



Derivatization Reagents

- Organic Chemistry
- Analytical Chemistry
- Biochemistry
- Material Chemistry

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Derivatization Reagents

Derivatization is the process by which a compound is chemically changed, producing a new compound that has properties more amenable to a particular analytic technique. As a key separation method, derivatization provides:

- Increased volatility, thermal stability, and peak shape
- Improved selectivity and chromatographic efficiency
- Strengthened detectability

J&K provides an extensive selection of Derivatization Reagents, including those used for GC and HPLC analysis, chiral separations and TLC applications. By choosing the right derivatization reagent and procedure you can increase resolution and analytic response, significantly improving your separations.

■ Derivatization Reagents for GC

GC Derivatization Reagents include silylation reagents, acylation reagents, esterification & alkylation reagents and others.

• Silylation

Cat. No.	Description	CAS
247763	Bis(dimethylamino)dimethylsilane, 97%	3768-58-9
447636	N,O-Bis(trimethylsilyl)acetamide, BSA, 95%	10416-59-8
576242	N,O-Bis(trimethylsilyl)trifluoroacetamide, 98%	25561-30-2
472228	Bromotrimethylsilane, TMBS, 98%	2857-97-8
236144	tert-Butyldimethylchlorosilane, TBDMSCI, 99%	18162-48-6
296944	N-tert-Butyldimethylsilyl-N-methyltrifluoroacetamide, MTBSTFA, 97%	77377-52-7
305146	Chloro(chloromethyl)dimethylsilane, CMDMCS, 98%	1719-57-9
104880	Chlorodimethylethylsilane, 97%	6917-76-6
459545	Chlorotriethylsilane, TESCI, 1.0 M solution in THF	994-30-9
458784	Chlorotrimethylsilane, TMCS, 99%, J&KSeal	75-77-4
584711	Dichlorodiethylsilane, 97%	1719-53-5
562900	N,N-Diethyltrimethylsilylamine, TMS-DEA, 97%	996-50-9
333396	N,N-Dimethyltrimethylsilylamine, TMSDMA, 97%, derivatization grade	2083-91-2
245053	1,3-Diphenyl-1,1,3,3-tetramethyldisilazane, 95%	3449-26-1
543142	Heptamethyldisilazane, 98%	920-68-3
996309	Hexamethyldisilazane, HMDS, 99%, J&KSeal	999-97-3
131611	Hexamethyldisiloxane, 97%	107-46-0
391175	Isopropyldimethylchlorosilane, 97%, derivatization grade	3634-56-8
123746	N-Methyl-N-(trimethylsilyl)trifluoroacetamide, MSTFA, 97%	24589-78-4
585626	1,1,3,3-Tetramethyldisilazane, TMDS, 97%	15933-59-2
600909	N-Trimethylsilylimidazole, TMSI, 98%	18156-74-6

• Acylation

Cat. No.	Description	CAS
411631	1-Acetylimidazole, 98%	2466-76-4
535607	Bistrifluoroacetamide, BTFA, 98%	407-24-9
278435	α -Bromo-2,3,4,5,6-pentafluorotoluene, 98%	1765-40-8
322995	2,2-Dimethyl-6,6,7,7,8,8,8-heptafluoro-3,5-octanedione, 98%	17587-22-3
925290	Ethyl trifluoromethanesulfonate, 99%	425-75-2
219537	Heptafluorobutyric acid, 99%	375-22-4
120251	Heptafluorobutyric anhydride, HFBA, 98%	336-59-4
100530	1-(Heptafluorobutyryl)imidazole, 97%	32477-35-3
313895	(\pm)- α -Methoxy- α -(trifluoromethyl)phenylacetic acid, (\pm)-MTPA, 97%	81655-41-6
254934	N-Methyl-bis(trifluoroacetamide), MBTFA, 98%	685-27-8
217190	Pentafluorobenzoyl chloride, 99%	2251-50-5
997194	Pentafluoropropionic anhydride, PFPA, 95%, derivatization grade	356-42-3
478445	Sodium methoxide, 99%, anhydrous, powder	124-41-4
170817	2,2,6,6-Tetramethyl-3,5-heptanedione, 98%	1118-71-4
105065	2-Thenoyltrifluoroacetone, TTA, 99%	326-91-0
199332	Trifluoroacetic anhydride, TFAA, 99%	407-25-0
370486	1-(Trifluoroacetyl)imidazole, 97.5%, derivatization grade	1546-79-8

