Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

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Технические характеристики на литийорганические реагенты, оловоорганические реагенты, реагенты для защиты/снятия защиты, реагенты для окисления, восстановители компании Sigma-Aldrich

Виды товаров: оловоорганические галогениды, оловоорганические гидриды, оловоорганические оксиды и гидроксиды, гиперкоординированные станнаны, триорганооловые соли, реагенты Дадли, этинилнафталины, этансульфонильные группы, реагенты Хеллера-Сарпонга, реагенты окисления джонса, реагенты Корнблюм-окисления, реагенты окисления Лея-Гриффита, реагенты окисления Оппенауэра , реагенты окисления Пинника, реагенты Руботтомового окисления, реагенты асимметричного эпоксидирования шарплесс, реагенты Вакер-окисления, восстановители Клемменсена, восстановители Меервейна-Понндорфа-Верли, восстановители Вольфа-Кишнера.

Organolithium Reagents

Since its discovery by Schlenk and Holtz, lithiation chemistry has become a well-established technique in modern industrial synthesis. With the demand to synthesize highly complex natural products and obtain new chemical structures for probing uncharted territory in chemistry, organolithium reagents have become essential elements in the formation of known bond formations (e.g. nucleophilic addition and substitution) and the development of new technologies in organic synthesis.

Organolithium compounds, being strong bases and nucleophiles, have gained outstanding importance as key intermediates and powerful reagents in organic synthesis.

297054
(Trimethylsilyl)methyllithium solution
1.0 M in pentane

332747
2-Thienyllithium solution
1.0 M in THF/hexanes

303348
Cyclopentadienyllithium
97%

561452
Ethyllithium solution
0.5 M in benzene: cyclohexane

468568
Hexyllithium solution
2.3 M in hexane

58565
Isobutyllithium solution
technical, ~16% in heptane (~1.7 M)

529745
Isopropyllithium solution
0.7 M in pentane

335452
Lithium (trimethylsilyl)acetylide solution
0.5 M in THF

186155
Lithium acetylide, ethylenediamine complex
90%

462306
Lithium pentamethylcyclopentadienide

514330
Methyllithium solution
3.1 M in diethoxymethane

197343
Methyllithium solution
1.6 M in diethyl ether

230715
***n*-Butyllithium solution**
11.0 M in hexanes

230707
***n*-Butyllithium solution**
2.5 M in hexanes

20159
***n*-Butyllithium solution**
2.7 M in heptane

186171
***n*-Butyllithium solution**
1.6 M in hexanes

302120
***n*-Butyllithium solution**
2.0 M in cyclohexane

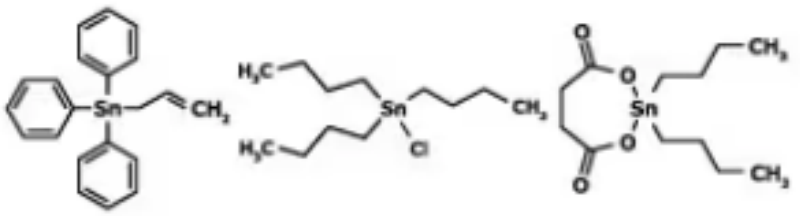
593230
Phenyllithium solution
1.9 M in dibutyl ether

195596
***sec*-Butyllithium solution**
1.4 M in cyclohexane

94439
***tert*-Butyllithium solution**
1.6-3.2 M in heptane

186198
***tert*-Butyllithium solution**
1.7 M in pentane

Organotin Reagents



Organotin reagents are pivotal in progressing organic synthesis in the quest for synthesizing highly complex natural compounds and creating new chemical structures and known bond formations. Organotin compounds, also known as stannanes, have at least one tin-carbon bond and are frequently utilized synthons in palladium-catalyzed cross coupling reactions. Since the first report by Stille in 1977, numerous applications of organotin reagents have become commonplace in the formation of new carbon-carbon (C-C) bonds for the synthesis of natural products and other small molecules for drug discovery.

Organotin chemistry continues to be an active field of research in organometallic chemistry and has a wide range of pharmacological, agrochemical, and polymerization applications. Our organotin reagents are used for the generation of Stille Coupling precursors to obtain more complex coupling partners and dehalogenation reactions to afford hydrocarbons in late-stage synthetic sequences.

Our extensive portfolio of organotin compounds includes:

- Organotin halides
- Organotin hydrides
- Organotin oxides and hydroxides
- Hypercoordinated stannanes
- Triorganotin salts

We also offer other organometallic reagents to facilitate cross-coupling reactions and the discovery of new bond-forming methodologies. To view these reagents, visit our Organolithium, Organozinc, Organoaluminum, and Organosilicon reagents pages.

429287
(Dimethylamino)trimethyltin(IV)
technical grade

SYX00076
1-Tributylstannyl-3,3,3-trifluoro-1-propyne
Aldrich[CPR]

638617
2-(Tri-*n*-butylstannyl)oxazole

414506
2-(Tributylstannyl)furan
97%

SYX00013
2-(Tributylstannyl)propene
Aldrich[CPR]

