Regis' Gas Chromatography Derivatization Reagents

Silylation, Acylation, Alkylation

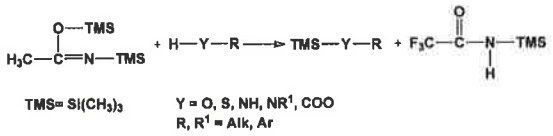
- Quality
- Convenience
- Affordability

REGIS® TECHNOLOGIES, INC.

BSTFA-Regisil®, BSTFA +TMCS (1%, 10%)

N,O-Bis(trimethylsilyl)trifluoroacetamide

- 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 and fouling.
- Excellent solubility.
- Addition of TMCS catalyzes reactions of hindered functional groups in secondary alcohols and amines.



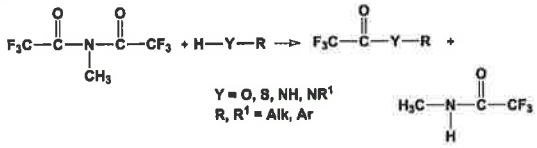
TMS= $Si(CH_3)_3$ Y = O, S, NH, NR^1, COO; R, R^1 = Alk, Ar

Product	Size	Catalog#
Regisil® RC-1 BSTFA	10 x 1 gram	270111
	4 x 5 gram	270112
	25 gram	270113
	100 gram	270114
	1000 gram	270116
Regisil®, RC-2 BSTFA +1% TMCS	10 x 1 gram	270121
	4 x 5 gram	270122
	25 gram	270123
	100 gram	270124
	1000 gram	270126
Regisil®, RC-3 BSTFA +10% TMCS	10 x 1 gram	270131
	4 x 5 gram	270132
	25 gram	270133
	100 gram	270134
	1000 gram	270135

MBTFA

N-Methyl-N-bis(trifluoroacetamide)

- Reacts rapidly under mild conditions with primary and secondary amines.
- Reacts more slowly with alcohols, phenols, and thiols.
- Works well in the analysis of sugars.



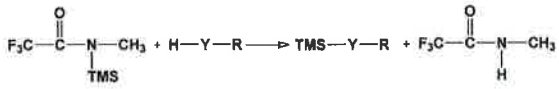
Y = O, S, NH, NR^1; R, R^1 = Alk, Ar

Product	Size	Catalog#
MBTFA	10 x 1 gram	270092
	5 gram	270091
	25 gram	270095
	100 gram	270093

MSTFA

N-Methyltrimethylsilyltrifluoroacetamide

- Most volatile of the TMS-acetamides.
- Useful in the analysis of volatile trace materials.



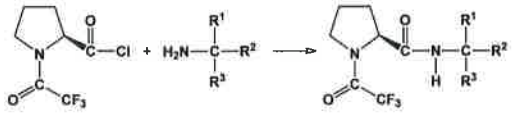
TMS= $Si(CH_3)_3$ Y = O, S, NH, NR^1, COO; R, R^1 = Alk, Ar

Product	Size	Catalog#
MSTFA	10 x 1 gram	270590
	10 gram	270589
	25 gram	270593
	100 gram	270594

TPC

N-Trifluoroacetyl-L-Prolyl Chloride

- Couples with amines to form diastereomers which can be separated on GC columns.
- Provides sample volatility.
- Used for confirmation of drugs of abuse testing.



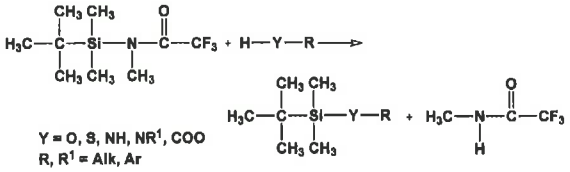
R^1, R^2, R^3 = H, Alk, Ar

Product	Size	Catalog#
TPC	25 ml	440001
	5 ml	440002

MTBSTFA + 1% t-BDMCS

N-Methyl-N-(t-butyldimethylsilyl) trifluoroacetamide

- 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.



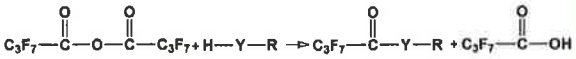
Y = O, S, NH, NR^1, COO; R, R^1 = Alk, Ar

Product	Size	Catalog#
MTBSTFA + 1% t-BDMCS	5 x 1 gram	270141
	10 x 1 gram	270144
	2 x 5 gram	270142
	25 gram	270143

HFBA

Heptafluorobutyric Anhydride

- 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 derivatives are the most sensitive to ECD.