• Esterification and Alkylation

Cat. No.	Description	CAS
207862	Boron trifluoride methanol, 50 wt.% solution in MeOH	373-57-9
101363	2,2-Dimethoxypropane, 98%	77-76-9
354810	N,N-Dimethylformamide di-tert-butyl acetal, 95%	36805-97-7
113009	N,N-Dimethylformamide diethyl acetal, 95%, derivatization grade	1188-33-6
191255	N,N-Dimethylformamide dimethyl acetal, DMF-DMA, 95%	4637-24-5
165540	1,1,1,3,3,3-Hexafluoro-2-propanol, HFIP, 99%	920-66-1
190359	Isobutyl chloroformate, 98%	543-27-1
221715	Methyl trifluoromethanesulfonate, 96%	333-27-7
457936	Tetramethylammonium hydroxide, TMAH, 25% solution in H ₂ O	75-59-2
379130	3-(Trifluoromethyl)phenyltrimethylammonium hydroxide, 5% solution in MeOH	68254-41-1
533891	(Trimethylsilyl)diazomethane, 2.0 M solution in hexanes	18107-18-1
518558	Trimethylsulfonium hydroxide, TMSH, 0.25 M solution in MeOH	17287-03-5

• Others

Cat. No.	Description	CAS
532517	n-Butylboronic acid, 97.5%	4426-47-5
369954	O-(2,3,4,5,6-Pentafluorobenzyl)hydroxylamine hydrochloride, PFBHA-HCl, 99%, derivatization grade	57981-02-9
390913	Phenylboronic acid, 99%	98-80-6

Derivatization Reagents

■ Derivatization Reagents for HPLC

HPLC Derivatization Reagents are organized by detection method, including UV, Fluorescence and Chemiluminescence detections.

● UV Detection

Cat. No.	Description	CAS
602529	4-Aminoantipyrine, 98%	83-07-8
112138	Benzenesulfonyl chloride, 99%	98-09-9
438305	Benzoin, 98%	119-53-9
366373	2-Bromoacetophenone, 99%	70-11-1
100792	2-Bromo-3'-methoxyacetophenone, 98%, derivatization grade	5000-65-7
154661	(-)-10-Camphorsulfonic acid, 99%	35963-20-3
562385	4-(N-Chloroformylmethyl-N-methylamino)-7-nitro-2,1,3-benzoxadiazole, NBD-COCl, 92%, derivatization grade	140164-85-8
929073	Dabsyl chloride, DABS-Cl, 98%, derivatization grade	56512-49-3
279588	2,4'-Dibromoacetophenone, 98%	99-73-0
439198	Dimedone, 98%	126-81-8
121248	4-(Dimethylamino)azobenzene 4'-Isothiocyanate, DABITC, 97%	7612-98-8
121011	4-Dimethylaminobenzoyl chloride, 97%	4755-50-4
164579	5-Dimethylamino-1-naphthalenesulfonyl chloride, DNSCI, 98%	605-65-2
343109	3,5-Dinitrobenzoyl chloride, DNBC, 99%	99-33-2
191243	N,N'-Disuccinimidyl carbonate, DSC, 99%	74124-79-1
128686	9-Fluorenylmethyl carbazate, 98%, derivatization grade	35661-51-9
197308	9-Fluorenylmethyl chloroformate, Fmoc-Cl, 98%	28920-43-6
508752	Marfey's reagent, 98%	95713-52-3
376516	4-Methoxybenzoyl chloride, 99%	100-07-2
343352	3-Methyl-1-phenyl-2-pyrazolin-5-one, 98%	89-25-8
586813	N-Methylphthalimide, 98%	550-44-7
201896	1-Naphthyl isocyanate, 99%, derivatization grade	86-84-0
249447	1-Naphthyl isothiocyanate, 98%, derivatization grade	551-06-4
603426	4-Nitrobenzyl bromide, 99%	100-11-8
405140	Phenyl isothiocyanate, 98%, for sequential analysis	103-72-0
133490	(S)-(-)-1-Phenyl-1-propanol, 98%, ee: 90%	613-87-6
227585	o-Phthalaldehyde, 99%	643-79-8
333410	N-(1-Pyrenyl)maleimide, 97%	42189-56-0
135775	Salicylaldehyde, 99%	90-02-8
283322	p-Toluenesulfonyl chloride, 99%	98-59-9
417912	m-Toluoyl chloride, 98.5%	1711-06-4

