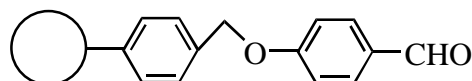


CombiZorb MP-Aldehyde

Structure:



Characterization:

Spherical, macroporous polystyrene/DVB particle;
Density: 0.6 g/ml; Particle Size: 30-100 μm ;
swelling: 20-30 % in THF or CH_2Cl_2 .

Capacity:

1.2-1.8 mmol/g (determined by uptake of toluene-sulfonylhydrazide and confirmed by elemental analysis of the derivative).

Application:

Scavenging hydrazines, hydroxylamines, primary amines, organometallic reagents (organolithium and Grignard reagents) and other nucleophiles.

Typical Conditions:

3 equivalents relative to the nucleophiles; 2-5 h, 20-60°C; a small amount of acid catalyst may help in some cases; shake or gentle agitation. The scavenger is compatible with more common solvents than gel-type polystyrene based analogues, including THF, Toluene, DMF, i-PrOH and even methanol (using 50-60% loading capacity in methanol). Acetonitrile is not a suitable solvent for scavenging phenylhydrazine. In general, it is unnecessary to swell the particle to get access to the functional sites. For many compounds, the mixture of THF/methanol is a favored solvent for using this scavenger.

Recommended Storage:

Keep cool and dry under argon, <5 °C

Table 1. Scavenging of a Variety of Nucleophiles with 3 Equivalent MP-Aldehyde

Nucleophile	Solvent	Additive	Temp (°C)	Time (h)	Scavenged (%) ^A
phenylhydrazine	THF	none	50-60	2	95
phenylhydrazine	Toluene	none	50-60	2	>99
phenylhydrazine	i-PrOH	none	50-60	2	93
phenylhydrazine	MeOH	none	50-60	2	>99
p-toluene sulfonylhydrazide	THF	MeOH	50-60	2	>99
4-methoxyphenyl hydrazine hydrochloride	MeOH	none	50-60	2	>99
Benzylamine	THF	Acetic acid	50-60	2	>99
Tryptamine	THF	MeOH	20	3	97

A) Determined by GC

Reference:

For general use of solid-supported aldehydes as scavengers, see:

1. S. W. Kaldor et al. Tetrahedron Lett., 1996, 37, 7193
2. J. M. Frechet et al. J. Am. Chem. Soc., 1971, 93, 492

For the application of this unique scavenger, see:

3. Q. Wang et al. at ACS National Meeting at New Orleans, 1999, Aug. 22-26, Organic Div.; Paper # 337



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Certificate of Analysis

Product Name **CombiZorb MP-aldehyde**

Lot Number _____

Functional Groups **-CHO**

Test	Specification	Result
Appearance	Off-white or light yellow	Pass
Capacity	>1.2 mmol/g	
Sweling in dichloromethane	<50%	
Particle Size	>80% at 25 to 130 µm	Pass
Extractible	<0.25 AU/g/mL	Pass
IR spectroscopy	Consistant with proposed structure	Pass

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Quality Control Date_____