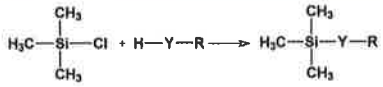


Product	Size	Catalog#
HFBA	10 x 1 gram	270851
	25 gram	270853

TMCS

Trimethylchlorosilane

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



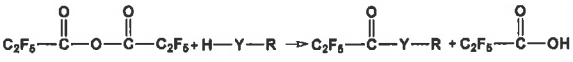
Y = O, S, NH, NR^1
R, R^1 = Alk, Ar

Product	Size	Catalog#
TMCS	25 gram	270601
	100 gram	270602

PFPA

Pentafluoropropionic Anhydride

- 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.
- PFPA derivatives require the lowest analysis temperatures.

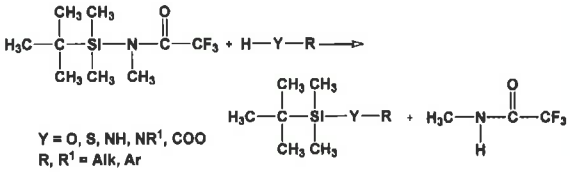


Product	Size	Catalog#
PFPA	10 x 1 gram	640110
	25 gram	640113
	100 gram	640114

MTBSTFA no t-BDMCS

N-Methyl-N-(t-butyldimethylsilyl) trifluoroacetamide

- 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.



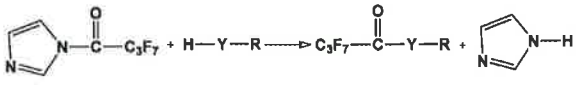
Y = O, S, NH, NR^1, COO
R, R^1 = Alk, Ar

Product	Size	Catalog#
MTBSTFA	5 x 1 gram	270241
	2 x 5 gram	270242
	25 gram	270243

HFBI

Heptafluorobutyrylimidazole

- Readily forms derivatives with phenols, alcohols and amines suitable for ECD.
- Reactions are fast and mild.
- Imidazole is not acidic, so no decomposition or corrosion occurs on columns.



Y = O, S, NH, NR^1
R, R^1 = Alk, Ar

Product	Size	Catalog#
HFBI	5 x 1 gram	270611
	5 gram	270612

3N HCl in n-Butanol

- Used for neonatal screening measuring amino acids and acylcarnitines by Tandem Mass Spectrometry.
- Ensures butylation of the carboxyl acid group of the analyte and formation of butyl ester, which forces ionization or makes charging of the analyte more efficient.
- Butylesterfication is superior with regard to sensitivity and specificity compared to non-derivatization procedure.
- Manufactured under cGMP protocols to assure highest quality and lot-to-lot consistency.

Product	Size	Catalog#
3.0N HCl In n-Butanol	4 x 25 ml	201007
	100 ml	201009
	500 ml	201010

Derivatization Reagents for Drugs of Abuse and Gas Chromatography

Regis Technologies, Inc. is a leader in the manufacturing of highly pure and reliable derivatization reagents. For more than 40 years, Regis offers an extensive line of GC Derivatization Reagents for specialized analytical laboratory applications, including drugs of abuse testing, food and beverage quality, newborn screening and other research GC chemical analyses. Regis Technologies, Inc. has a long tradition of serving the analytical needs of scientists and researchers worldwide. We are committed to manufacturing quality and comprehensive products with consistency.

Derivatization Grade Solvents

- Acetonitrile
- Pyridine

Alkylation

- 3N HCl in n-Butanol
- BF3/Methanol

Acylation Reagents

- HFBA
- PFPA
- TFAA
- HFBI
- MBTFA
- PFPOH
- TPC
- MCF
- HFIP
- (R) –(-)-MTPA-Cl

Silylation Reagents

- BSA
- BSTFA- Regisil
- BSTFA +TMCS (1%, 10%)
- HMDS
- MSTFA
- MTBSTFA
- MTBSTFA + 1% t-BDMCS
- TMCS
- TMSI
- Deriva-Sil
- Deriva-Sil Concentrate
- HydroxSil
- Hydrox-Sil Concentrate
- HydroxSil AQ

REGIS® TECHNOLOGIES, INC.

Serving the Scientific Community Since 1956

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About Regis Technologies, Inc.

Regis Technologies, Inc. is a privately held company that provides synthesis and separations services to the pharmaceutical, biotechnology and other related industries. Regis is dedicated to supplying high-quality and innovative chromatography products and services, especially those with a chiral emphasis, through the utilization of our extensive organic expertise and collegiate collaborations.

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