● Fluorescence Detection

Cat. No.	Description	CAS
612818	N-(9-Acridinyl)maleimide, NAM, 98%	49759-20-8
270732	2-Aminopyridine, 2-AP, 99%	504-29-0
102767	4-(Aminosulfonyl)-7-fluoro-2,1,3-benzoxadiazol, ABD-F, 98%, derivatization grade	91366-65-3
152014	2-Aminothiophenol, 99%	137-07-5
153880	Benzylamine, 99%	100-46-9
992216	9-(Bromomethyl)acridine, 98%, derivatization grade	1556-34-9
418944	4-Bromomethyl-7-methoxycoumarin, 97%	35231-44-8
434551	9-Chloromethylanthracene, 98%	24463-19-2
194928	4-Chloro-7-nitrobenzofurazan, NBD-Cl, 98%	10199-89-0
525618	Cyanoacetamide, 99%	107-91-5
385727	1,3-Cyclohexanedione, 99%	504-02-9
276443	Dansyl hydrazine, 98%	33008-06-9
279588	2,4'-Dibromoacetophenone, 98%	99-73-0
452067	(1S,2S)-(-)-1,2-Diphenylethylenediamine, 99%	29841-69-8
315447	2-Fluorencarboxaldehyde, 99%	30084-90-3
128686	9-Fluorenylmethyl carbazate, 98%, derivatization grade	35661-51-9
197308	9-Fluorenylmethyl chloroformate, Fmoc-Cl, 98%	28920-43-6
988398	Fluorescamine, 98%	38183-12-9
194222	Fluorescein 5(6)-isothiocyanate, 5(6)-FITC, 95%, for fluorescence, mixture of 5- and 6- isomers	27072-45-3
255493	Fluorescein isothiocyanate isomer I, FITC(isomer I), 95%	3326-32-7
196963	7-Fluorobenzofurazan-4-sulfonic acid ammonium salt, SBD-F, 99%, derivatization grade	84806-27-9
301307	4-Fluoro-7-nitrobenzofurazan, NBD-F, 98%	29270-56-2
205040	4-Hydrazino-7-nitro-benzofurazan hydrazine adduct, NBD-H, 98%, derivatization grade	131467-87-3
337922	2,3-Naphthalenedicarboxaldehyde, 99%, derivatization grade	7149-49-7
576646	o-Phenylenediamine, OPD, 99.5%	95-54-5
970576	Pyridoxal 5'-phosphate monohydrate, 99%	41468-25-1
453665	3-Pyridyl isothiocyanate, 95%, derivatization grade	17452-27-6

● Chemiluminescence Detection

Cat. No.	Description	CAS
482541	N-(4-Aminobutyl)-N-ethylisoluminol, ABEI, 97%	66612-29-1
227560	2,3-Dihydro-6-isothiocyanato-1,4-phthalazinedione, 96%	107807-39-6

Derivatization Reagents

■ Derivatization Reagents for Chiral Detection

● Chiral GC Derivatization Reagents

Cat. No.	Description	CAS
189438	(-)-Camphanic acid chloride, 98%	39637-74-6
571643	(R)-(+)- α -Methoxy- α -(trifluoromethyl)phenylacetic acid, (+)MTPA, 98%, ee: 99.5%	20445-31-2
192146	(S)-(-)- α -Methoxy- α -(trifluoromethyl)phenylacetic acid, (-)MTPA, 98%	17257-71-5
191106	(S)-(+)- α -Methoxy- α -(trifluoromethyl)phenylacetyl chloride, 99%	20445-33-4
241739	(R)-(+)-1-(1-Naphthyl)ethylamine, 99%	3886-70-2
390305	(S)-(-)-1-(1-Naphthyl)ethylamine, 99%	10420-89-0
297184	D-(+)-2-Octanol, 99%	6169-06-8
238277	L-(-)-2-Octanol, 99%	5978-70-1
457038	(R)-(+)-1-Phenylethanol, 99%, for chiral derivatization	1517-69-7
284516	(S)-(-)-1-Phenylethanol, 99%, for chiral derivatization	1445-91-6
134448	(S)-(-)-1-Phenylethylamine, 99%, ee: 98%	2627-86-3