678333
2-(Tributylstannyl)pyridine
85%

721174
2-(Tributylstannyl)pyrimidine
95%

414492
2-(Tributylstannyl)thiophene
97%

728896
2-Chloro-5-(tributylstannyl)thiazole
96%

642541
2-Tributylstannylthiazole
97%

717703
2,5-Bis(tributylstannyl)thiophene
97%

739782
5-Methyl-2-(tributylstannyl)pyridine
95%

707031
6-Methoxy-2-(tributylstannyl)pyrimidine
95%

271411
Allyltributylstannane
97%

43916

Allyltris(3,3,4,4,5,5,6,6,6-nonafluorohexyl)stannane
~90%

349488
Azidotrimethyltin(IV)
97%

331090
Bis(dibutylchlorotin(IV)) oxide
98%

271403
Bis(tributylstannyl)acetylene
95%

251127
Bis(tributyltin)
95%

720585
Bis(tributyltin)sulfide
97%

483613
Bis(trimethylstannyl)acetylene

344923
Butyltin chloride dihydroxide
96%

201057
Butyltin trichloride
95%

8.40126
Butyltinhydroxide-oxide
for synthesis

8.24510
cis-Platinum (65% Pt)
for synthesis

707937
***cis*-Tributyl[2-ethoxyethenyl]stannane**
97%

520586
Dibutyltin bis(acetylacetonate)

95%

290890
Dibutyltin diacetate
technical grade

205494
Dibutyltin dichloride
96%

8.04184
Dibutyltin dichloride
for synthesis

291234
Dibutyltin dilaurate
95%

8.20421
Dibutyltin dilaurate
for synthesis

440477
Dibutyltin maleate
95%

8.03539
Dibutyltin oxide
for synthesis

183083
Dibutyltin(IV) oxide
98%

288012
Dimethyltin dichloride
97%

748382
Dimethyltin oxide

8.03544
Dioctyltin oxide
for synthesis

229202
Diphenyltin dichloride

96%

479462
Diphenyltin(IV) oxide
97%

288020
Hexamethylditin
99%

719366
***N*-Methyl-2-(tributylstannyl)indole**
97%

719501
***N*-Methyl-4-(tributylstannyl)imidazole**
95%

277231
Phenyltin trichloride
98%

8.14689
Platinum(II) acetylacetonate (50% Pt)
catalyst for synthesis

804185
SnAP 2-Spiro-(2-Pyr) M Reagent

804150
SnAP 2,3-Bicyclo-(3,4-Pyr) M Reagent

804177
SnAP 3-Spiro-(2-Pyr) M Reagent

804142
SnAP 3-Spiro-(4-Pip) M Reagent

798843
SnAP 3Me-M Reagent

798894
SnAP DA Reagent

798878
SnAP M Reagent

95%

798916
SnAP OA Reagent

798908
SnAP Pip Reagent

798886
SnAP TM Reagent

900398
SnAP-ex 3-*N*-Boc P Reagent
95%

900397
SnAP-ex 3-*O*-MOM P
95%

8.08278
Tetra-n-butyltin
for synthesis

271446
Tetraallyltin
97%

481394
Tetramethyltin
95%

8.08706
Tetramethyltin
for synthesis

8.21898
Tetraoctyltin
for synthesis

T26727
Tetraphenyltin
97%

328669
Tetravinyltin
97%

CDS001577
Tin(II) pyrophosphate
Aldrich[CPR]

731625
***trans*-1,2-Bis(tributylstannyl)ethene**
97%

SYX00050
Tributyl[(methoxymethoxy)methyl]stannane
Aldrich[CPR]

SYX00093
Tributyl[2,2-difluoro-1-(2-methoxyethoxymethoxy)vinyl]stannane
Aldrich[CPR]

275123
Tributyl(1-ethoxyvinyl)tin
97%

499862
Tributyl(1-propynyl)tin
95%

711063
Tributyl(perfluoroethyl)stannane
97%

271438
Tributyl(vinyl)tin
97%

374601
Tributylphenylstannane
97%

T50202
Tributyltin chloride
96%

615633
Tributyltin chloride-d_{27}
98 atom % D, 96% (CP)

234788
Tributyltin hydride

contains 0.05% BHT as stabilizer, 97%

8.14109
Tributyltin hydride (stabilized)
for synthesis

288047
Triethyltin bromide
97%

366331
Trimethyl(phenyl)tin
98%

367265
Trimethyl(tributylstannyl)silane
97%

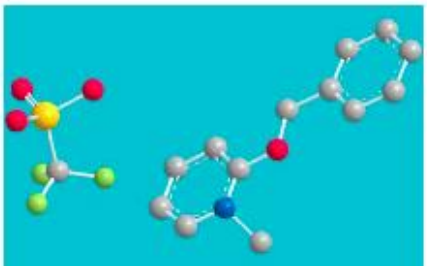
146498
Trimethyltin chloride

615625
Triphenyl-d_{15}-tin chloride
≥98 atom % D

348104
Triphenyltin hydroxide

8.08735
Tripropyltin chloride
for synthesis

Protection/Deprotection Reagents



One of the common difficulties with natural product and other multi-step syntheses is the need to render one functional group inert to a particular reagent, while keeping another group open for further chemical elaboration. Despite the great advances made in the involved synthesis of multifunctional products, chemoselectivity in functional group transformations remains a critical issue in organic synthesis. Unfortunately, there is no perfect protecting group applicable to any functional group in any

situation. Thus, the chemist needs a handy toolbox of selective and efficient protection reagents that can be applied and easily removed under a variety of conditions by a deprotection reagent.

We are pleased to offer an unmatched portfolio of alcohol protecting groups, amine protecting groups, carbonyl protecting groups, carboxylic acid protecting groups, phosphate protecting groups, and terminal alkyne protecting groups to make your breakthroughs feel closer than ever. Selected highlights are:

- The Dudley Reagent is capable of benzylation of alcohols under neutral conditions. Allyl and 4-methoxybenzyl trichloroacetimidates are also commonly used to protect alcohols in various synthetic applications.
- Ethynylnaphthalenes offer sterically unobtrusive protection of hydroxyl groups on carbohydrates with orthogonal reactivity compared to benzyl ethers.
- The (2-trimethylsilyl)ethanesulfonyl (SES) group is used to protect amines via SES chloride; alternatively, SES-NH_2 can be used to introduce a SES-protected amine functionality directly into a molecule.
- The Heller-Sarpong reagents promote highly chemoselective esterification and amidations as a practical alternative to diazoalkanes and Weinreb amide protocols.
- Our fluorous protecting groups serve several purposes, acting as protecting groups and serving as temporary fluorous tags that can facilitate product design and purification throughout a synthesis.

It is equally important to be able to remove the protecting group at the end of the synthesis. Our portfolio of deprotecting agents will help you get to your desired molecule to reach new scientific frontiers.

8.18203
(9-Fluorenylmethyl) chloroformate
for synthesis

91415
(Triisopropylsiloxy)methyl chloride
≥95.0% (GC)

64296
(Trimethylsilyl)methanesulfonate
≥97%

8.43834
1-Bromo-3-methoxypropane
for synthesis

8.43833
1-Chloro-3-methoxypropane
for synthesis

411094
1,1-Dichlorosilacyclobutane
97%

8.41297
1,2-Benzenedimethanol

for synthesis

267880
1,2-Bis(chlorodimethylsilyl)ethane
96%

337005
1,3-Dichloro-1,1,3,3-tetraisopropyldisiloxane
97%

09655
2-(3-Methylbutyryl)-5,5-dimethyl-1,3-cyclohexandione
≥99.0% (GC)

193372
2-(Boc-oxyimino)-2-phenylacetonitrile
99%

930067
2-(Pyrimidin-5-yl)benzaldehyde

681334
2-(Trimethylsilyl)ethanesulfonyl chloride

226890
2-(Trimethylsilyl)ethanol
96%

238902
2-(Trimethylsilyl)ethoxymethyl chloride
technical grade

92749
2-(Trimethylsilyl)ethoxymethyl chloride
≥95.0% (GC)

679674
2-Benzyloxy-1-methylpyridinium triflate
96%

109983
2-Chloroethyl vinyl ether
99%, contains triethanolamine as stabilizer, contains MEHQ as stabilizer

