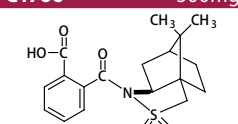
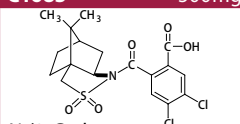
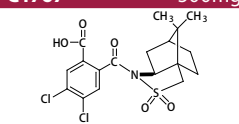
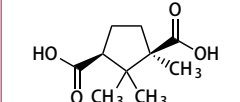
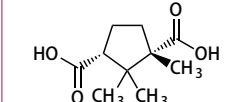
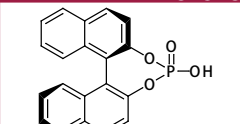
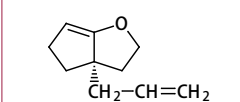
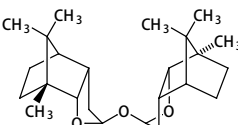
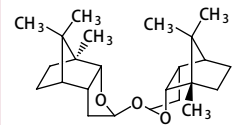
Amines and Aminoalcohols



羰基化合物

Carbonyl Compounds

<p>I0334 1g 5g 25g</p>  <p>(R)-(+)-α-Methylbenzyl Isocyanate CAS RN: 33375-06-3</p>	<p>I0335 1g 5g</p>  <p>(S)-(-)-α-Methylbenzyl Isocyanate CAS RN: 14649-03-7</p>	<p>I0336 1g 5g</p>  <p>(R)-(-)-1-(1-Naphthyl)ethyl Isocyanate CAS RN: 42340-98-7</p>	<p>I0398 1g 5g</p>  <p>(S)-(+)-1-(1-Naphthyl)ethyl Isocyanate CAS RN: 73671-79-1</p>	<p>M1103 100mg 1g</p>  <p>(S)-(+)-MTPA-Cl CAS RN: 20445-33-4</p>	
<p>M1221 5mL 25mL</p>  <p>(+)-Menthyl Chloroformate CAS RN: 7635-54-3</p>	<p>M1104 100mg 1g</p>  <p>(R)-(-)-MTPA-Cl CAS RN: 39637-99-5</p>	<p>M0990 5mL 25mL</p>  <p>(-)-Menthyl Chloroformate CAS RN: 14602-86-9</p>			
<p>M1349 1g 5g</p>  <p>Methyl D-(-)-Mandelate CAS RN: 20698-91-3</p>	<p>M1350 1g 5g</p>  <p>Methyl L-(+)-Mandelate CAS RN: 21210-43-5</p>	<p>羰基化合物 Carbonyl Compounds</p>		<p>M0824 1g</p>  <p>(S)-(-)-N-(1-Phenylethyl)-phthalamic Acid CAS RN: 21752-36-3</p>	<p>M1622 1g 5g</p>  <p>(R)-(+)-N-(1-Phenylethyl)-phthalamic Acid CAS RN: 21752-35-2</p>
<p>M0829 1g 5g</p>  <p>(S)-(+)-α-Methoxyphenylacetic Acid CAS RN: 26164-26-1</p>	<p>M0830 100mg 1g 5g</p>  <p>(R)-(-)-α-Methoxyphenylacetic Acid CAS RN: 3966-32-3</p>	<p>M0831 1g 5g</p>  <p>(+)-MTPA CAS RN: 20445-31-2</p>	<p>M0832 1g 5g</p>  <p>(-)-MTPA CAS RN: 17257-71-5</p>	<p>O0276 1g 5g</p>  <p>(S)-(+)-γ-Carboxy-γ-butyrolactone CAS RN: 21461-84-7</p>	
<p>O0281 1g 5g</p>  <p>(R)-(-)-γ-Carboxy-γ-butyrolactone CAS RN: 53558-93-3</p>	<p>P1219 1g 5g</p>  <p>(R)-(-)-Hydratropic Acid CAS RN: 7782-26-5</p>	<p>P1220 1g 5g</p>  <p>(S)-(+)-Hydratropic Acid CAS RN: 7782-24-3</p>	<p>M0021 5g 25g</p>  <p>D-(+)-Malic Acid CAS RN: 636-61-3</p>	<p>M0022 25g 100g 500g</p>  <p>L-(-)-Malic Acid CAS RN: 97-67-6</p>	
<p>M0573 5g 25g</p>  <p>(-)-Menthoxylacetic Acid CAS RN: 40248-63-3</p>	<p>M0661 25g 100g 250g</p>  <p>L-(+)-Mandelic Acid CAS RN: 17199-29-0</p>	<p>M0662 25g 100g 500g</p>  <p>D-(-)-Mandelic Acid CAS RN: 611-71-2</p>	<p>Q0009 5g 25g</p>  <p>D-(-)-Quinic Acid CAS RN: 77-95-2</p>	<p>氨基酸衍生物 Amino Acid Derivatives</p>	
<p>A0545 25g</p>  <p>D-Aspartic Acid CAS RN: 1783-96-6</p>	<p>A0546 25g 500g</p>  <p>L-Aspartic Acid CAS RN: 56-84-8</p>	<p>G0057 25g 100g 250g</p>  <p>D-Glutamic Acid CAS RN: 6893-26-1</p>	<p>G0059 25g 500g</p>  <p>L-Glutamic Acid CAS RN: 56-86-0</p>	<p>P1354 5g 25g</p>  <p>D-Pyrroglutamic Acid CAS RN: 4042-36-8</p>	
<p>P0573 25g 100g 500g</p>  <p>L-Pyrroglutamic Acid CAS RN: 98-79-3</p>	<p>V0012 1g 25g</p>  <p>D-Valine CAS RN: 640-68-6</p>	<p>V0014 25g 100g 500g</p>  <p>L-Valine CAS RN: 72-18-4</p>	<p>T1444 1g 5g</p>  <p>Tosyl-L-phenylalanyl Chloride CAS RN: 29739-88-6</p>	<p>酒石酸衍生物 Tartaric Acid Derivatives</p>	

