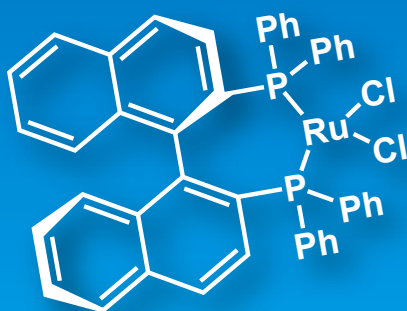
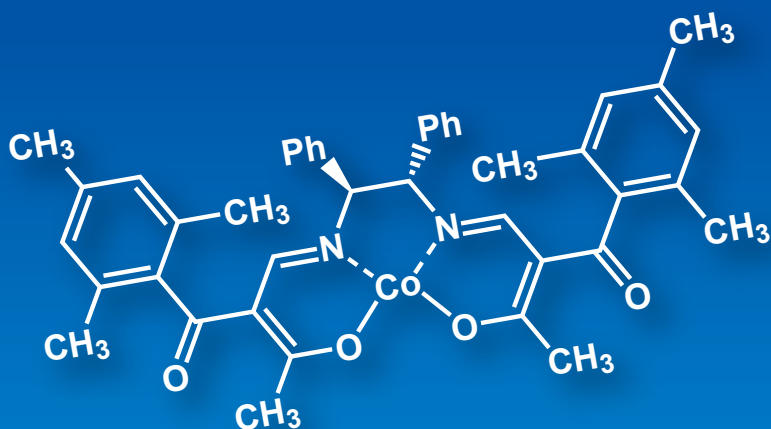


Asymmetric Synthesis



Chiral Organometallic Complexes

Chiral Organic Compounds

Asymmetric Synthesis

In the research and development of pharmaceuticals, agricultural chemicals or functional materials starting with ferroelectrical liquid crystals, the demand for optically active compounds has increased more than ever. In order to obtain the desired optically active compounds through synthesis, diastereo-differentiating and enantio-differentiating reactions have employed chiral auxiliaries or asymmetric catalysts. In order to achieve even higher optical purity and yield, new chiral auxiliaries and asymmetric catalysts are being developed and a considerable number of successful results have been reported. For instance, camphorsultam and oxazolidinone derivatives are utilized as chiral auxiliaries. BINAP-Ru complexes and oxazaborolidine derivatives are excellent asymmetric catalysts. All of these new developments produce products of high optical purity and good reaction yields.

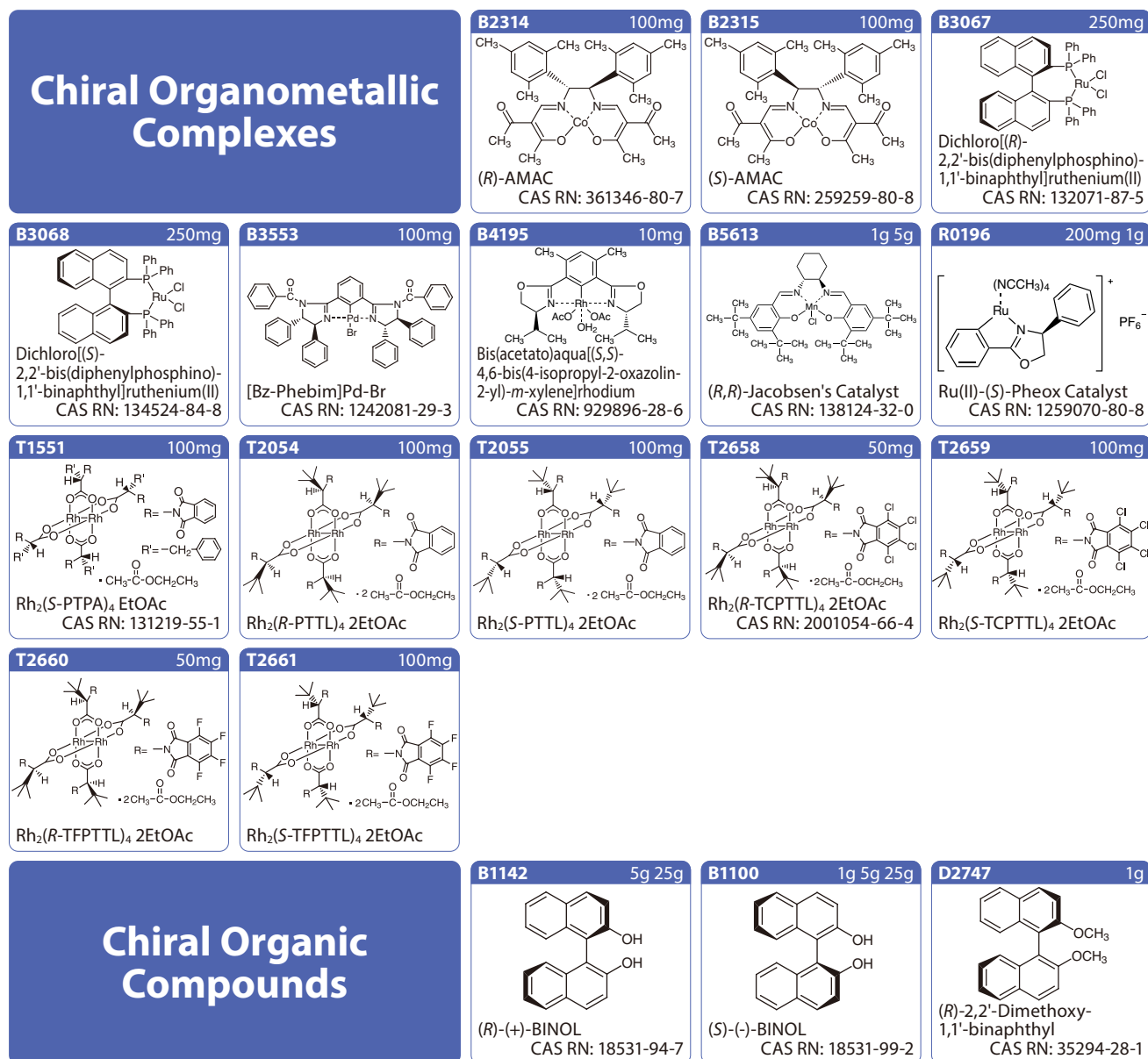
Recently, Yamada and co-workers have developed a pro-chiral