357480
2-Methoxyethoxymethyl chloride
technical grade

174645
2-Methoxypropene
97%

8.22293
2-Nitrobenzaldehyde
for synthesis

8.02936
2,2-Dimethoxypropane
for synthesis

8.01021
3-Bromo-1-propene
(stabilised) for synthesis

752886
3-Buten-2-yl 1*H*-imidazole-1-carboxylate
95%

D106208
3,4-Dihydro-2*H*-pyran
97%

8.02971
3,4-Dihydro-2H-pyran
for synthesis

679585
4-Methoxybenzyl-2,2,2-trichloroacetimidate

8.21233
4-Methoxyphenol
for synthesis

129208
4-Methoxytriphenylmethyl chloride
97%

92748
4-Nitrophenyl 2-(trimethylsilyl)ethyl carbonate
≥97.0%

8.08326
4-Toluenesulfonyl chloride
for synthesis

38827
4,4′-Dimethoxytriphenylmethyl chloride
≥97.0% (HPLC)

100013
4,4′-Dimethoxytrityl chloride
95%

367001
4,4′,4″-Trimethoxytrityl chloride
technical grade

8.01366
Acetaldehyde diethyl acetal
for synthesis

8.20002
Acetaldehyde dimethyl acetal
for synthesis

A29585
Allyl bromide
ReagentPlus®, 99%, contains ≤1000 ppm propylene oxide as stabilizer

337528
Allyl bromide
reagent grade, 97%, contains ≤1000 ppm propylene oxide as stabilizer

499781
Benzyl carbazate
97%

8.01809
Benzyl chloride
for synthesis

13282
Benzyl chloromethyl ether
technical, ~60% (NMR)

20430
Boc-OSu
≥98.0% (CHN)

202207
Boron tribromide
ReagentPlus®, 99.9%

419508
Boron tribromide
ReagentPlus®, ≥99%

230367
Boron tribromide
≥99.99%

92337
Bromotrimethylsilane
purum, ≥97.0% (AT)

194409
Bromotrimethylsilane
97%

8.14324
Bromotrimethylsilane
for synthesis

20990
Cesium fluoride
purum p.a., ≥98.0%

255718
Cesium fluoride
99.99% trace metals basis

198323
Cesium fluoride
99%

226181
Chloro(chloromethyl)dimethylsilane
98%

281875
Chloro(dimethyl)isopropylsilane
97%

289108
Chloro(dimethyl)octadecylsilane
95%

246859

Chloro(dimethyl)octylsilane
97%

113379
Chloro(dimethyl)phenylsilane
98%

302449
Chloro(dimethyl)thexylsilane
95%

40242
Chloro(dodecyl)dimethylsilane
≥95.0% (GC)

8.02411
Chloroacetyl chloride
for synthesis

404713
Chlorodiisobutyloctadecylsilane
technical grade, 85%

380695
Chlorodiisopropyloctylsilane
98%

467138
Chlorodimethylphenethylsilane
≥98%

144207
Chlorodimethylsilane
98%

673935
Chlorodiphenylsilane
technical grade, 90%

142670
Chloromethyl ethyl ether
95%

100331
Chloromethyl methyl ether
technical grade

C54007

Chloromethyl methyl sulfide
95%

216631
Chloromethyl phenyl sulfide
97%

282707
Chlorotributylsilane
97%

409243
Chlorotriethoxysilane
98%

75986
Chlorotriethylsilane
produced by Wacker Chemie AG, Burghausen, Germany, ≥99.0%

235067
Chlorotriethylsilane
99%

254444
Chlorotrihexylsilane
95%

291013
Chlorotriisobutylsilane
97%

92360
Chlorotrimethylsilane
puriss., ≥99.0% (GC)

92361
Chlorotrimethylsilane
≥98.0% (GC)

95541
Chlorotrimethylsilane
produced by Wacker Chemie AG, Burghausen, Germany, ≥99.0% (GC)

386529
Chlorotrimethylsilane
purified by redistillation, ≥99%

8.18737
Chlorotrimethylsilane
for synthesis

114162
Chlorotriphenylsilane
96%

409405
Chlorotris(trimethylsilyl)silane
97%

205249
Di-*tert*-butyl dicarbonate
ReagentPlus®, 99%

361941
Di-*tert*-butyl dicarbonate
ReagentPlus®, ≥99%

34660
Di-*tert*-butyl dicarbonate
≥98.0% (GC)

8.18282
Di-tert-butyl dicarbonate
for synthesis

296937
Di-*tert*-butylchlorosilane
97%

287660
Di-*tert*-butyldichlorosilane
98%

262021
Di-*tert*-butylsilyl bis(trifluoromethanesulfonate)
97%

307297
Dichloro(3-chloropropyl)methylsilane
98%

291501
Dichloro(chloromethyl)methylsilane
98%

440116
Dichloro(methyl)phenylsilane
97%

274208
Dichlorodiethylsilane
97%

38385
Dichlorodiisopropylsilane
≥97.0% (GC)

80430
Dichlorodimethylsilane
produced by Wacker Chemie AG, Burghausen, Germany, ≥99.0% (GC)

440272
Dichlorodimethylsilane
≥99.5%

40140
Dichlorodimethylsilane
≥98.5% (GC)

8.03452
Dichlorodimethylsilane
for synthesis

440124
Dichlorodiphenylsilane
≥95%

440248
Dichloromethylsilane
≥97%

8.03038
Dicyclopentadiene
(stabilised) for synthesis

D91551
Diethyl carbonate
99%

375942
Diisopropylsilyl bis(trifluoromethanesulfonate)
96%

8.03525
Dimethyl carbonate
for synthesis

8.00881
Ethyl chloroformate
for synthesis

8.20774
Ethyl methanesulfonate
for synthesis

752002
Ethyl methyl carbonate
98%

17346
Ethyl *N*-Boc-oxamidate
≥97.0%

422177
Ethyl vinyl ether
contains 0.1% KOH as stabilizer, 99%

8.01391
Ethyl vinyl ether
(stabilised with potassium hydroxide) for synthesis

03747
Ethylene glycol
BioUltra, ≥99.5% (GC)

324558
Ethylene glycol
anhydrous, 99.8%

102466
Ethylene glycol
ReagentPlus®, ≥99%

V900208
Ethylene glycol
Vetec™, reagent grade, 98%

10919
Fmoc isothiocyanate
≥98.0% (CHN)

46920
Fmoc *N*-hydroxysuccinimide ester
≥98.0% (HPLC)

907847
$HB(trip)_2$
≥95%

8.18068
Hydrogen fluoride
(65% solution in pyridin) for synthesis

195529
Iodotrimethylsilane
97%

8.14347
Lithium tetrafluoroborate
for synthesis

717991
Lithium thioethoxide
80%

8.06022
Methanesulfonic acid
for synthesis

8.06021
Methanesulfonyl chloride
for synthesis

8.18035
Methyl trifluoromethanesulfonate
for synthesis

227781
***N*-(Benzyloxycarbonyloxy)succinimide**
98%

420697
***N*-(Methoxymethyl)-*N*-(trimethylsilylmethyl)benzylamine**
96%

901415
***N*-(*tert*-Butyl)-*N*-((ethoxycarbonothioyl)thio)-3,5-bis(trifluoromethyl)benzamide**

