Product Information

May 2025

BSTFA - N,O-Bis-(trimethylsilyl)-trifluoroacetamide

P/N: 370505

Available units: 20 x 1 mL, 1 x 10 mL, 5 x 10 mL (other packaging units on request)

Physical data:
M = 257,40 g/mol
Kp = 145-147 °C
$d_{20/4}$ = 0.974 g/cm³

Spplication:
BSTFA is a similarly strong silylating agent as BSA and MSTFA.
The silylation power is further increased by adding 1% TMCS (see also Silyl-991, P/N 370620). BSTFA has two notable advantages over BSA: a) the fluorine contained in the molecule reduces contamination of the FID by SiO_2 deposits and b) the by-products of the silylation reaction are characterized by higher volatility and therefore do not interfere with the subsequent analysis.
BSTFA itself has good solvent properties, but it is also used in a mixture with acetonitrile, pyridine, and DMF.
BSTFA is used for the derivatization of carboxylic acids, amino acids, amines, alkaloids, alcohols, polyalcohols, sugars, phenols, steroids and other compounds that have active hydrogen atoms.

Literature:
D.L. Stalling et al., *Biochem. Biophys. Res. Commun.* **31** (1968) 616
C.W. Gehrke et al., *J. Chromatogr.* **53** (1970) 201
T.R. Kemp et al., *J. Chromatogr.* **241** (1982) 325

Silylation:
e.g. for phenols:
A double molar excess of BSTFA : DMF = 1:3 is added to the sample in a reaction vessel. It is heated to about 80 °C for about 20 minutes and, after cooling, the reaction mixture is injected directly into the GC.

GC Analysis:
The analysis of silylated samples (silyl ethers and silyl esters) is usually carried out on non-polar silicone columns, such as methyl silicone OV-1.

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