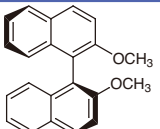
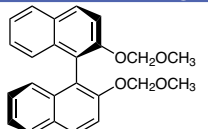
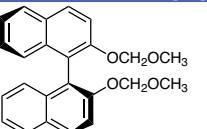
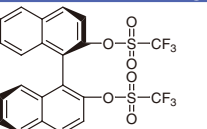
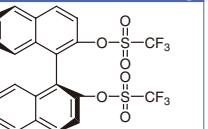
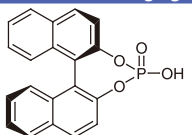
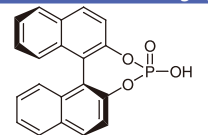
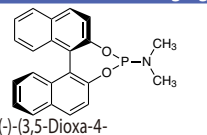
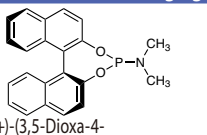
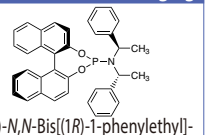
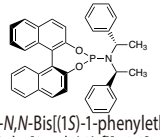
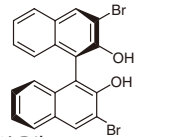
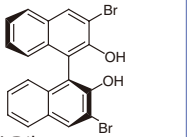
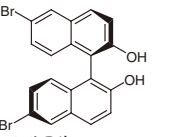
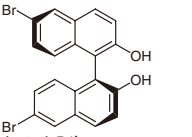
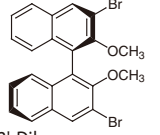
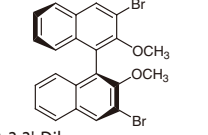
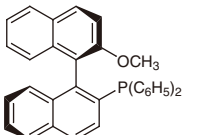
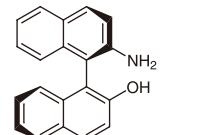
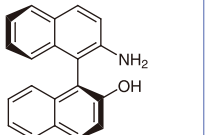
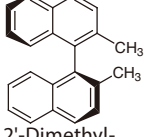
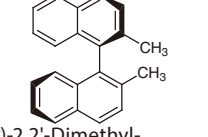
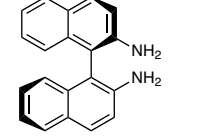
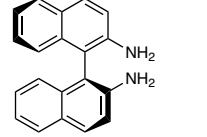
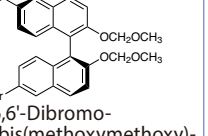
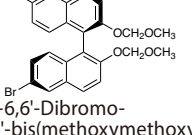
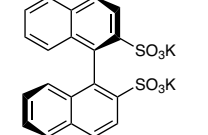
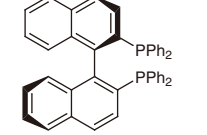
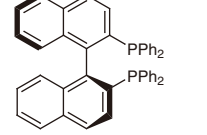
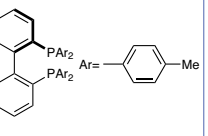
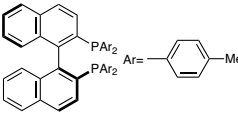
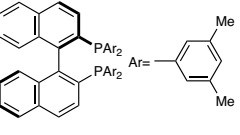
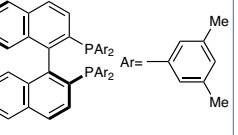
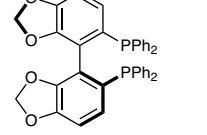
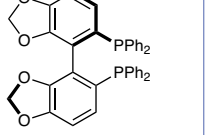
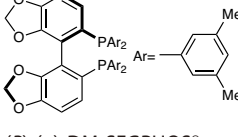
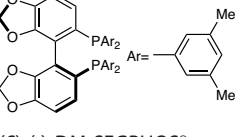
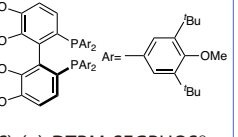
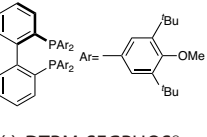
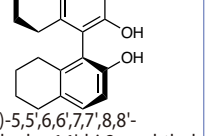
ketone and imine asymmetric reduction which uses the newly developed optically active cobalt(II) complex catalyst MPAC. Through this asymmetric reduction using MPAC, secondary alcohols and amines of high optical purity can be obtained in good yields. The reaction proceeds under relatively moderate temperatures and utilize sodium borohydride, which has been traditionally employed as a reducing agent of ketones and imines. For this reason, this method is receiving much attention as a route to useful optically active alcohols and amines.

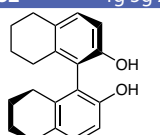
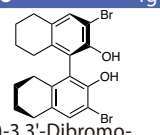
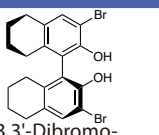
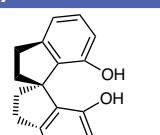
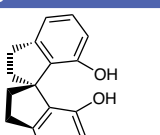
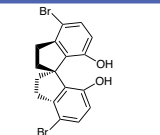
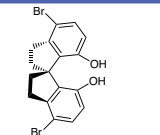
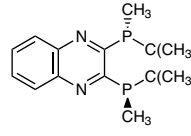
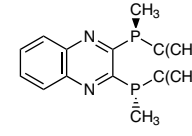
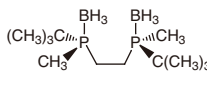
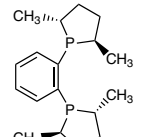
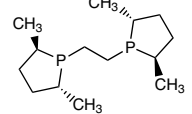
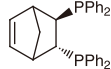
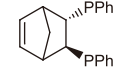
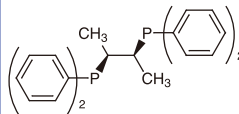
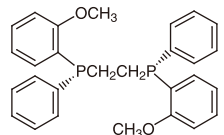
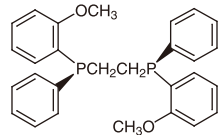
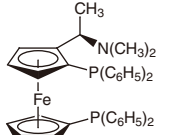
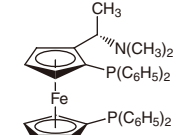
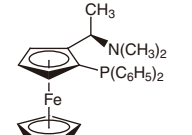
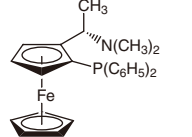
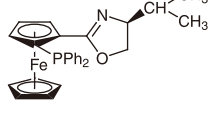
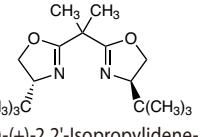
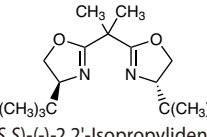
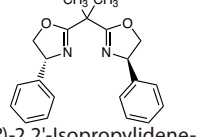
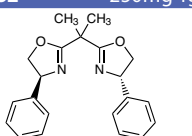
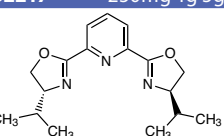
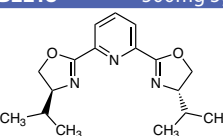
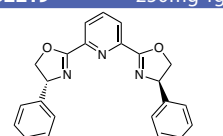
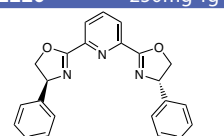
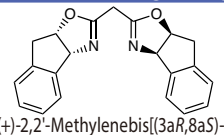
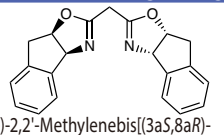
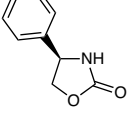
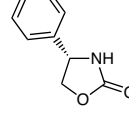
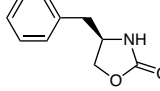
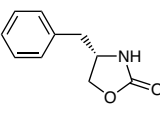
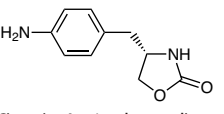
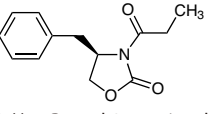
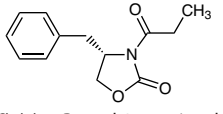
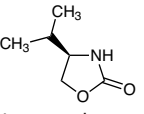
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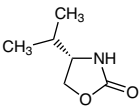
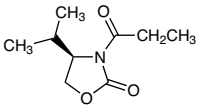
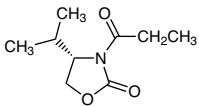
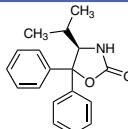
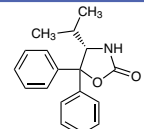
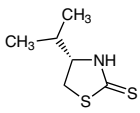
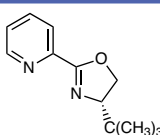
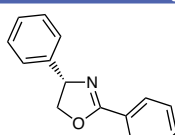
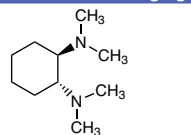
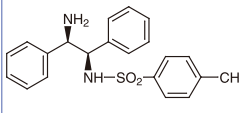
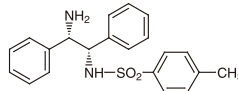
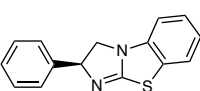
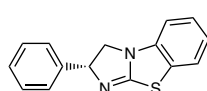
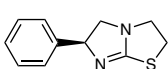
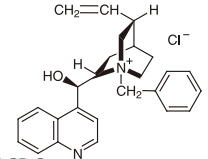
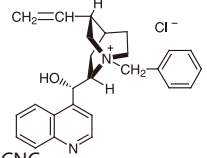