ALD00592
***N*-Boc-*N'*-TFA-pyrazole-1-carboxamidine**
95%

775037
***N*-Boc-*O*-tosylhydroxylamine**
95%

394882
***N*-*tert*-Butyldimethylsilyl-*N*-methyltrifluoroacetamide**
>97%

8.14219
N-tert-Butyldimethylsilyl-N-methyltrifluoroacetamide
for synthesis

128910
***N*,*O*-Bis(trimethylsilyl)acetamide**
synthesis grade, ≥95%

8.18727
N,O-Bis(trimethylsilyl)acetamide
for synthesis

155195
***N*,*O*-Bis(trimethylsilyl)trifluoroacetamide**
≥99%

8.00592
Phthalic anhydride
for synthesis

745413
Potassium benzyl cyanocarbamate

60240
Potassium fluoride
purum p.a., ≥99.0% (F)

748781
Propargyl 1*H*-imidazole-1-carboxylate
95%

8.22261
Pyrocatechol
for synthesis

688509
Silicon tetrachloride
packaged for use in deposition systems

B91005
***tert*-Butyl carbazate**
98%

195537
***tert*-Butyl(chloro)diphenylsilane**
98%

8.18642
tert-Butyldimethylchlorosilane
for synthesis

190500
***tert*-Butyldimethylsilyl chloride**
reagent grade, 97%

226149
***tert*-Butyldimethylsilyl trifluoromethanesulfonate**
reagent grade, 98%

8.18313
tert-Butyldimethylsilyl trifluoromethanesulfonate
for synthesis

8.18164
Tetra-n-butylammonium fluoride trihydrate
for synthesis

241512
Tetrabutylammonium fluoride hydrate
98%

361399
Tetrabutylammonium fluoride solution
75 wt. % in H_2O

86843
Tetrabutylammonium fluoride trihydrate
technical, ≥90% (T)

86872
Tetrabutylammonium fluoride trihydrate
≥97.0% (NT)

235911
Tetraethylammonium fluoride hydrate
98%

459135
Tetramethylammonium fluoride
97%

107212
Tetramethylammonium fluoride tetrahydrate
98%

8.22342
Trichloroacetic acid
for synthesis

8.18154
Trichloromethyl chloroformate
for synthesis

279471
Triethylsilyl trifluoromethanesulfonate
99%

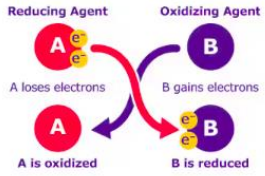
8.08261
Trifluoroacetic anhydride
for synthesis

241725
Triisopropylsilyl chloride
97%

248460
Triisopropylsilyl trifluoromethanesulfonate
97%

226467
Trimethyl(phenylthio)silane
97%

Oxidation Reagents



Oxidation-reduction reactions are some of the most common transformations encountered in organic synthesis and are powerful tools for creating novel products. These reactions have manufacturing relevance in small molecule research. No matter what your oxidation-reduction reaction, we have the corresponding oxidation reagents to keep your work flowing.

Selected highlights are:

BAEYER–VILLIGER OXIDATION

The Baeyer–Villiger (BV) oxidation method is the synthetic reaction that oxidizes a ketone to an ester or a cyclic ketone to a lactone. Modifications in 2004 by Brink, Arends, and Sheldon to the BV reaction have made it more sustainable by using hydrogen peroxide as the oxidant.

DESS–MARTIN OXIDATION

Dess–Martin oxidation synthesizes aldehydes or ketones using Dess–Martin periodinane (DMP) as the oxidizing reagent. Due to the mild reaction conditions, it is one of the more preferable oxidation reactions.

JONES OXIDATION

The Jones oxidation is a conversion of the primary alcohol into a carboxylic acid and a secondary alcohol into a ketone. Modifications to this reaction, such as Collins oxidation with the Collins reagent, are now prevalently used because of higher selectivity and milder conditions.

KORNBLUM OXIDATION

The Kornblum oxidation method transforms an alkyl halide into an aldehyde using dimethyl sulfoxide (DSMO). As one of the first DSMO oxidations, it has been further developed with the Pfitzner–Moffatt oxidation, Swern oxidation, and others.

LEY–GRIFFITH OXIDATION

Ley–Griffith oxidation is the selective oxidation of an alcohol to an aldehyde or to a ketone that uses tetrapropylammonium perruthenate (known as the Ley–Griffith reagent or TPAP). TPAP is a soluble, nonvolatile, air-stable, mild oxidant which can be used either stoichiometrically or catalytically with a suitable co-oxidant.

OPPENAUER OXIDATION

With Oppenauer oxidation, a secondary alcohol is aluminum-catalyzed to form aldehydes or ketones. While this oxidation can also work for primary alcohols, Oppenauer oxidation is unique because it targets the secondary alcohol.

PINNICK OXIDATION

The Pinnick oxidation reaction converts aldehydes into carboxylic acids, the second step of Jones oxidation. This reaction is run under mild conditions and doesn't show functional group sensitivity.

RUBOTTOM OXIDATION

The Rubottom oxidation is the synthesis of a α-hydroxy ketone from a silyl enol ether. Buffer systems have been used in reaction modifications that reduce side reactions and improve stability.

SHARPLESS ASYMMETRIC EPOXIDATION

The Sharpless epoxidation allows the enantioselective epoxidation of primary and secondary allylic alcohols to 2,3-epoxyalcohols using a titanium isopropoxide catalyst, t-butyl hydroperoxide (TBHP), and a chiral diethyl tartrate (DET). This method has become synthetically popular due to availability and low cost of the starting materials and the reliability and predictability of the reaction outcome. K. Barry Sharpless shared the 2001 Nobel Prize in chemistry for this work.

WACKER OXIDATION

The Wacker oxidation method oxidizes a terminal alkene to a ketone using a palladium catalyst, oxygen, and a copper catalyst. Modified procedures have allowed more acid-sensitive functional groups to be oxidized.

