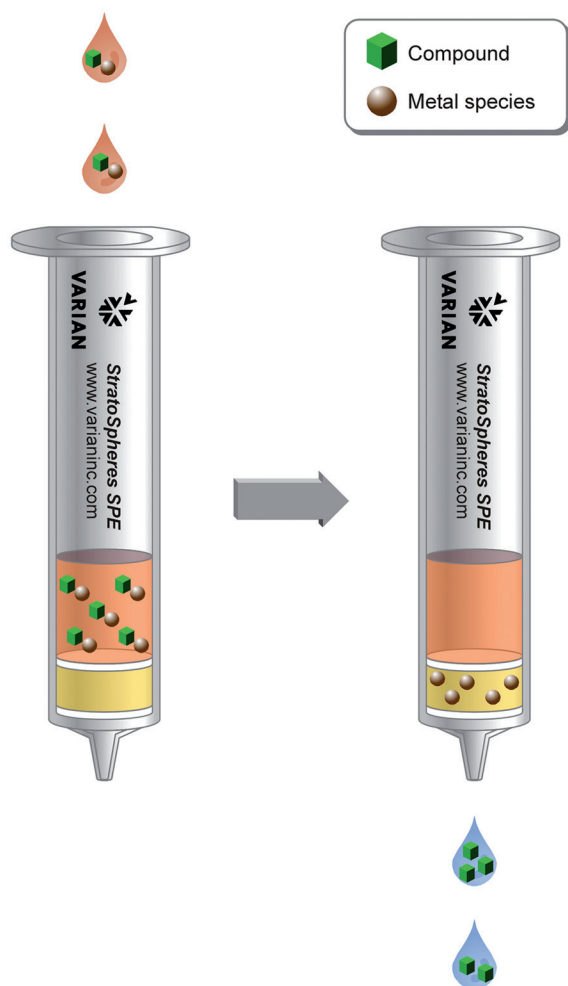


StratoSpheres™ Resins for Metal Removal

SCAVENGER RESINS FOR REMOVING METAL SPECIES



Organometallic compounds are commonly used in drug discovery as metal reagents or metal catalysts. However, many of these compounds remain associated with the target compound and may present a risk to health. Guidelines limit exposure to metals suspected of significant toxicity.

The StratoSpheres range includes a number of products that reduce residual metal content to permissible levels.

Key Benefits

- ▶ **Rapid and convenient.** Compatible with high throughput technologies and simple manual operation.
- ▶ **Macroporous, open structure.** Allows rapid diffusion across the broadest range of solvents.
- ▶ **Wide choice of functionality.** Suitable for removal of many different metal species.
- ▶ **Cost effective.** Economical and simple to use, requiring no specialized laboratory equipment or instrumentation.
- ▶ **Optimized spherical particle size.** For easy handling and rapid filtration.
- ▶ **Available as pre-packed cartridges and bulk media.** Covering a wide range of synthesis scales, from R&D upwards.

NOTICE: This document contains references to Varian. Please note that Varian, Inc. is now part of Agilent Technologies. For more information, go to www.agilent.com/chem.



StratoSpheres™ Resins for Metal Removal

Products for Metal Removal

There are a number of ligands/ligand combinations suitable for chelating metal species. However, it is not always possible to anticipate which product works best under a given set of conditions. Reaction temperature, concentration, solvent, and the presence of other species may all influence the outcome, and so we recommend screening a selection of products, including:

Sulfur

PL-BnSH
PL-BnSH MP
PL-Thiol MP



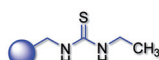
Ion Exchange

PL-SO3H
PL-SO3H MP

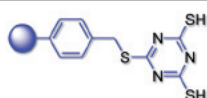


Sulfur / Nitrogen

PL-Thiourea MP

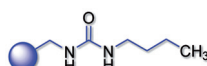


PL-TMT MP

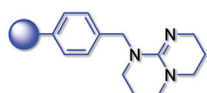


Nitrogen

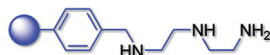
PL-Urea MP



PL-TBD
PL-TBD MP
PL-Guanidine MP



PL-DETA
PL-DETA MP

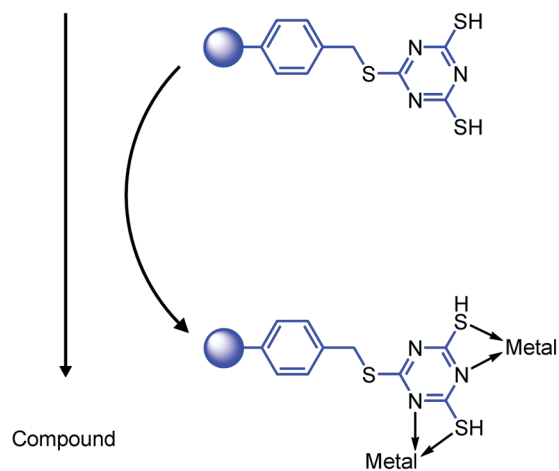


Illustrative Example

The efficacy of StratoSpheres metal removal products relies on their ability to sequester metals from solution through a strong interaction.