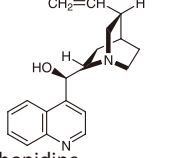
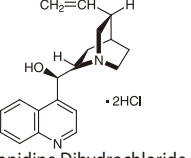
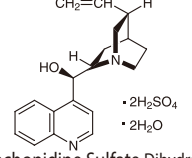
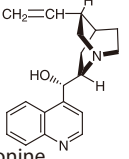
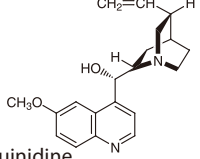
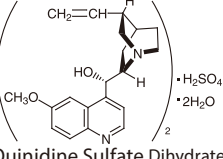
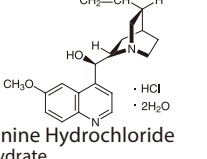
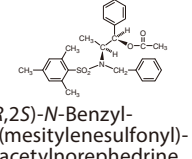


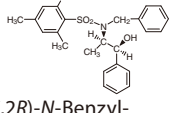
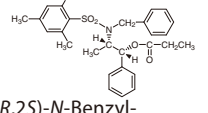
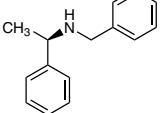
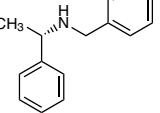
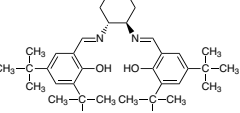
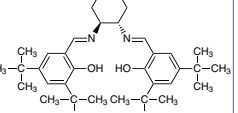
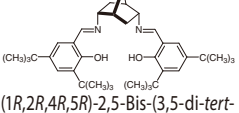
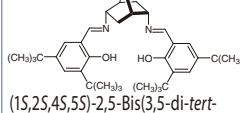
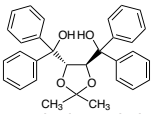
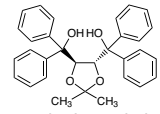
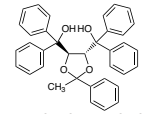
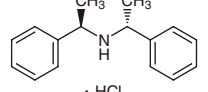
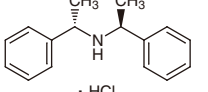
T. Yamada, T. Nagata, Y. Ohtsuka, T. Ikeno, T. Mukaiyama, *Yuki Gosei Kagaku Kyokaiishi (J. Synth. Org. Chem. Jpn.)* **2003**, *61*, 843; T. Yamada, T. Nagata, K. D. Sugi, K. Yorozu, T. Ikeno, Y. Ohtsuka, D. Miyazaki, T. Mukaiyama, *Chem. Eur. J.* **2003**, *9*, 4485.

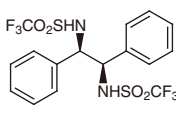
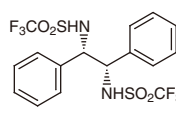
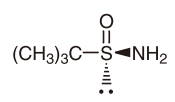
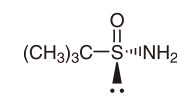
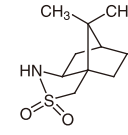
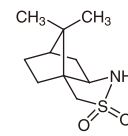
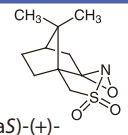
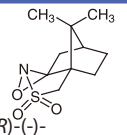
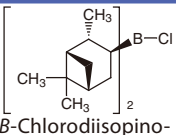
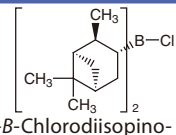
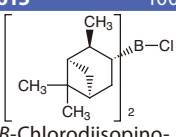
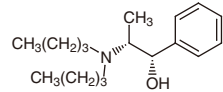
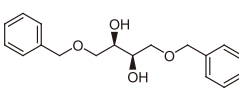
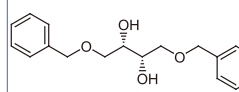
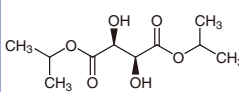
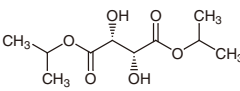
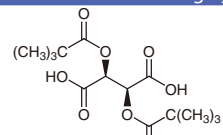
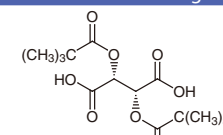
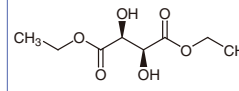
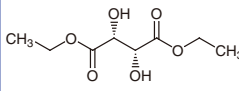
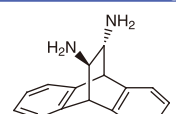
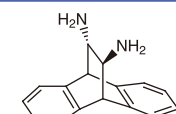
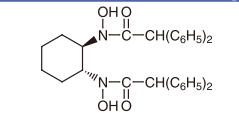
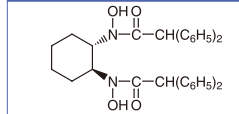
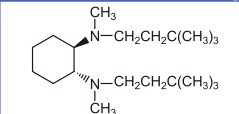
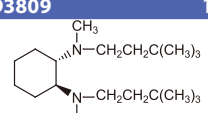
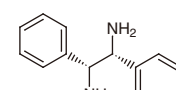
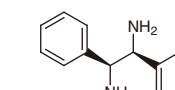
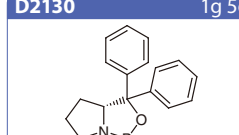
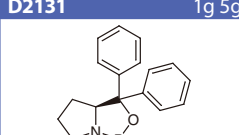
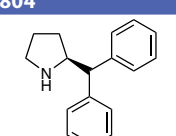
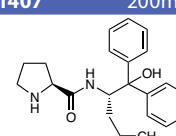
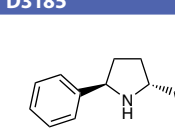
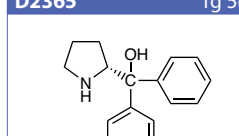
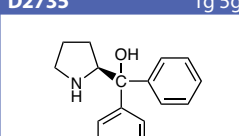
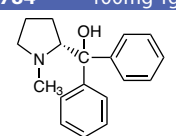
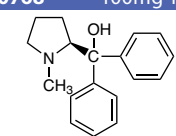
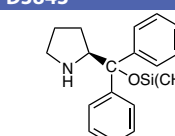
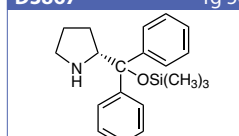
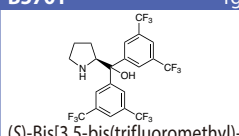
Chiral Organometallic Complexes