There are hundreds of oxidizing agents at a chemist′s disposals. Depending on the demands of synthetic chemistry, one can always use a more specific, a more stable, a milder, or a stronger oxidant. We offer an extensive breadth of oxidizing agents, from common oxidants like permanganate and dichromate to milder oxidants like Chloramine-T, and Dess–Martin periodinane (DMP). We also list radical oxidizers such as TEMPO and Fremy′s salt. Find the oxidation reagent you need to keep your work flowing.

744743
(2-Bromophenyl)(2,4,6-trimethylphenyl)iodonium triflate
≥98% (HPLC)

178721
(Diacetoxyiodo)benzene
98%

701718
2-Azaadamantane-*N*-oxyl
90%

661384
2-Iodoxybenzoic acid
contains stabilizer, 45 wt. % (IBX)

766682
2,2,6,6-Tetramethyl-4-[1-oxo-6-(triethylammonio)hexylamino]-1-piperidinyloxy bromide
95%

D60400
2,3-Dichloro-5,6-dicyano-*p*-benzoquinone
98%

8.02940
2,3-Dichloro-5,6-dicyano-p-benzoquinone
for synthesis

745537
4-(Acetylamino)-2,2,6,6-tetramethyl-1-oxo-piperidinium tetrafluoroborate
97% (HPLC)

224286
4-Methylmorpholine *N*-oxide
97%

258822
4-Methylmorpholine *N*-oxide solution
50 wt. % in H_2O

229547
Ammonium cerium(IV) nitrate
≥99.99% trace metals basis

C3654
Ammonium cerium(IV) nitrate
≥98% (titration)

215473
Ammonium cerium(IV) nitrate
ACS reagent, ≥98.5%

22249
Ammonium cerium(IV) nitrate
puriss. p.a., ACS reagent, ≥98.5% (RT)

A7460
Ammonium persulfate
BioXtra, ≥98.0%

A3678
Ammonium persulfate
for molecular biology, suitable for electrophoresis, ≥98%

248614
Ammonium persulfate

ACS reagent, ≥98.0%

215589
Ammonium persulfate
reagent grade, 98%

342165
Ammonium phosphomolybdate hydrate

241733
Barium perchlorate
97%

8.01641
Benzoyl peroxide
(with 25% H_2O) for synthesis

742988
Bis(4-bromophenyl)iodonium triflate
≥98% (HPLC)

531634
Bis(pyridine)iodonium tetrafluoroborate

662283
Bis(*tert*-butylcarbonyloxy)iodobenzene
97%

223964
Bis(tetrabutylammonium) dichromate
99%

232130
[Bis(trifluoroacetoxy)iodo]benzene
97%

15230
[Bis(trifluoroacetoxy)iodo]benzene
purum, ≥95.0% (AT)

8.20171
Bromine
for synthesis

401374
Cadmium perchlorate hydrate

529567
Cadmium perchlorate hydrate
99.999% trace metals basis

8.41799
Calcium hypochlorite
for synthesis

401420
Calcium perchlorate tetrahydrate
99%

466271
Calcium peroxide
75%, −200 mesh

574023
Cesium perchlorate
99.9% trace metals basis

31224
Chloramine T trihydrate
reag. Ph. Eur., 98.0-103.0%

402869
Chloramine T trihydrate
ACS reagent, 98%

23270
Chloramine T trihydrate
purum p.a., for the detection of halogens and bromate, ≥98.0% (RT)

857319
Chloramine-T hydrate
95%

8.22266
Chromium(VI) oxide
for synthesis

215392
Copper(II) perchlorate hexahydrate
98%

8.20502
Cumene hydroperoxide
(80% solution in cumene) for synthesis

274623
Dess-Martin periodinane
97%

8.20248
Di-tert-butyl peroxide
for synthesis

43088
Diphenyliodonium chloride
≥98.0% (AT)

E43101
Ethyl chlorooxoacetate
98%

8.22287
Hydrogen peroxide 30%
(stabilized) for synthesis

8.18356
Hydrogen peroxide urea
for synthesis

95314
Hydrogen peroxide–Urea adduct
purum p.a., "rapid-soluble", tablet (1 g each)

301035
[Hydroxy(tosyloxy)iodo]benzene
96%

8.20738
Iodine monobromide
for synthesis

334081
Iron(II) perchlorate hydrate
98%

326348
Iron(III) perchlorate hydrate
crystalline, low chloride

309281
Iron(III) perchlorate hydrate
crystalline

791814
KetoABNO
95%

8.43861
Lauroyl peroxide
for synthesis

205311
Lead(II) perchlorate hydrate
98%

459100
Lead(II) perchlorate hydrate
≥99.995%

383066
Lead(II) perchlorate trihydrate
ACS reagent, 98%

431567
Lithium perchlorate
99.99% trace metals basis

634565
Lithium perchlorate
battery grade, dry, 99.99% trace metals basis

62580
Lithium perchlorate
purum p.a., ≥98.0% (calc. based on dry substance, T), powder

205281
Lithium perchlorate
ACS reagent, ≥95.0%

347043
Lithium peroxide
technical grade, 90%

283207
Magnesium bis(monoperoxyphthalate) hexahydrate
80%, technical grade

69868
Magnesium monoperoxyphthalate hexahydrate

technical, ~80% (RT)