The coordinating effect of nitrogen and sulfur ligands is exploited in these materials, particularly in PL-TMT MP Resin.

Compound-----Metal



Simple Protocol

Precondition

Pre-condition the sorbent by rinsing with methanol (or similar solvent). This helps to overcome surface tension effects by "wetting" the sorbent.

Apply Sample

Apply Sample solution and allow to percolate through under gravity, or stir a suspension containing the sorbent. Collect filtrate containing metal-free product.

Wash

Wash sorbent with methanol and collect filtrate.

Isolate

Isolate compound from combined filtrate and washings.

StratoSpheres™ Resins for Metal Removal

Ordering Information

MP indicates macroporous products that are used with the widest range of solvents. All other products are microporous and are suitable for use in "good" organic solvents, which swell the beads.

Description	Pack Size (g)	Part No.	Pack Size (g)	Part No.	Pack Size (g)	Part No.	Pack Size (kg)	Part no.
Palladium Scavenging Toolkit, 6 x 5 g		PL3498-0005	(Comprising PL-BnSH MP, PL-DETA MP, PL-EDA MP, PL-TBD MP, PL-Thiourea MP, PL-TMT MP)					
PL-BnSH Resin 1.8 mmol/g 150-300 µm	5	PL3482-1689	25	PL3482-3689	100	PL3482-4689	1	PL3482-6689
PL-BnSH MP Resin 2.2 mmol/g 100Å 150-300 µm	5	PL3582-1689	25	PL3582-3689	100	PL3582-4689	1	PL3582-6689
PL-DETA Resin >6.0 mmol N/g 150-300 µm	5	PL3401-1679	25	PL3401-3679	100	PL3401-4679	1	PL3401-6679
PL-DETA MP Resin >4.5 mmol N/g 100Å 150-300 µm	5	PL3501-1679	25	PL3501-3679	100	PL3501-4679	1	PL3501-6679
PL-SO3H Resin >3.5 mmol/g 150-300 µm	5	PL3404-1679	25	PL3404-3679	100	PL3404-4679	1	PL3404-6679
PL-SO3H MP Resin >3.0 mmol/g 100Å 150-300 µm	5	PL3504-1679	25	PL3504-3679	100	PL3504-4679	1	PL3504-6679
PL-TBD Resin 2.7 mmol/g 150-300 µm	5	PL3414-1679	25	PL3414-3679	100	PL3414-4679	1	PL3414-6679
PL-TBD MP Resin 1.7 mmol/g 100Å 150-300 µm	5	PL3514-1679	25	PL3514-3679	100	PL3514-4679	1	PL3514-6679
PL-Thiourea MP Resin >2.0 mmol/g 100Å 150-300 µm	5	PL350B-1689	25	PL350B-3689	100	PL350B-4689	1	PL350B-6689
PL-TMT MP Resin >0.6 mmol/g 100Å 150-300 µm	5	PL3527-1679	25	PL3527-3679	100	PL3527-4679	1	PL3527-6679
PL-Urea MP Resin >2.0 mmol/g 100Å 150-300 µm	5	PL350A-1689	25	PL350A-3689	100	PL350A-4689	1	PL350A-6689

Description	Pack Quantity	Part No.	
Metal Removal SPE Screening Kit (500 mg/6 mL)	50	PL3540-0099	(Comprising PL-Guanidine MP SPE, PL-Thiol MP SPE, PL-Thiourea MP SPE, PL-TMT MP SPE, PL-Urea MP SPE)
PL-Guanidine MP SPE (500 mg/6 mL)	50	PL3514-CM89	
PL-SO3H MP SPE (500 mg/6 mL)	50	PL3504-C679	
PL-Thiol MP SPE (500 mg/6 mL)	50	PL3582-CM89	
PL-Thiourea MP SPE (500 mg/6 mL)	50	PL350A-CM89	
PL-TMT MP SPE (500 mg/6 mL)	50	PL3527-CM89	
PL-Urea MP SPE (500 mg/6 mL)	50	PL350B-CM89	

Accessories

These allow larger volumes of solution to pass through the pre-packed cartridges.

Description	Pack Quantity	Part No.
Adapter caps for 6 mL cartridges	15	12131001
Luer stopcocks	15	12131005
Empty 20 mL reservoir	100	12131011
Empty 60 mL reservoir	100	12131012



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