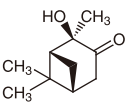
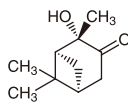
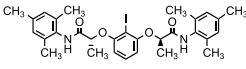
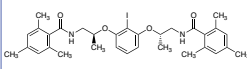
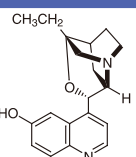
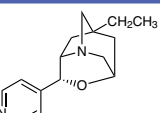
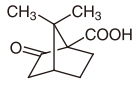
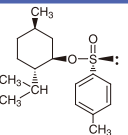
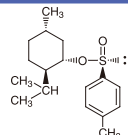
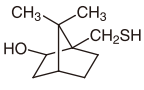
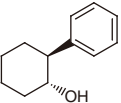
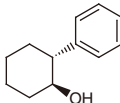
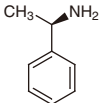
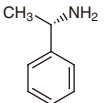
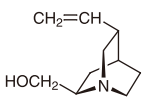
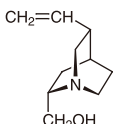
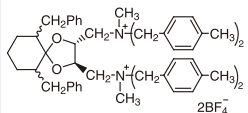
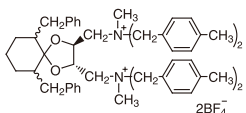
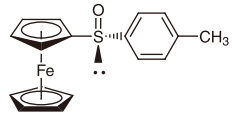
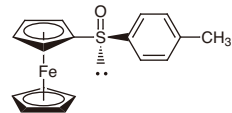
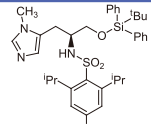
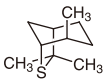
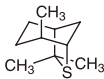
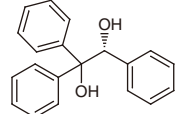
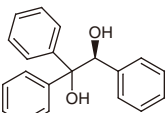
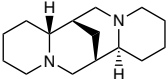
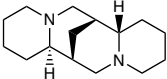
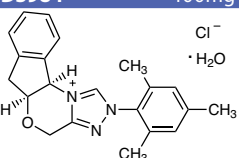
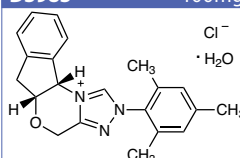
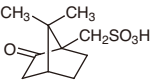
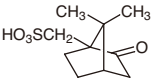
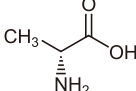
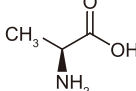
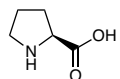
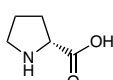
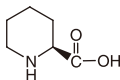
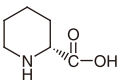
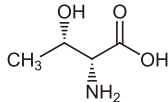
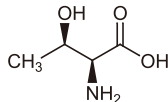


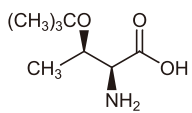
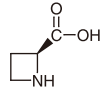
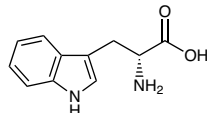
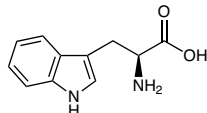
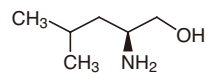
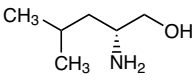
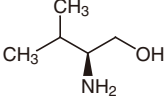
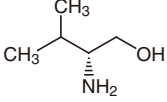
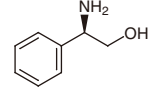
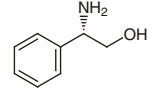
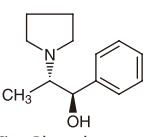
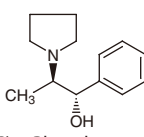
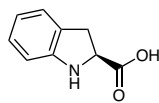
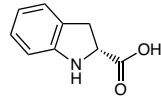
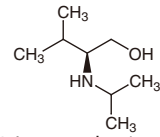
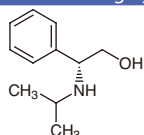
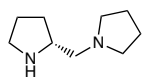
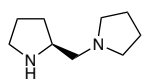
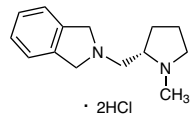
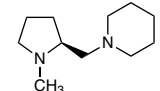
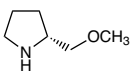
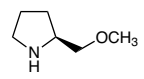
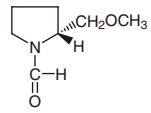
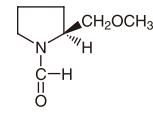
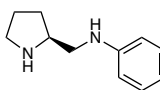
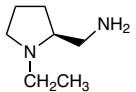
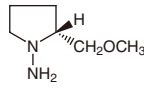
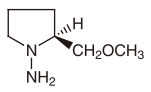
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| D2821 1g  (S)-2,2'-Dimethoxy-1,1'-binaphthyl CAS RN: 75640-87-8 | B3202 1g 5g  (R)-2,2'-Bis(methoxymethoxy)-1,1'-binaphthyl CAS RN: 173831-50-0 | B3203 1g 5g  (S)-2,2'-Bis(methoxymethoxy)-1,1'-binaphthyl CAS RN: 142128-92-5 | B2230 1g  (R)-(-)-1,1'-Bi-2-naphthol Bis(trifluoromethanesulfonate) CAS RN: 126613-06-7 | B2231 1g  (S)-(+)-1,1'-Bi-2-naphthol Bis(trifluoromethanesulfonate) CAS RN: 128544-05-8 |
| B1143 100mg 1g 5g  (R)-(-)-1,1'-Binaphthyl-2,2'-diyl Hydrogen Phosphate CAS RN: 39648-67-4 | B1144 100mg 1g  (S)-(+)-1,1'-Binaphthyl-2,2'-diyl Hydrogen Phosphate CAS RN: 35193-64-7 | D4992 1g 5g  (R)-(-)-(3,5-Dioxa-4-phosphacyclohepta[2,1-a;3,4-a']-dinaphthalen-4-yl)dimethylamine CAS RN: 157488-65-8 | D4993 1g 5g  (S)-(+)-(3,5-Dioxa-4-phosphacyclohepta[2,1-a;3,4-a']-dinaphthalen-4-yl)dimethylamine CAS RN: 185449-80-3 | D4994 200mg 1g  (11bR)-N,N-Bis[(1R)-1-phenylethyl]-dinaphthol[2,1-d:1',2'-f][1,3,2]-dioxaphosphepin-4-amine CAS RN: 415918-91-1 |
| D4995 200mg 1g  (11bS)-N,N-Bis[(1S)-1-phenylethyl]-dinaphthol[2,1-d:1',2'-f][1,3,2]-dioxaphosphepin-4-amine CAS RN: 209482-27-9 | D2810 1g 5g  (R)-3,3'-Dibromo-1,1'-bi-2-naphthol CAS RN: 111795-43-8 | D2811 1g 5g  (S)-3,3'-Dibromo-1,1'-bi-2-naphthol CAS RN: 119707-74-3 | D2729 1g  (R)-(-)-6,6'-Dibromo-1,1'-bi-2-naphthol CAS RN: 65283-60-5 | D2730 1g 5g  (S)-(+)-6,6'-Dibromo-1,1'-bi-2-naphthol CAS RN: 80655-81-8 |
| D2801 200mg 1g  (R)-3,3'-Dibromo-2,2'-dimethoxy-1,1'-binaphthyl CAS RN: 75714-59-9 | D2802 200mg  (S)-3,3'-Dibromo-2,2'-dimethoxy-1,1'-binaphthyl CAS RN: 75714-60-2 | D2774 100mg 1g  (R)-(+)-MOP CAS RN: 145964-33-6 | A2316 100mg  (R)-(+)-NOBIN CAS RN: 137848-28-3 | A2317 100mg  (S)-(-)-NOBIN CAS RN: 137848-29-4 |
| D2838 1g 5g  (S)-2,2'-Dimethyl-1,1'-binaphthyl CAS RN: 32587-64-7 | D2837 1g 5g  (R)-2,2'-Dimethyl-1,1'-binaphthyl CAS RN: 19634-89-0 | D3207 200mg  (R)-(+)-BINAM CAS RN: 18741-85-0 | D3208 200mg  (S)-(-)-BINAM CAS RN: 18531-95-8 | D4883 1g 5g  (S)-6,6'-Dibromo-2,2'-bis(methoxymethoxy)-1,1'-binaphthyl CAS RN: 211560-97-3 |
| D4882 1g 5g  (R)-6,6'-Dibromo-2,2'-bis(methoxymethoxy)-1,1'-binaphthyl CAS RN: 179866-74-1 | D4445 100mg  (R)-BINSA Dipotassium Salt CAS RN: 1092934-19-4 | B1406 1g 5g 25g  (R)-(+)-BINAP CAS RN: 76189-55-4 | B1405 1g 5g  (S)-(-)-BINAP CAS RN: 76189-56-5 | T3152 1g 5g  (R)-(+)-ToIBINAP CAS RN: 99646-28-3 |
| T3153 1g 5g  (S)-(-)-ToIBINAP CAS RN: 100165-88-6 | X0070 200mg 1g  (R)-(+)-XylBINAP CAS RN: 137219-86-4 | X0071 200mg 1g  (S)-(-)-XylBINAP CAS RN: 135139-00-3 | S0929 200mg 1g  (S)-(-)-SEGPHOS [®] CAS RN: 210169-54-3 | S0930 200mg 1g  (R)-(+)-SEGPHOS [®] CAS RN: 244261-66-3 |
| D4499 200mg 1g  (R)-(+)-DM-SEGPHOS [®] CAS RN: 850253-53-1 | D4498 200mg 1g  (S)-(-)-DM-SEGPHOS [®] CAS RN: 210169-57-6 | D4500 200mg 1g  (S)-(+)-DTBM-SEGPHOS [®] CAS RN: 210169-40-7 | D4501 200mg 1g  (R)-(-)-DTBM-SEGPHOS [®] CAS RN: 566940-03-2 | O0283 1g 5g  (S)-(-)-5,5',6,6',7,7',8,8'-Octahydro-1,1'-bi-2-naphthol CAS RN: 65355-00-2 |