222283
Magnesium perchlorate
ACS reagent

309303
Magnesium perchlorate hexahydrate
99%

433624
Magnesium peroxide complex
technical grade

359386
Manganese(II) perchlorate hydrate
99%

8.05958
Manganese(IV) oxide
(precipitated active) for synthesis

151440
Methyl chlorooxoacetate
96%

8.01949
N-Bromosuccinimide
for synthesis

23265
***N*-Chlorobenzenesulfonamide sodium salt**
~28% active chlorine basis

8.02811
N-Chlorosuccinimide
for synthesis

ALD00564
***N*-Hydroxytetrachlorophthalimide**

72262
Nickel (IV) oxide
technical, oxidizing agent, ~30% active peroxide basis

309338
Nickel(II) perchlorate hexahydrate

175064
Nitrosyl tetrafluoroborate
95%

113034
Oxalyl bromide
97%

221015
Oxalyl chloride
ReagentPlus®, ≥99%

O8801
Oxalyl chloride
reagent grade, 98%

8.07066
Oxalyl chloride
for synthesis

75920
OXONE® tetrabutylammonium salt
technical, ~1.6% active oxygen basis

8.02361
p-Chloranil
for synthesis

8.18056
Palladium(II) acetate (47% Pd)
for synthesis

311421
Perchloric acid
70%, 99.999% trace metals basis

244252
Perchloric acid
ACS reagent, 70%

311413
Perchloric acid
ACS reagent, 60%

176745
Perchloric acid-d solution
68 wt. % in D_2O, 99 atom % D

P0430
Periodic acid
suitable for electrophoresis, ≥99%

379891
Periodic acid
99.999% trace metals basis

8.22288
Periodic acid
for synthesis

375810
Periodic acid
ACS reagent, 99%

P7875
Periodic acid
ReagentPlus®, ≥99.0%

1.10081
Peroxide Test
colorimetric, 0.5-100 mg/L (H_2O_2), MQuant®

P6994
Phenol nitroprusside solution

743534
Phenyl[3-(trifluoromethyl)phenyl]iodonium triflate
≥98% (HPLC)

79560
Phosphomolybdic acid hydrate
for microscopy

431400
Phosphomolybdic acid hydrate
≥99.99% trace metals basis

221856
Phosphomolybdic acid hydrate
ACS reagent

8.18401
Potassium hydrogen monopersulfate
for synthesis

220930
Potassium nitrosodisulfonate

8.18055
Potassium osmate dihydrate
for synthesis

460494
Potassium perchlorate
≥99.99% trace metals basis

241830
Potassium perchlorate
ACS reagent, ≥99%

210056
Potassium periodate
ACS reagent, 99.8%

60470
Potassium permanganate
purum p.a., ≥99.0% (RT), fine crystals

P2097
Potassium permanganate
meets USP testing specifications

379824
Potassium persulfate
99.99% trace metals basis

216224
Potassium persulfate
ACS reagent, ≥99.0%

190144
Pyridinium chlorochromate

98%

214698
Pyridinium dichromate
98%

8.00653
Selenium dioxide
(sublimed) for synthesis

8.18881
Silver tetrafluoroborate
for synthesis

8.18003
Silver trifluoroacetate
for synthesis

S1878
Sodium (meta)periodate
≥99.0%

8.14368
Sodium bromate
for synthesis

8.14815
Sodium chlorite
(25% solution in water) for synthesis

218928
Sodium dichloroisocyanurate
96%

35915
Sodium dichloroisocyanurate dihydrate
≥98.0% (AT)

398063
Sodium dichromate dihydrate
ACS reagent, ≥99.5%

371432
Sodium percarbonate
avail. H_2O_2 20-30 %

410241
Sodium perchlorate

ACS reagent, ≥98.0%

381225
Sodium perchlorate hydrate
99.99% trace metals basis

310514
Sodium perchlorate monohydrate
ACS reagent

311448
Sodium periodate
ACS reagent, ≥99.8%

225851
Sodium permanganate monohydrate
≥95%

519073
Sodium permanganate solution
40 wt. % in H_2O

8.14606
Sodium peroxide
for synthesis

223417
Sodium peroxide
granular, +140 mesh particle size, reagent grade, 97%

S6172
Sodium persulfate
BioXtra, ≥99%

71890
Sodium persulfate
purum p.a., ≥98% (RT)

216232
Sodium persulfate
reagent grade, ≥98%

79558
Sodium phosphomolybdate hydrate
technical

415200
Strontium peroxide
98%

373680
Sulfur trioxide *N*,*N*-dimethylformamide complex
97%

84737
Sulfur trioxide pyridine complex
technical, ≥45% SO_3 basis

S7556
Sulfur trioxide pyridine complex
97%

8.18112
Sulfur trioxide pyridine complex
for synthesis

84739
Sulfur trioxide triethylamine complex
technical, ≥95% sulfur basis
135879
Sulfur trioxide trimethylamine complex

911992
TBSAB
≥95%

214000
TEMPO
98%

426369
TEMPO
purified by sublimation, 99%

8.14006
tert-Butyl hydroperoxide
(70% solution in water) for synthesis

86885
Tetrabutylammonium perchlorate
≥95.0% (T)

T8809
Tetracyanoethylene

96%

317594
Trimethylamine *N*-oxide
95%

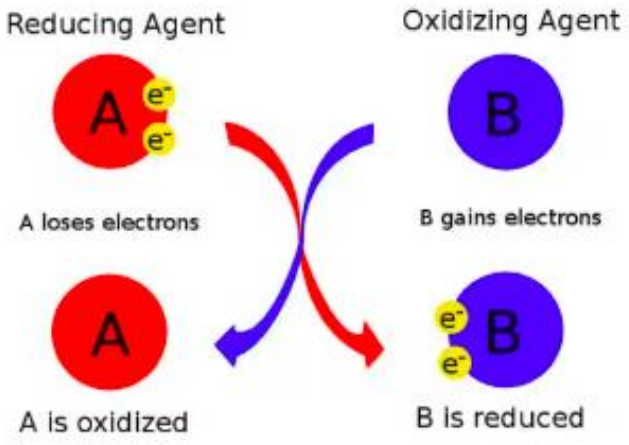
92277
Trimethylamine *N*-oxide dihydrate
purum, ≥99.0% (NT)

T0514
Trimethylamine *N*-oxide dihydrate
98%

401439
Zinc perchlorate hexahydrate

481424
Zinc peroxide
50-60%

Reducing Agents



We have just the right reducing agents that you need to support your reduction reaction methods of organic synthesis in small molecule research. Selected highlights are:

BIRCH REDUCTION

The Birch reduction method converts an arene into 1,4-cyclohexadiene. Historically, the Birch reduction wasn't a viable option for large-scale reactions. However, Baran group modifications published in 2019 now allow for scaled-up reactions.

CLEMMENSEN REDUCTION

Clemmensen reduction transforms an aldehyde or ketone into a methylene group through deoxygenation. While the original reaction typically had strongly acidic conditions, Yamamura and colleagues further developed a technique for the reaction to take place under milder conditions.

COREY–BAKSHI–SHIBATA REDUCTION

The Corey–Bakshi–Shibata (CBS) reduction method is the enantioselective reduction of a ketone to an alcohol. The CBS reduction has been shown to be a valuable tool for synthesizing natural products which could be useful in drug discovery.

LUCHE REDUCTION

Luche reduction is the transformation of an α,β-unsaturated carbonyl (enone) into an allylic alcohol. This reaction allows for the selective reduction of a ketone in the presence of an aldehyde.

MEERWEIN–PONNDORF–VERLEY REDUCTION

The Meerwein–Ponndor–Verley reduction method converts an aldehyde or ketone into an alcohol. This reduction is highly selective, focusing on just the aldehyde and ketone, disregarding all other functional groups.

MIDLAND ALPINE–BORANE® REDUCTION

Midland Alpine–Borane® reduction is the asymmetric reduction of a variety of prochiral ketones using Alpine–Borane® reagents. Alpine–Borane® is a chiral reducing agent, synthesized from (+)-α-pinene via hydroboration.

STAUDINGER REDUCTION

The Staudinger reduction method is the transformation of an azide into an amine through a two-step synthesis. This rapid, high-yield reaction is valuable in the synthetic reaction toolbox.