D1354 25g 500g  (-)-Dibenzoyl-L-tartaric Acid Monohydrate CAS RN: 62708-56-9	D1398 25g 500g  (+)-Dibenzoyl-D-tartaric Acid Monohydrate CAS RN: 80822-15-7	D1387 25g 250g  (-)-Di- <i>p</i> -toluoyl-L-tartaric Acid CAS RN: 32634-66-5	D1417 25g 250g  (+)-Di- <i>p</i> -toluoyl-D-tartaric Acid CAS RN: 32634-68-7	D1911 25g  (+)-Diacetyl-L-tartaric Anhydride CAS RN: 6283-74-5	
D2645 5g 25g  (-)-Diacetyl-D-tartaric Anhydride CAS RN: 70728-23-3	D3492 25g 100g 250g  (-)-Dibenzoyl-L-tartaric Acid CAS RN: 2743-38-6	D3826 25g 250g  (+)-Dibenzoyl-D-tartaric Acid CAS RN: 17026-42-5	T0025 25g 500g  L-(+)-Tartaric Acid CAS RN: 87-69-4	T0026 25g 100g 500g  D-(-)-Tartaric Acid CAS RN: 147-71-7	
T0006 25g  Dimethyl L-(+)-Tartrate CAS RN: 608-68-4	T1659 5g 25g  Dimethyl D-(-)-Tartrate CAS RN: 13171-64-7	T0003 25g 100g 500g  Diethyl L-(+)-Tartrate CAS RN: 87-91-2	T1195 25g 250g  Diethyl D-(-)-Tartrate CAS RN: 13811-71-7	T0621 25g 100g 500g  Diisopropyl L-(+)-Tartrate CAS RN: 2217-15-4	
T1387 25g 250g  Diisopropyl D-(-)-Tartrate CAS RN: 62961-64-2	T1702 1g 5g  (2 <i>R</i> ,3 <i>R</i>)-Tartranilic Acid CAS RN: 3019-58-7	樟脑衍生物 Camphor Derivatives		C0015 25g 100g 500g  (+)-CSA CAS RN: 3144-16-9	
				C0972 25g 100g 500g  (-)-CSA CAS RN: 35963-20-3	
C0998 5g 25g  (+)-10-Camphorsulfonyl Chloride CAS RN: 21286-54-4	C1308 5g 25g  (-)-10-Camphorsulfonyl Chloride CAS RN: 39262-22-1	C1021 1g 5g  (-)-Camphanic Acid CAS RN: 13429-83-9	C1022 1g 5g 25g  (-)-Camphanic Chloride CAS RN: 39637-74-6	C1682 500mg  <i>N</i> -(2-Carboxybenzoyl)-(-)-10,2-camphorsultam CAS RN: 179950-32-4	
C1766 500mg  <i>N</i> -(2-Carboxybenzoyl)-(+)-10,2-camphorsultam	C1683 500mg  <i>N</i> -(2-Carboxy-4,5-dichlorobenzoyl)-(-)-10,2-camphorsultam CAS RN: 193202-37-8	C1767 500mg  <i>N</i> -(2-Carboxy-4,5-dichlorobenzoyl)-(+)-10,2-camphorsultam	C0012 25g 100g 500g  (+)-Camphoric Acid CAS RN: 124-83-4	C3237 1g  (1 <i>S</i> ,3 <i>R</i>)-(-)-Camphoric Acid CAS RN: 560-09-8	
含磷化合物 Phosphorous Compounds		B1143 100mg 1g 5g  (<i>R</i>)-(-)-1,1'-Binaphthyl-2,2'-diyl Hydrogen Phosphate CAS RN: 39648-67-4	其它 Others		A1984 1g  (<i>S</i>)-5-Allyl-2-oxabicyclo[3.3.0]oct-8-ene CAS RN: 1052236-86-8
B1219 100mg  (+)-MBF-OH Dimer CAS RN: 87248-50-8	B1220 100mg  (-)-MBF-OH Dimer CAS RN: 108031-79-4				



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