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|--|--|--|--|--|
| <p>O0282 1g 5g 25g</p>  <p>(<i>R</i>)-(+)-5,5',6,6',7,7',8,8'-Octahydro-1,1'-bi-2-naphthol CAS RN: 65355-14-8</p> | <p>D4418 1g 5g</p>  <p>(<i>R</i>)-(+)-3,3'-Dibromo-5,5',6,6',7,7',8,8'-octahydro-1,1'-bi-2-naphthol CAS RN: 65355-08-0</p> | <p>D5107 1g</p>  <p>(<i>S</i>)-(-)-3,3'-Dibromo-5,5',6,6',7,7',8,8'-octahydro-1,1'-bi-2-naphthol CAS RN: 765278-73-7</p> | <p>S0957 1g</p>  <p>(<i>R</i>)-SPINOL CAS RN: 223259-62-9</p> | <p>S0958 1g</p>  <p>(<i>S</i>)-SPINOL CAS RN: 223259-63-0</p> |
| <p>D4717 1g</p>  <p>(<i>R</i>)-4,4'-Dibromo-1,1'-spirobiindane-7,7'-diol CAS RN: 681481-94-7</p> | <p>D4718 1g</p>  <p>(<i>S</i>)-4,4'-Dibromo-1,1'-spirobiindane-7,7'-diol CAS RN: 636601-27-9</p> | <p>B5301 100mg</p>  <p>(<i>R,R</i>)-QuinoxP* CAS RN: 866081-62-1</p> | <p>B5302 100mg</p>  <p>(<i>S,S</i>)-QuinoxP* CAS RN: 1107608-80-9</p> | <p>B2089 100mg</p>  <p>(<i>S,S</i>)-1,2-Bis[boranato(<i>tert</i>-butyl)-methylphosphino]ethane CAS RN: 203000-48-0</p> |
| <p>B2436 100mg 500mg</p>  <p>(<i>R,R</i>)-Me-DUPHOS CAS RN: 147253-67-6</p> | <p>B5985 100mg 500mg</p>  <p>(<i>R,R</i>)-Me-BPE CAS RN: 129648-07-3</p> | <p>B3449 100mg</p>  <p>(<i>2R,3R</i>)-(-)-Norphos CAS RN: 71042-55-2</p> | <p>B3450 100mg</p>  <p>(<i>2S,3S</i>)-(+)-Norphos CAS RN: 71042-54-1</p> | <p>B2704 100mg 1g</p>  <p>(<i>S,S</i>)-Chiraphos CAS RN: 64896-28-2</p> |
| <p>B3035 100mg</p>  <p>(<i>R,R</i>)-DIPAMP CAS RN: 55739-58-7</p> | <p>B3036 100mg 1g</p>  <p>(<i>S,S</i>)-DIPAMP CAS RN: 97858-62-3</p> | <p>D2537 100mg</p>  <p>(<i>R</i>)-(-)-BPPFA CAS RN: 74311-56-1</p> | <p>D2538 100mg</p>  <p>(<i>S</i>)-(R)-BPPFA CAS RN: 55650-59-4</p> | <p>D2535 100mg</p>  <p>(<i>R</i>)-(-)-PPFA CAS RN: 55700-44-2</p> |
| <p>D2536 100mg</p>  <p>(<i>S</i>)-(R)-PPFA CAS RN: 55650-58-3</p> | <p>D3822 200mg 1g</p>  <p>(<i>S,S</i>)-ip-FOXAP CAS RN: 163169-29-7</p> | <p>I0795 100mg</p>  <p>(<i>R,R</i>)-(+)-2,2'-Isopropylidene-bis(4-<i>tert</i>-butyl-2-oxazoline) CAS RN: 131833-97-1</p> | <p>I0567 100mg 1g</p>  <p>(<i>S,S</i>)-(-)-2,2'-Isopropylidene-bis(4-<i>tert</i>-butyl-2-oxazoline) CAS RN: 131833-93-7</p> | <p>D2823 250mg 1g 5g</p>  <p>(<i>R,R</i>)-2,2'-Isopropylidene-bis(4-phenyl-2-oxazoline) CAS RN: 150529-93-4</p> |
| <p>I0582 250mg 1g</p>  <p>(<i>S,S</i>)-2,2'-Isopropylidene-bis(4-phenyl-2-oxazoline) CAS RN: 131457-46-0</p> | <p>B2217 250mg 1g 5g</p>  <p>(<i>R,R</i>)-2,6-Bis(4-isopropyl-2-oxazolin-2-yl)pyridine CAS RN: 131864-67-0</p> | <p>B2218 500mg 5g</p>  <p>(<i>S,S</i>)-2,6-Bis(4-isopropyl-2-oxazolin-2-yl)pyridine CAS RN: 118949-61-4</p> | <p>B2219 250mg 1g</p>  <p>(<i>R,R</i>)-2,6-Bis(4-phenyl-2-oxazolin-2-yl)pyridine CAS RN: 128249-70-7</p> | <p>B2220 250mg 1g</p>  <p>(<i>S,S</i>)-2,6-Bis(4-phenyl-2-oxazolin-2-yl)pyridine CAS RN: 174500-20-0</p> |
| <p>M1401 100mg 500mg</p>  <p>(+)-2,2'-Methylenebis[3a<i>R</i>,8a<i>S</i>]-3a,8a-dihydro-8<i>H</i>-indeno[1,2-<i>d</i>]-oxazole CAS RN: 180186-94-1</p> | <p>M1402 100mg 500mg</p>  <p>(-)-2,2'-Methylenebis[3a<i>S</i>,8a<i>R</i>]-3a,8a-dihydro-8<i>H</i>-indeno[1,2-<i>d</i>]-oxazole CAS RN: 175166-49-1</p> | <p>P1307 5g 25g</p>  <p>(<i>R</i>)-(-)-4-Phenyl-2-oxazolidinone CAS RN: 90319-52-1</p> | <p>P1308 5g 25g</p>  <p>(<i>S</i>)-(+)-4-Phenyl-2-oxazolidinone CAS RN: 99395-88-7</p> | <p>B1786 5g 25g</p>  <p>(<i>R</i>)-4-Benzyl-2-oxazolidinone CAS RN: 102029-44-7</p> |
| <p>B1754 5g 25g</p>  <p>(<i>S</i>)-4-Benzyl-2-oxazolidinone CAS RN: 90719-32-7</p> | <p>A2095 1g 5g</p>  <p>(<i>S</i>)-4-(4-Aminobenzyl)-2-oxazolidinone CAS RN: 152305-23-2</p> | <p>B2165 1g 5g 25g</p>  <p>(<i>R</i>)-(-)-4-Benzyl-3-propionyl-2-oxazolidinone CAS RN: 131685-53-5</p> | <p>B2166 1g 5g</p>  <p>(<i>S</i>)-(+)-4-Benzyl-3-propionyl-2-oxazolidinone CAS RN: 101711-78-8</p> | <p>I0572 1g 5g 25g</p>  <p>(<i>R</i>)-4-Isopropyl-2-oxazolidinone CAS RN: 95530-58-8</p> |