WOLFF–KISHNER REDUCTION

Wolff–Kishner reduction converts aldehydes and ketones into alkanes under highly basic conditions. Many modifications to this reaction have occurred over the years to make the conditions milder, such as the Huang Minlon modification or Caglioti reaction.

911208
1-Hydrosilatrane
≥95%

8.05740
2-Mercaptoethanol
for synthesis

654213
2-Methylpyridine borane complex
95%

178713
9-Borabicyclo[3.3.1]nonane dimer

151076
9-Borabicyclo[3.3.1]nonane solution
0.5 M in THF

459496
9-Borabicyclo[3.3.1]nonane solution
0.4 M in hexanes

400386
Alane *N*,*N*-dimethylethylamine complex solution
0.5 M in toluene

8.01079
Aluminium triisopropylate
for synthesis

8.20082
Aminoiminomethanesulfinic acid
for synthesis

441880
Barium
dendritic pieces, purified by distillation, 99.9% trace metals basis

403334
Barium
pieces, 1 cm, 99% trace metals basis

237094
Barium
rod, diam. ~2 cm, ≥99% trace metals basis

474711
Barium
dendritic pieces, purified by distillation, 99.99% trace metals basis

223670
Bis(cyclopentadienyl)zirconium(IV) chloride hydride
95%

8.18504
Bis(triphenylphosphine)copper(I) borohydride
for synthesis

179825
Borane dimethyl sulfide complex

192120
Borane dimethyl sulfide complex solution
2.0 M in THF

180238
Borane dimethylamine complex
97%

449563
Borane diphenylphosphine complex
98%

180203
Borane morpholine complex
95%

179043
Borane *N*,*N*-diethylaniline complex

179752
Borane pyridine complex
~8 M BH_3

180211
Borane *tert*-butylamine complex
powder, 97%

176192
Borane tetrahydrofuran complex solution
1.0 M in THF

178977
Borane triethylamine complex
97%

178985
Borane trimethylamine complex
97%

287717
Borane-ammonia complex
technical grade, 90%

8.41077
Boron hydride-tetrahydrofuran complex
(stabilised) (1 molar solution in tetrahydrofuran) for synthesis

476668
Bromobis(dimethylamino)borane
97%

441872
Calcium
dendritic pieces, purified by distillation, 99.99% trace metals basis

327387
Calcium
pieces, <1 cm, 99%

215414
Calcium
turnings, 99% trace metals basis

215147
Calcium
granular, 99%

596566
Calcium
dendritic pieces, purified by distillation, 99.9% trace metals basis

695254
Calcium borohydride

389986
Calcium borohydride bis(tetrahydrofuran)

208027

Calcium hydride
reagent grade, 95% (gas-volumetric)

213268
Calcium hydride
powder, 0-2 mm, reagent grade, ≥90% (gas-volumetric)

497355
Calcium hydride
powder, 99.99% trace metals basis

558257
Calcium hydride
99.9% trace metals basis

21170
Calcium hydride
purum p.a., ≥97.0% (gas-volumetric), powder

8.02100
Calcium hydride
for synthesis

188913
Catecholborane
98%

239240
Cesium
ingot, ≥99.95% trace metals basis

298441
Chloroborane methyl sulfide complex

8.02482
Chromium(II) chloride
for synthesis

8.18090
Chromium(III) chloride
anhydrous for synthesis

255106
Dibromoborane dimethyl sulfide complex

262056
Dibromoborane dimethyl sulfide complex solution
1.0 M in methylene chloride

298433
Dichloroborane methyl sulfide complex
in excess methyl sulfide

101346
Dichlorophenylborane
97%

256811
Diisobutylaluminum hydride
reagent grade

215007
Diisobutylaluminum hydride solution
1.0 M in toluene

214965
Diisobutylaluminum hydride solution
1.0 M in heptane

214949
Diisobutylaluminum hydride solution
1.0 M in cyclohexane

214981
Diisobutylaluminum hydride solution
1.0 M in THF

214973
Diisobutylaluminum hydride solution
1.0 M in methylene chloride

190306
Diisobutylaluminum hydride solution
1.0 M in hexanes

192724
Diisobutylaluminum hydride solution
25 wt. % in toluene

D9163
DL-Dithiothreitol
suitable for electrophoresis, ≥99%

D5545
DL-Dithiothreitol
BioXtra, ≥99.0% (titration)

D0632
DL-Dithiothreitol
≥98% (HPLC), ≥99.0% (titration)

43819
DL-Dithiothreitol
≥99.0% (RT)

D9779
DL-Dithiothreitol
for molecular biology, ≥98% (HPLC), ≥99% (titration)

