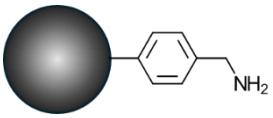
TEMIZ™ DVB-NH2-SPE Resin

Material overview

TEMIZ™ DVB-NH_2 SPE Resin is a polymeric resin with a combination of hydrophobic (DVB/Sty) and polar primary amine groups. The resin is in a size range optimal for use in analytical flow-through SPE columns or other formats.

Resin parameter	Value
Resin backbone	DVB/Sty
Surface chemistry	Benzyl-amino
Ion Exchange capacity	0,75 mmol/g
Particle size	20-90 µm
Pore size	~125 Å
Pore area	700 m^2/g
Pore volume	0,75 ml/g



Schematic structure of benzyl amine groups on a DVB/PS bead surface

Material properties and areas of use

This resin is a rigid polymer with weak anion exchange function in form of primary aminomethyl groups. It has a dual retention capability with a combination of hydrophobic adsorption and weak anion exchange retention in types of solutions.

A few possible examples of compounds that can be retained are:

- Weak organic acids, fatty acids
- Strong anions (eg sulfonates)
- Acidic drugs and their metabolites
- Acidic environmental or agricultural residues

TEMIZ™ DVB-NH2 is characterized by being easily water-wettable thereby simplifying the pre-conditioning step in the sample preparation process. The resin is pH stable from 1-14, has an exceptional selectivity for small organics and therapeutic small or oligomeric biomolecules spanning a wide range of differing polarities and Log P values.

Target matrices are aqueous and include food or environmental matrices but also biological samples such as urine, serum, plasma, or the like.

Application and format

Recommended use is in solid phase extraction (SPE)-LC-MS/MS applications. The product is delivered pack into SPE columns. Upon request, they can be delivered as multi-well plates or other formats for use in bio/analytical applications.

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It allows for a simplified SPE workup, a possible start point is as follows (user must optimize their specific method):

1) dilute sample
2) wash with water/5% MeOH
3) wash with diluted acidic step or wash with diluted basic step
4) elute with MeOH/AcN 1:1 with eg 10 % ammonium hydroxide

The resin can also be used in suspension mode to adsorb the target compounds. The resin can then be either filtered off or separated from the liquid by sedimentation. Further desorption steps and elution steps can be adapted depending on the target application.

Use as a solid phase material or affinity ligand material

The rigid material is well stable in flow mode and will withstand conventional pressure conditions in a packed column.

For affinity applications, the aminomethyl group is well suited to be modified via amide bonds to covalently immobilize selectors, chemical reactants, catalysts or other ligands for a given application. Redstone Separations can assist in designing the immobilization strategies.

TEMIZ™ DVB-NH_2 SPE is supplied as resin (50 mg) packed into 3 ml SPE columns. Other column geometries, resin packed in HPLC cartridges, or other resin contents can be provided, as well as resin packed in multi-well plates or other formats for use in bio/analytical applications. To obtain the resin in bulk other inquiries, or to obtain more information, please contact us at info@redstone-sep.com.

See Web shop for prices, or inquire directly at order@redstone-sep.com

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