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|--|--|--|--|---|
| I0451 1g 5g 25g  (<i>S</i>)-4-Isopropyl-2-oxazolidinone CAS RN: 17016-83-0 | I0594 1g 5g  (<i>R</i>)-(-)-4-Isopropyl-3-propionyl-2-oxazolidinone CAS RN: 89028-40-0 | I0573 1g 5g  (<i>S</i>)-(+)-4-Isopropyl-3-propionyl-2-oxazolidinone CAS RN: 77877-19-1 | I0761 1g 5g  (4 <i>R</i>)-(+)-4-Isopropyl-5,5-diphenyl-2-oxazolidinone CAS RN: 191090-32-1 | I0762 1g 5g  (4 <i>S</i>)-(-)-4-Isopropyl-5,5-diphenyl-2-oxazolidinone CAS RN: 184346-45-0 |
| I0575 1g  (<i>S</i>)-4-Isopropylthiazolidine-2-thione CAS RN: 76186-04-4 | B4104 1g 5g  (<i>S</i>)-4- <i>tert</i> -Butyl-2-(2-pyridyl)oxazoline CAS RN: 117408-98-7 | D5368 1g 5g  (<i>S</i>)-Pheox CAS RN: 475571-19-8 | T3942 250mg 1g  (1 <i>R</i> ,2 <i>R</i>)-1,2-Bis(dimethylamino)cyclohexane CAS RN: 53152-69-5 | A1548 1g  (<i>R,R</i>)-TsDPEN CAS RN: 144222-34-4 |
| A1699 1g  (<i>S,S</i>)-TsDPEN CAS RN: 167316-27-0 | B3549 1g  (-)-Benzotetramisole CAS RN: 950194-37-3 | B3296 200mg 1g 5g  (+)-Benzotetramisole CAS RN: 885051-07-0 | T1215 10g 25g  Levamisole Hydrochloride CAS RN: 16595-80-5 | B1683 10g  BCDC CAS RN: 69257-04-1 |
| B1689 5g  BCNC CAS RN: 69221-14-3 | B1684 5g  <i>N</i> -Benzylquinidinium Chloride CAS RN: 77481-82-4 | C0347 25g 100g  Cinchonidine CAS RN: 485-71-2 | C0348 25g  Cinchonidine Dihydrochloride CAS RN: 24302-67-8 | C0349 25g 500g  Cinchonidine Sulfate Dihydrate CAS RN: 524-61-8 |
| C0350 25g 200g  Cinchonine CAS RN: 118-10-5 | Q0006 5g 25g  Quinidine CAS RN: 56-54-2 | Q0010 5g 25g  Quinidine Sulfate Dihydrate CAS RN: 6591-63-5 | Q0030 25g  Quinine Hydrochloride Dihydrate CAS RN: 6119-47-7 | A1534 1g  (1 <i>R</i> ,2 <i>S</i>)- <i>N</i> -Benzyl- <i>N</i> -(mesitylenesulfonyl)- <i>O</i> -acetylnorephedrine CAS RN: 240423-74-9 |
| A1535 1g  (1 <i>S</i> ,2 <i>R</i>)- <i>N</i> -Benzyl- <i>N</i> -(mesitylenesulfonyl)- <i>O</i> -acetylnorephedrine CAS RN: 240423-53-4 | B2103 1g 5g  (1 <i>R</i> ,2 <i>S</i>)- <i>N</i> -Benzyl- <i>N</i> -(mesitylenesulfonyl)-norephedrine CAS RN: 187324-63-6 | B2104 1g 5g  (1 <i>S</i> ,2 <i>R</i>)- <i>N</i> -Benzyl- <i>N</i> -(mesitylenesulfonyl)-norephedrine CAS RN: 187324-64-7 | P1371 1g  (1 <i>R</i> ,2 <i>S</i>)- <i>N</i> -Benzyl- <i>N</i> -(mesitylenesulfonyl)- <i>O</i> -propionynorephedrine CAS RN: 187324-66-9 | B1528 5mL 25mL  (<i>R</i>)-(+)- <i>N</i> -Benzyl-1-phenylethylamine CAS RN: 38235-77-7 |
| B1529 5mL 25mL  (<i>S</i>)-(-)- <i>N</i> -Benzyl- α -methylbenzylamine CAS RN: 17480-69-2 | B4418 5g 25g  (<i>R,R</i>)-Jacobsen's Ligand CAS RN: 135616-40-9 | B4647 5g 25g  (<i>S,S</i>)-Jacobsen's Ligand CAS RN: 135616-36-3 | B2652 100mg  (1 <i>R</i> ,2 <i>R</i> ,4 <i>R</i> ,5 <i>R</i>)-2,5-Bis-(3,5-di- <i>tert</i> -butyl-2-hydroxybenzylideneamino)bicyclo[2.2.1]heptane CAS RN: 539834-19-0 | B2653 100mg  (1 <i>S</i> ,2 <i>S</i> ,4 <i>S</i> ,5 <i>S</i>)-2,5-Bis-(3,5-di- <i>tert</i> -butyl-2-hydroxybenzylideneamino)bicyclo[2.2.1]heptane CAS RN: 539834-16-7 |
| B2048 1g 5g  (+)-4,5-Bis[hydroxy(diphenyl)methyl]-2,2-dimethyl-1,3-dioxolane CAS RN: 93379-49-8 | B1614 1g 5g  (-)-4,5-Bis[hydroxy(diphenyl)methyl]-2,2-dimethyl-1,3-dioxolane CAS RN: 93379-48-7 | B1615 1g  (+)-4,5-Bis[hydroxy(diphenyl)methyl]-2-methyl-2-phenyl-1,3-dioxolane CAS RN: 109306-21-0 | B2034 5g  (<i>R,R</i>)-(+)-Bis(α -methylbenzyl)amine Hydrochloride CAS RN: 82398-30-9 | B2035 5g  (<i>S,S</i>)-(-)-Bis(α -methylbenzyl)amine Hydrochloride CAS RN: 40648-92-8 |

