

Regis Technologies GC Derivatization Reagents

Silylation Reagents



Silylation is the most widely used derivatization procedure for sample analysis by GC. In silylation, an active hydrogen is replaced by an alkylsilyl group.

BSTFA-Regisil® – BSTFA + TMCS (1%, 10%)

- Reacts faster and more completely than BSA, due to presence of trifluoroacetyl group
- The high volatility of BSTFA and its byproducts results in separation of early eluting peaks
- Highly volatile and stable products result in low detector noise
- Excellent solubility
- Addition of TMCS catalyzes reactions of hindered functional groups in secondary alcohols and amines

Product	Size	Cat. No.
Regisil® RC-2	10 x 1 gram	270121
BSTFA + 1% TMCS	50 x 1 gram	270127
	4 x 5 gram	270122
	25 gram	270123
	100 gram	270124
Regisil® RC-3	10 x 1 gram	270131
BSTFA + 10% TMCS	4 x 5 gram	270132
	25 gram	270133
	100 gram	270134

HMDS – Hexamethyldisilazane

- Weak TMS donor, used for silylation of carbohydrates
- Used as mixture with pyridine and trifluoroacetic acid

Product	Size	Cat. No.
HMDS	25 gram	270651
	100 gram	270652

TMCS – Trimethylchlorosilane

- Used as a catalyst to increase reactivity of other silylation reagents

Product	Size	Cat. No.
TMCS	25 gram	270601
	100 gram	270602

MTBSTFA – MTBSTFA + 1% *t*-BDMCS

- Replaces active hydrogens to form *t*-BDMCS derivatives
- Derivatization is usually complete upon dissolution with this exceptionally strong, yet mild silylating reagent
- MTBSTFA derivatives are 10⁴ times more stable to hydrolysis than their corresponding TMS derivatives
- Produces easily interpreted mass spectra for GC/MS
- Addition of *t*-BDMCS catalyzes reactions of hindered alcohols and amines

Product	Size	Cat. No.
MTBSTFA (+ 1% <i>t</i> -BDMCS)	5 x 1 gram	270141
	10 x 1 gram	270144
	2 x 5 gram	270142
	25 gram	270143
MTBSTFA (no <i>t</i> -BDMCS)	5 x 1 gram	270241
	2 x 5 gram	270242
	25 gram	270243

Acylation Reagents

Fluorinated Anhydrides: HFBA/PFPA/TFAA

- Most commonly used for ECD
- Reacts with alcohols, amines, and phenols
- Bases such as triethylamine and trimethylamine can be added to promote reactivity
- Frequently used for the confirmation of drugs of abuse
- HFBA (Heptafluorobutyric Anhydride) derivatives are the most sensitive to ECD
- PFPA (Pentafluoropropionic Anhydride) derivatives require the lowest analysis temperature
- TFAA (Trifluoroacetic Anhydride) is the most reactive and volatile of the anhydrides

Product	Size	Cat. No.
HFBA	10 x 1 gram	270851
	25 gram	270853
PFPA	10 x 1 gram	640110
	25 gram	640113
	100 gram	640114
TFAA	10 x 1 gram	270841
	25 gram	270843

Derivatization Grade Solvents

Product	Size	Cat. No.
Acetonitrile	2 x 25mL	270010
Dimethylformamide	2 x 25mL	270011
Pyridine	2 x 25mL	270013
Tetrahydrofuran	2 x 25mL	270014



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For a complete list of Regis reagents, please contact Chrom Tech.