8.08332
Ethyl 4-toluenesulfonate
for synthesis

8.00947
Ethylenediamine
for synthesis

8.22254
Formic acid
for synthesis

8.04604
Hydrazin hydrate (80% solution in water)
for synthesis

8.22333
Hydroquinone
for synthesis

900258
Isopropoxy(phenyl)silane

220760
K-Selectride® solution
1.0 M potassium tri-*sec*-butylborohydride in THF

8.10646
Kryptofix® 221
for synthesis

266000
Lithium

ribbon, thickness × W 1.5 mm × 100 mm, 99.9% trace metals basis

444456
Lithium
granular, 4-10 mesh particle size, high sodium, 99% (metals basis)

220914
Lithium
wire (in mineral oil), diam. 3.2 mm, 99.9% trace metals basis

278327
Lithium
wire, diam. 3.2 mm, in mineral oil, ≥98%

265985
Lithium
ribbon, thickness × W 0.38 mm × 23 mm, 99.9% trace metals basis

499811
Lithium
granular, 99% trace metals basis

320080
Lithium
ribbon, thickness × W 0.75 mm × 19 mm, 99.9% trace metals basis

265993
Lithium
ribbon, thickness × W 0.75 mm × 45 mm, 99.9% trace metals basis

265969
Lithium
rod, diam. 12.7 mm, 99.9% trace metals basis

8.05660
Lithium
(sticks) (protective liquid: paraffin oil) for synthesis

62420
Lithium aluminum hydride
≥97.0% (gas-volumetric)

62421
Lithium aluminum hydride
≥97.0% (gas-volumetric), tablet (5 g each)

323403
Lithium aluminum hydride

pellets, reagent grade, 95%

686034
Lithium aluminum hydride
hydrogen-storage grade

199877
Lithium aluminum hydride
powder, reagent grade, 95%

236055
Lithium aluminum hydride solution
0.5 M in 2-methoxyethyl ether

703508
Lithium aluminum hydride solution
2.3 M in 2-methyltetrahydrofuran

593702
Lithium aluminum hydride solution
2.0 M in THF

212776
Lithium aluminum hydride solution
1.0 M in THF

212792
Lithium aluminum hydride solution
1.0 M in diethyl ether

62460
Lithium borohydride
≥95.0%

222356
Lithium borohydride
≥90%

686026
Lithium borohydride
hydrogen-storage grade, ≥90%

230200
Lithium borohydride solution
2.0 M in THF

702714

Lithium borohydride solution
0.5 M in diethyl ether

718386
Lithium diisobutyl-*tert*-butoxyaluminum hydride solution
0.25 M in THF/hexanes

658235
Lithium dimethylaminoborohydride solution
1 M in THF

201049
Lithium hydride
powder, −30 mesh, ≥95%

225924
LS-Selectride® solution
1.0 M in THF

63040
Magnesium
grit, ≥99.0% (KT)

465666
Magnesium
ReagentPlus®, powder, −325 mesh, 99.5% trace metals basis

266302
Magnesium
ReagentPlus®, ribbon, ≥99% trace metals basis

403148
Magnesium
turnings, 5-25 mm, 99.95% trace metals basis

299405
Magnesium
rod, diam. 6 mm, ≥99.9% trace metals basis

474754
Magnesium
dendritic pieces, purified by distillation, 99.998% trace metals basis

254126
Magnesium
20-230 mesh, reagent grade, 98%

723312

Magnesium
in a Sure/Seal™ bottle, turnings, 37.5 mmol

200905
Magnesium
turnings, reagent grade, 98%

63035
Magnesium
purum, for Grignard reactions, ≥99.5%, turnings

13103
Magnesium
ribbon, ≥99.0% Mg basis

13112
Magnesium
powder, ≥99%

8.18506
Magnesium
powder (particle size < 0.1 mm) for synthesis

8.05817
Magnesium
turnings acc. to Grignard for synthesis

262064
mono-Bromoborane methyl sulfide complex solution
1.0 M in methylene chloride

213403
***N*-Selectride®**
1.0 M in THF

8.20876
Nickel catalyst
(Produced according to a process of the type developed by Murray Raney, activated for hydrogenation) for synthesis

8.18063
Poly(methyl hydrogen siloxane)
for synthesis

244864
Potassium
chunks (in mineral oil), 98% trace metals basis

60080
Potassium borohydride
purum, ≥97.0% (RT)

455571
Potassium borohydride
≥97%

438472
Potassium borohydride
99.9% trace metals basis

8.20747
Potassium borohydride
for synthesis

215813
Potassium hydride
30 wt % dispersion in mineral oil

708860
Potassium hydride
in paraffin

213438
Potassium triethylborohydride solution
1.0 M in THF

276332
Rubidium
ingot, 99.6% trace metals basis

409340
Samarium(II) iodide
anhydrous, powder, ≥99.9% trace metals basis

71172
Sodium
in kerosene, pieces (large), ≥99.8% (sodium basis)

244686
Sodium
25-35 wt % dispersion in paraffin

282065
Sodium
ACS reagent, dry

262714
Sodium
99.95% trace metals basis, ingot

483745
Sodium
cubes, contains mineral oil, 99.9% trace metals basis

8.22284
Sodium
rods (protective liquid: paraffin oil) for synthesis

71320
Sodium borohydride
purum p.a., ≥96% (gas-volumetric)

452882
Sodium borohydride
powder, ≥98.0%

452890
Sodium borohydride
caplets (18 × 10 × 8 mm), 98%

452874
Sodium borohydride
granular, 10-40 mesh, 98%

480886
Sodium borohydride
granular, 99.99% trace metals basis

213462
Sodium borohydride
ReagentPlus®, 99%

8.18823
Sodium borohydride
(tablets) for synthesis

8.06373
Sodium borohydride
fine granular for synthesis

215511
Sodium borohydride solution
2.0 M in triethylene glycol dimethyl ether

452904
Sodium borohydride solution
~12 wt. % in 14 M NaOH

156159
Sodium cyanoborohydride
reagent grade, 95%

8.18053
Sodium cyanoborohydride
for synthesis

296945
Sodium cyanoborohydride solution
5.0 M in 1 M NaOH

452912
Sodium hydride
60 % dispersion in mineral oil

223441
Sodium hydride
dry, 90%

316393
Sodium triacetoxyborohydride
97%

8.43705
Sodium triacetoxyborohydride
for synthesis

227307
Sodium triethylborohydride solution
1.0 M in toluene

403326
Strontium
granular, 99% trace metals basis

343730
Strontium
random pieces, 99%

441899
Strontium
dendritic pieces, purified by distillation, 99.99% trace metals basis

460346
Strontium
dendritic pieces, purified by distillation, 99.9% trace metals basis

179728
Super-Hydride® solution
1.0 M lithium triethylborohydride in THF

230170
Tetrabutylammonium borohydride
98%

86600
Tetraethylammonium borohydride
technical, ≥95% (T)

317365
Tetramethylammonium triacetoxyborohydride
95%

8.08159
Thiophenol

8.18591
Thiourea
for synthesis

8.18150
Tin(II) chloride
anhydrous for synthesis

1.12384
Titanium hydride
fine powder 98+

209279
Titanium(II) hydride
−325 mesh, 98%

8.08307
Titanium(III) chloride solution about 15%
(in about 10% hydrochloric acid) for synthesis

409170
Tributylgermanium hydride
99%

234788
Tributyltin hydride
contains 0.05% BHT as stabilizer, 97%

8.14109
Tributyltin hydride (stabilized)
for synthesis

179701
Triethylborane solution
1.0 M in THF

195030
Triethylborane solution
1.0 M in hexanes

429961
Triethylgermanium hydride
98%

230197
Triethylsilane
99%

467448
Triethylsilane
97%

8.18806
Triethylsilane
for synthesis

276146
Trihexylsilane
95%

233781
Triisopropylsilane
98%

8.41359
Triisopropylsilane
for synthesis

225177
Trimesitylborane
97%

8.21180

Trimethyl borate
for synthesis

424838
Triphenylgermanium hydride

8.08270
Triphenylphosphine
for synthesis

148504
Triphenylsilane
97%

C4706
Tris(2-carboxyethyl)phosphine hydrochloride
powder

279730
Tris(dimethylamino)borane
97%

570133
Tris(dimethylamino)silane
electronic grade, 99.999%

250600
Tris(dimethylamino)sulfonium difluorotrimethylsilicate
technical grade

777854
Tris(hydroxypropyl)phosphine
≥80%

736856
Tris(triethylsilyl)silane

360716
Tris(trimethylsilyl)silane
97%

632287
VenPure® SF
powder

208558
Zirconium(II) hydride
−325 mesh, 99%

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