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| D2520 1g  (R,R)-1,2-Bis(trifluoromethanesulfonamido)-1,2-diphenylethane CAS RN: 121788-73-6 | D2521 1g  (S,S)-1,2-Bis(trifluoromethanesulfonamido)-1,2-diphenylethane CAS RN: 121788-77-0 | B2907 1g 5g  (R)-(+)- <i>tert</i> -Butylsulfonamide CAS RN: 196929-78-9 | B2908 1g 5g  (S)-(-)- <i>tert</i> -Butylsulfonamide CAS RN: 343338-28-3 | C1324 1g 5g  (+)-10,2-Camphorsultam CAS RN: 108448-77-7 |
| C1325 1g 5g  (-)-10,2-Camphorsultam CAS RN: 94594-90-8 | C1326 1g 5g  (2R,8aS)-(+)-(Camphorylsulfonyl)-oxaziridine CAS RN: 104322-63-6 | C1327 1g 5g  (2S,8aR)-(-)-(Camphorylsulfonyl)-oxaziridine CAS RN: 104372-31-8 | C1614 100mL  (+)- <i>B</i> -Chlorodiisopinocampheylborane (58% in Hexane, ca. 1.6mol/L) CAS RN: 112246-73-8 | C2023 100mL  (-)- <i>B</i> -Chlorodiisopinocampheylborane (60% in Heptane, ca. 1.7mol/L) CAS RN: 85116-37-6 |
| C1615 100mL  (-)- <i>B</i> -Chlorodiisopinocampheylborane (60% in Hexane, ca. 1.7mol/L) CAS RN: 85116-37-6 | D2129 1g 5g  (-)- <i>N,N</i> -Dibutylnorephedrin CAS RN: 114389-70-7 | D2239 1g  (+)-1,4-Di- <i>O</i> -benzyl-D-threitol CAS RN: 91604-41-0 | D2240 1g 5g  (-)-1,4-Di- <i>O</i> -benzyl-L-threitol CAS RN: 17401-06-8 | T1387 25g 250g  Diisopropyl D-(-)-Tartrate CAS RN: 62961-64-2 |
| T0621 25g 500g  Diisopropyl L-(+)-Tartrate CAS RN: 2217-15-4 | D2702 1g 5g  (+)-Dipivaloyl-D-tartaric Acid CAS RN: 76769-55-6 | D2686 5g 25g  (-)-Dipivaloyl-L-tartaric Acid CAS RN: 65259-81-6 | T1195 25g 250g  Diethyl D-(-)-Tartrate CAS RN: 13811-71-7 | T0003 25g 100g 500g  Diethyl L-(+)-Tartrate CAS RN: 87-91-2 |
| D3444 100mg 1g  (11R,12R)-9,10-Dihydro-9,10-ethanoanthracene-11,12-diamine CAS RN: 181139-49-1 | D3445 100mg 1g  (11S,12S)-9,10-Dihydro-9,10-ethanoanthracene-11,12-diamine CAS RN: 138517-66-5 | D3715 50mg  (1R,2R)- <i>N,N'</i> -Dihydroxy- <i>N,N'</i> -bis-(diphenylacetyl)-cyclohexane-1,2-diamine CAS RN: 860036-16-4 | D3716 50mg  (1S,2S)- <i>N,N'</i> -Dihydroxy- <i>N,N'</i> -bis-(diphenylacetyl)-cyclohexane-1,2-diamine CAS RN: 1217464-22-6 | D3808 1g  (1R,2R)- <i>N,N'</i> -Dimethyl- <i>N,N'</i> -bis-(3,3-dimethylbutyl)-cyclohexane-1,2-diamine CAS RN: 644958-86-1 |
| D3809 1g  (1S,2S)- <i>N,N'</i> -Dimethyl- <i>N,N'</i> -bis-(3,3-dimethylbutyl)-cyclohexane-1,2-diamine CAS RN: 767291-67-8 | D2176 1g 5g  (R,R)-DPEN CAS RN: 35132-20-8 | D2175 1g 5g  (S,S)-DPEN CAS RN: 29841-69-8 | D2130 1g 5g  (R)-Me-CBS Catalyst CAS RN: 112022-83-0 | D2131 1g 5g  (S)-Me-CBS Catalyst CAS RN: 112022-81-8 |
| D3804 1g  (S)-(-)-2-(Diphenylmethyl)-pyrrolidine CAS RN: 119237-64-8 | H1407 200mg 1g  Singh's Catalyst CAS RN: 910110-45-1 | D3185 100mg  (2R,5R)-2,5-Diphenylpyrrolidine CAS RN: 155155-73-0 | D2365 1g 5g  α,α -Diphenyl-D-prolinol CAS RN: 22348-32-9 | D2735 1g 5g  α,α -Diphenyl-L-prolinol CAS RN: 112068-01-6 |
| H0784 100mg 1g 5g  (R)-(-)-Diphenyl(1-methylpyrrolidin-2-yl)methanol CAS RN: 144119-12-0 | H0768 100mg 1g 5g  (S)-(+)-Diphenyl(1-methylpyrrolidin-2-yl)methanol CAS RN: 110529-22-1 | D3843 1g 5g  α,α -Diphenyl-L-prolinol Trimethylsilyl Ether CAS RN: 848821-58-9 | D3867 1g 5g  α,α -Diphenyl-D-prolinol Trimethylsilyl Ether CAS RN: 943757-71-9 | B5701 1g  (S)-Bis[3,5-bis(trifluoromethyl)phenyl](pyrrolidin-2-yl)methanol CAS RN: 848821-76-1 |

