Product Information

TSIM - N-Trimethylsilyl imidazole

P/N 370540

Available Dimensions: 20 x 1 mL, 1 x 10 mL, 5 x 10 mL (other dimensions on request)

Physical Data:
M = 140,26 g/mol
Kp = 40-41 °C/0,05 bar
$d_{20/4}$ = 0.957 g/cm³

Suitability:
TSIM is a strong silylation agent for hydroxyl groups and accordingly suited for the derivatization of alcohols, glycols, phenols, acids, carbohydrates, hormones, nucleotides and steroids (including sterically hindered ones). TSIM allows for a selective derivatization because hydroxyl groups are silylated, but not amines. This method is used among other things for the synthesis of -O-TMS/-N-HFB derivatives of catecholamines. Derivatization is usually carried out in mixture with pyridine (see also Silyl-1139, P/N 370605), more rarely with acetonitrile or ethyl acetate. For strongly sterically hindered steroids, the addition of 1% TMCS as a catalyst can help. Mixtures with other silylation agents are also used for special purposes. Small quantities of water in the sample usually do not interfere with the reaction.

Literature:
L. Birkhofer, A. Ritter, *Angew. Biochem.* **30** (1969) 7
M. Donike et al., *Dtsch Z. Sportmed.* **14** (1984)

Silylation:
e.g. for alcohols/polyols:
In a reaction vessel, 15-20 mg of sample are mixed with 300 µL of derivatization agent. The mixture is briefly heated to about 70 °C and after cooling directly injected into the GC.

GC Analysis:
Silylated samples (silyl ethers and silyl esters) are usually analyzed on nonpolar silicone columns such as methyl silicone OV-1.

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