

# Biotage® Metal Scavenging Toolkit

## Metal Scavenger

### Key Facts



### Quickly and Easily Remove Residual Metals from API's to Regulatory Approved Levels

Biotage® Metal Scavenging Toolkit is an essential tool that can enable you to quickly and efficiently find the right metal scavenger for your application. Containing protocols, guidance and recommendations for working in batch mode or passing solutions through a fixed bed, this all in one kit showcases the metal scavengers and provides practical information on how to use the metal scavengers in your application for the best results.

### What's in the Box?

10 g Si Thiol	10 g ISOLUTE SCX-2
3 g ISOLUTE® Si-TMT	10 g ISOLUTE® Si-Trisamine
3 g Biotage® MP-TMT	500 mg/6 mL ISOLUTE® Si-TMT

### Biotage Metal Scavengers Offer:

- » Higher metal affinity - low Kd(Pd) relative to API Kd(Pd) - excellent metal scavenging
- » Fast kinetics/filtration at room temperature - enhanced by heating
- » Diverse solid supports - silica and polystyrene backbones
- » Work Flow Compatible, easy to deploy, easy to add, stir and filter, or obtain fixed beds
- » Minimal loss of API, maximize your yields compared to traditional carbon methods
- » Short development time, reduce plant time and the cost of reprocessing batches
- » Long-life, no instabilities, can be used in the air without special considerations

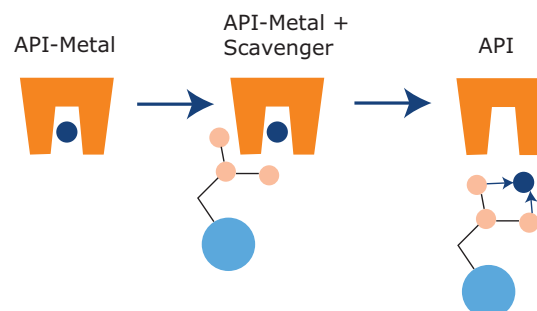
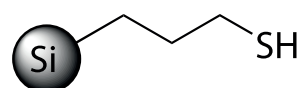


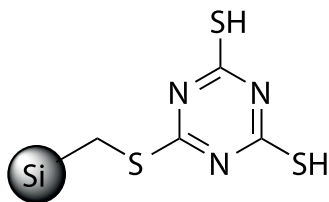
Figure 1. Metal Scavenging

Available from grams to multi-kilograms, from screening development studies to final processing of 100 Kg of APIs.

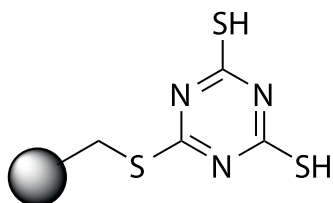


### ISOLUTE® Si-Thiol (typically 1.3 mmol/g)

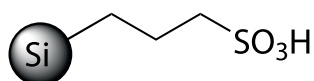
ISOLUTE Si-Thiol is the silica-bond equivalent of 1-propanethiol, which is useful for covalent scavenging of electrophiles. The main application is the use to scavenge a variety of metals used in organic chemistry including Pd, Pt, Cu, Hg, Ag and Pb.

**ISOLUTE® Si-TMT (typically 0.3 mmol/g)**

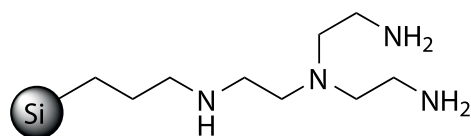
ISOLUTE Si-TMT is the silica bound equivalent of 2,4,6-trimercaptotriazine (TMT). Si-TMT has been shown to efficiently scavenge residual palladium from palladium-catalyzed reactions.

**Biotage® MP-TMT (typically 0.66 mmol/g)**

MP-TMT is a macroporous polystyrene-bound trimercaptotriazine, a resin bound equivalent of 2,4,6-trimercaptotriazine (TMT). MP-TMT scavengers residual palladium from palladium catalyzed reactions and has also shown to remove other metals. The MP-base copolymer has been redesigned to yield a more robust, low swelling material, which makes it ideal for restricted volume environments. Its unique pore structure provides greater access to the reactive sites resulting in faster reactions and higher recoveries.

**ISOLUTE® SCX-2 (Si-Propylsulfonic Acid) (typically 0.66 mmol/g)**

ISOLUTE® SCX-2 belongs to a class of strong supported acids. As a bound sulfonic acid, it has a natural propensity to bind alkali and some transition metal group metals, which means that it can be used as a scavenger for metals with a +I or +II oxidation state, such as Na, K, Li, also Pd, Rh, and Ru. Since SCX-2 is acidic in nature, it is typically used as a metal scavenger when the target product is not basic, to avoid the obvious acid/base product binding interactions with the scavenger.

**ISOLUTE® Si-Trisamine (typically 1.6 mmol/g)**

ISOLUTE® Si-Trisamine is a silica bound propyltris(2-aminoethyl)-amine. Si-Trisamine is a very powerful scavenger of electrophiles from aqueous or organic solutions as well as an effective scavenger for transition metals (+II oxidation states).

## Regulatory Compliance and Support Information

- » Biotage metal scavengers remove transition metals to regulatory guidelines prior to clinical trials
- » Both silica and polymer based metal scavengers offered for both filtration and batch processing
- » MP-TMT, Si-Thiol and Si-TMT, Si-Trisamine, SCX-2 available in a screening kit, and all in multi-Kg qty.
- » TSE certified (no animal/human origin)
- » C of A, Extractable information, capacity, LOD, batch and lot control
- » ISO 9001 controlled facility
- » Extensive confidential technical assistance

## Ordering Information

Part Number	Description	Quantity
K-MS-2	Biotage® Metal Scavenging Kit <b>Kit contains:</b> 3 g ISOLUTE® Si-TMT, 10 g ISOLUTE SCX-2 10 g ISOLUTE Si-Trisamine 10 g Si Thiol 3 g Biotage® MP-TMT 500 mg/6 mL ISOLUTE Si-TMT	1

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Biotage holds certification for both ISO9001 Quality Management and ISO14001 Environmental Management.

Part Number: PPS377.V.1

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