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| H0862 1g 5g  (1R,2R,5R)-(+)-2-Hydroxy-3-pinanone CAS RN: 24047-72-1 | H0863 1g 5g  (1S,2S,5S)-(-)-2-Hydroxy-3-pinanone CAS RN: 1845-25-6 | I0807 200mg  (R,R)-2-Iodo-1,3-bis[1-(mesitylcarbamoyl)ethoxy]benzene CAS RN: 1226896-38-3 | I1122 200mg  N,N'-[(2S,2'S)-[(2-Iodo-1,3-phenylene)bis(oxy)]bis(propane-2,1-diyl)]bis(mesitylamide) CAS RN: 1399008-27-5 | I0728 1g  β -Isocupreidine CAS RN: 253430-48-7 |
| E0974 100mg  α -ICPN CAS RN: 1476067-44-3 | K0028 1g 5g  (S)-(+)-Ketopinic Acid CAS RN: 40724-67-2 | M1044 5g 25g  (1R,2S,5R)-(-)-Menthyl (S)-p-Toluenesulfinate CAS RN: 1517-82-4 | M1066 1g 5g  (1S,2R,5S)-(+)-Menthyl (R)-p-Toluenesulfinate CAS RN: 91796-57-5 | M1070 1g  (1S)-(-)-10-Mercapto-isoborneol CAS RN: 71242-58-5 |
| T1490 100mg 1g  (1R,2S)-(-)-trans-2-Phenyl-1-cyclohexanol CAS RN: 98919-68-7 | T1491 100mg 1g  (1S,2R)-(+)-trans-2-Phenyl-1-cyclohexanol CAS RN: 34281-92-0 | P0794 25mL 100mL 500mL  (R)-(+)-1-Phenylethylamine CAS RN: 3886-69-9 | P0793 25mL 100mL 500mL  (S)-(-)-1-Phenylethylamine CAS RN: 2627-86-3 | Q0076 100mg 1g  Quincordine CAS RN: 207129-36-0 |
| Q0074 100mg 1g  Quincorine CAS RN: 207129-35-9 | D3475 200mg 1g  (R,R)-TaDiAs-2nd CAS RN: 2010983-27-2 | D3476 200mg 1g  (S,S)-TaDiAs-2nd CAS RN: 2135524-59-1 | T2545 1g 5g  (R)-(p-Toluenesulfinyl)ferrocene CAS RN: 130225-27-3 | T2546 1g  (S)-(p-Toluenesulfinyl)ferrocene CAS RN: 164297-25-0 |
| T2223 100mg  N ^{α} -(2,4,6-Triisopropylbenzene-sulfonyl)-O-(tert-butyl-diphenylsilyl)- π -methyl-L-histidinol CAS RN: 787554-04-5 | T2578 1g 5g  (-)-Isothiocineole CAS RN: 5718-75-2 | T2579 1g 5g  (+)-Isothiocineole CAS RN: 1208985-45-8 | T1499 1g 5g  (R)-(+)-1,1,2-Triphenyl-1,2-ethanediol CAS RN: 95061-46-4 | |
| T1482 1g  (S)-(-)-1,1,2-Triphenyl-1,2-ethanediol CAS RN: 108998-83-0 | S0461 1g 5g 10g  (-)-Sparteine CAS RN: 90-39-1 | S0884 1g  (+)-Sparteine CAS RN: 492-08-0 | D3984 100mg  Bode Catalyst 1 Monohydrate CAS RN: 919102-70-8 | D3983 100mg  Bode Catalyst 2 Monohydrate CAS RN: 903571-02-8 |
| C0015 25g 100g 500g  (+)-CSA CAS RN: 3144-16-9 | C0972 25g 100g 500g  (-)-CSA CAS RN: 35963-20-3 | A0177 5g 25g  D-Alanine CAS RN: 338-69-2 | A0179 25g 250g  L-Alanine CAS RN: 56-41-7 | P0481 25g 250g  L-Proline CAS RN: 147-85-3 |
| P0994 5g 25g  D-Proline CAS RN: 344-25-2 | P1404 1g 5g  L-Pipecolic Acid CAS RN: 3105-95-1 | P1830 5g 25g  D-Pipecolic Acid CAS RN: 1723-00-8 | T0228 25g 100g 500g  D-(+)-Threonine CAS RN: 632-20-2 | T0230 25g 100g 500g  L-(-)-Threonine CAS RN: 72-19-5 |

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| B3398 1g 5g  <i>O</i> - <i>tert</i> -Butyl-L-threonine CAS RN: 4378-13-6 | A1043 100mg 1g  L-Azetidine-2-carboxylic Acid CAS RN: 2133-34-8 | T0539 5g 25g  D-Tryptophan CAS RN: 153-94-6 | T0541 25g 100g  L-Tryptophan CAS RN: 73-22-3 | L0137 5mL 25mL  L-(+)-Leucinol CAS RN: 7533-40-6 |
| L0236 1g 5g  D-(-)-Leucinol CAS RN: 53448-09-2 | V0058 5g 25g  L-Valinol CAS RN: 2026-48-4 | V0077 1g 5g  D-Valinol CAS RN: 4276-09-9 | P1201 5g 25g  (<i>R</i>)-(-)-2-Phenylglycinol CAS RN: 56613-80-0 | P1294 5g 25g  (<i>S</i>)-(+)-2-Phenylglycinol CAS RN: 20989-17-7 |
| P1374 1g 5g  (1 <i>R</i> ,2 <i>S</i>)-1-Phenyl-2-(1-pyrrolidinyl)propan-1-ol CAS RN: 127641-25-2 | P1375 1g 5g  (1 <i>S</i> ,2 <i>R</i>)-1-Phenyl-2-(1-pyrrolidinyl)propan-1-ol CAS RN: 123620-80-4 | I0395 1g 5g  (<i>S</i>)-(-)-Indoline-2-carboxylic Acid CAS RN: 79815-20-6 | I0589 1g  (<i>R</i>)-(+)-Indoline-2-carboxylic Acid CAS RN: 98167-06-7 | I0480 5g  (<i>S</i>)-2-Isopropylamino-3-methyl-1-butanol CAS RN: 112211-88-8 |
| I0476 1g 5g 25g  (<i>R</i>)-2-Isopropylamino-2-phenylethanol CAS RN: 112211-92-4 | P1925 1g  (<i>R</i>)-(-)-1-(2-Pyrrolidinylmethyl)pyrrolidine CAS RN: 60419-23-0 | P1241 1g 5g  (<i>S</i>)-(+)-1-(2-Pyrrolidinylmethyl)pyrrolidine CAS RN: 51207-66-0 | M1995 1g 5g  (<i>S</i>)-2-[(1-Methyl-2-pyrrolidinyl)methyl]-isoindoline Dihydrochloride | M1183 1g 5g  (<i>S</i>)-(-)-1-Methyl-2-(1-piperidinomethyl)pyrrolidine CAS RN: 84466-85-3 |
| M1169 1g 5g  (<i>R</i>)-2-(Methoxymethyl)pyrrolidine CAS RN: 84025-81-0 | M1161 1g 5g  (<i>S</i>)-2-(Methoxymethyl)pyrrolidine CAS RN: 63126-47-6 | M1170 1g  (<i>R</i>)-(+)-2-(Methoxymethyl)-1-pyrrolidinecarboxaldehyde CAS RN: 121817-71-8 | M1162 1g  (<i>S</i>)-(-)-2-(Methoxymethyl)-1-pyrrolidinecarboxaldehyde CAS RN: 63126-45-4 | A0945 1g 5g  (<i>S</i>)-(+)-2-(Anilinomethyl)pyrrolidine CAS RN: 64030-44-0 |
| A1301 1g 5g  (<i>S</i>)-(-)-2-Aminomethyl-1-ethylpyrrolidine CAS RN: 22795-99-9 | A1337 1g  RAMP CAS RN: 72748-99-3 | A1335 1g 5g  SAMP CAS RN: 59983-39-0 | | |

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