● Chiral LC Derivatization Reagents

Cat. No.	Description	CAS
215457	Boc-L-cysteine, 99%, for chiral derivatization	20887-95-0
485835	(+)-10-Camphorsulfonic acid, (+)-CSA, 99%	3144-16-9
433825	L-(-)-10-Camphorsulfonyl chloride, 98%	39262-22-1
497970	(R)-(-)-N-(3,5-Dinitrobenzoyl)- α -phenylglycine, 98%	74927-72-3
620470	(+)-1-(9-Fluorenyl)ethyl chloroformate, \geq 18 mM in acetone	107474-79-3
198485	(R)-(-)-O-Formylmandeloyl chloride, 98%	29169-64-0
107382	(R)-(-)- α -Methoxyphenylacetic acid, 99%	3966-32-3
441219	(S)-(+)- α -Methoxyphenylacetic acid, 99%, for chiral derivatization	26164-26-1
191107	(R)-(-)- α -Methoxy- α -(trifluoromethyl)phenylacetyl chloride, (-)MTPA-Cl, 99%	39637-99-5
356622	(-)- α -Methylbenzyl isothiocyanate, 98%, for chiral derivatization	24277-44-9

■ Derivatization Reagents for TLC

Cat. No.	Description	CAS
608111	4-Aminobenzenesulfonic acid, 99%	121-57-3
199896	p-Anisaldehyde, 99%	123-11-5
427024	1,4-Benzoquinone, 99%	106-51-4
107095	2,2'-Bipyridine, 99%	366-18-7
552604	Bromocresol Green, BCG, ACS reagent	76-60-8
137657	Bromothymol Blue, ACS reagent	76-59-5
472252	o-Dianisidine, 98%	119-90-4

Cat. No.	Description	CAS
223219	2',7'-Dichlorofluorescein	76-54-0
284784	2,6-Dichloroindophenol sodium salt hydrate, DCIP, 98%	620-45-1
288995	3,5-Dihydroxytoluene monohydrate, 98%	6153-39-5
602425	4-Dimethylaminobenzaldehyde, 99%	100-10-7
280243	5-(4-Dimethylaminobenzylidene)rhodanine, 97%	536-17-4
125830	Dimethylglyoxime, 99%	95-45-4
276988	Diphenylamine, 99%	122-39-4
149895	Iodine, 99.8%, ACS reagent	7553-56-2
104092	3-Methyl-2-benzothiazolinone hydrazone hydrochloride monohydrate, MBTH, 98%	38894-11-0
623766	Morin hydrate, 90%	654055-01-3
122337	Ninhydrin, ACS reagent	485-47-2
904190	Potassium bromide, 99%, IR grade	7758-02-3
997096	Rhodamine B, 95%	81-88-9
174331	Sodium p-toluenesulfonchloramide trihydrate, 97%	7080-50-4
424435	Starch, Corn, powder	9005-25-8
370201	Tetracyanoethylene, TCNE, 98%	670-54-2
981206	N,N,N',N'-Tetramethyl-p-phenylenediamine dihydrochloride, TMPD, 98%	637-01-4
296617	p-Toluenesulfonic acid monohydrate, 99%	6192-52-5
286719	o-Toluidine, 98.5%	95-53-4
216624	1,3,3-Trimethyl-2-methyleneindoline, 95%	118-12-7
118388	2,3,5-Triphenyl-2H-tetrazolium chloride, 98%	298-96-4
188374	Vanillin, 99%	121-33-5

■ Derivatization Reagents for MS

Cat. No.	Description	CAS
220778	2-Aminobenzamide, 98%	88-68-6
228313	2-(Aminomethyl)pyridine, 99%	3731-51-9
235074	9-Anthracenemethanol, 97%	1468-95-7
229921	2-Bromopyridine-5-boronic acid, 96%	223463-14-7
148928	O-(Carboxymethyl)hydroxylamine hemihydrochloride, 98%, derivatization grade	2921-14-4
182456	Diethyl ethoxymethylenemalonate, 98%	87-13-8
154090	2-Fluoro-1-methylpyridinium p-toluenesulfonate, 98%	58086-67-2
341056	Girard's Reagent P, 98%	1126-58-5
509681	Girard's Reagent T, 98%	123-46-6
476922	2-Hydrazinopyridine, 97%	4930-98-7
249096	2-Mercaptoethanol, BME, 99%, for electrophoresis and molecular biology	60-24-2
432347	2-Nitrophenylhydrazine hydrochloride, 98%, derivatization grade	6293-87-4
390757	Pentafluorophenylhydrazine, 97%	828-73-9
303168	p-Toluenesulfonyl isocyanate, 96%	4083-64-1