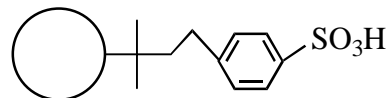


# CombiZorb S-Sulfonic acid Structure:



## Characterization:

Spherical, ultra-pure silica; Density: 1.3 g/ml; Particle Size: 20-80  $\mu\text{m}$ ; no swelling.

## Capacity:

0.4-0.6 mmol/g (determined by acid/base titration)

## Application:

Scavenging amines and other basic compounds

## Typical Conditions:

1.5-3 equivalents relative to amines or other basic compounds; shake or gentle agitation; compatible with any solvents used for your reactions, no swelling needed. In general, there is no need to quench the reaction mixture with water when using scavengers, however, if water is used, this scavenger is compatible with an aqueous solution. If using aqueous solutions as the matrix, the recommended time frame for the scavenging reaction is two hours or less. CombiZorb S-Sulfonic acid is best used under flow-through conditions.

## Recommended Storage:

Keep under  $\text{N}_2$  in a cool place, 15° to 25°C.

## Reference:

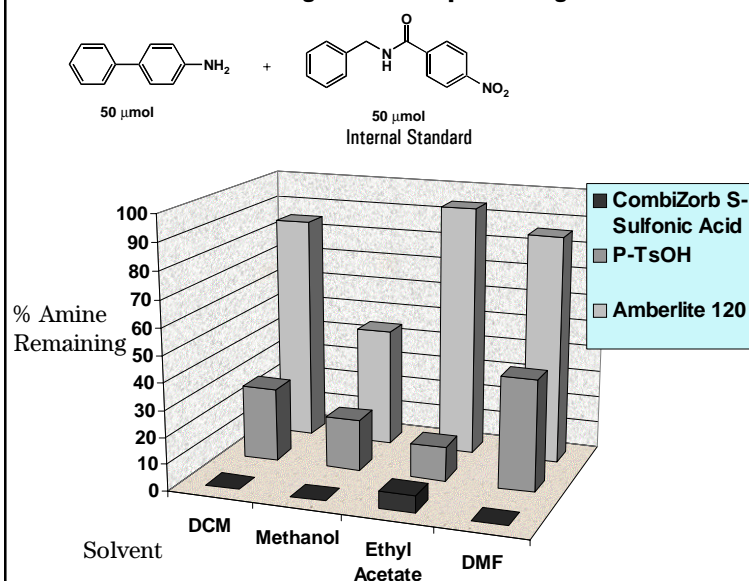
1. L. A. Thompson, et al. at Lake Tahoe Symposium on Molecular Diversity, Lake Tahoe, CA. 1999, Jan. 28.

**Table A**

Scavenging of 4-phenylaniline under flow-through conditions using a column prepacked with 10 equivalents of CombiZorb S-Sulfonic acid and different matrix solvents.

Solvent	Conditions	Scavenged (%)
MeOH	Flow through	> 99%
$\text{CH}_2\text{Cl}_2$	Flow through	> 99%
DMF	Flow through	> 99%

**Figure 1. Sequestering of an Amine: 4-Aminobiphenyl <sup>1</sup>**



**CombiZorb S-Sulfonic Acid is the most effective under flow-through conditions, and works well in all solvents.**

- 50  $\mu\text{mol}$  of each Material are dissolved in 1.0 mL of solvent (DCM, Ethyl Acetate, Methanol, and DMF).
- The solution is forced with a pipet bulb through a 450  $\mu\text{L}$  plug of scavenger in a 2.0 mL tube, and the scavenger is then rinsed with 1.0 mL of solvent.
- The eluents are concentrated, redissolved in 2.0 mL of solvent and analyzed by HPLC.
- P-TsOH and Amberlite 120 are sulfonic acid-modified polymeric resins.



**Agilent Technologies**

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# Certificate of Analysis

**Product Name**            **CombiZorb S-sulfonic acid**

**Lot Number**            \_\_\_\_\_

**Functional Groups**    **-SO<sub>3</sub>H**

Test	Specification	Result
Appearance	Off-white	Pass
Capacity	> 0.4 mmol/g	
Particle Size	> 80% at 30 to 70 $\mu$ m	Pass
Extractible	< 0.2 AU/g/mL	Pass
IR spectroscopy	Consistent with proposed structure	Pass

**FOR RESEARCH AND DEVELOPMENT USE ONLY**

**Certified By** \_\_\_\_\_ **Quality Control Date** \_\_\_\_\_