QuadraPure™ SP Cartridges

The QuadraPure™ range of metal scavengers offers practical methods for removal of metal catalyst residues, allowing easier, faster and cleaner processes to be developed. In addition to the loose resin, QuadraPure™ TU is also conveniently available in cartridge format compatible with Biotage SP automated chromatography units.

QuadraPure™ TU SP Cartridges

QuadraPure™ Cartridge Advantages:

Cleaner products	typically achieves less than <1-10 ppm residual metal contamination
Fast, efficient processes	selective metal removal in single pass through cartridge
Ease of handling	avoids handling/filtering loose beads
High selectivity	minimal product absorption
Process intensification	higher metal loadings with faster kinetics than in batch
Improved yields	versus conventional work-up and isolation steps
Process development	scalable to manufacturing scale cartridges

QuadraPure™ SP Cartridge Characteristics:

Cartridge size	Approx mass of QuadraPure™	Approx cartridge metal capacity	Optimum flow rate*
12M	**8 g**	**1 mmol**	**1 ml/min**
25S	**18 g**	**2 mmol**	**2 ml/min**
40M	**80 g**	**10 mmol**	**8 ml/min**

**Optimum flow rate is ~5 column volumes/h*

For pricing and ordering of QuadraPure™ cartridges please contact info@reaxa.com

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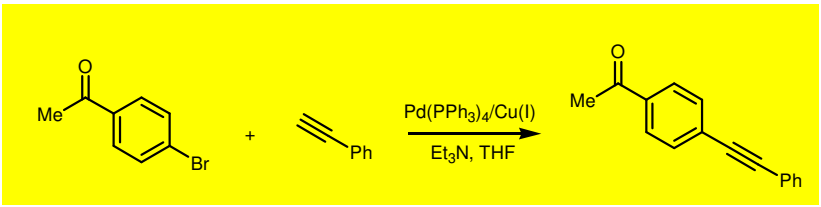
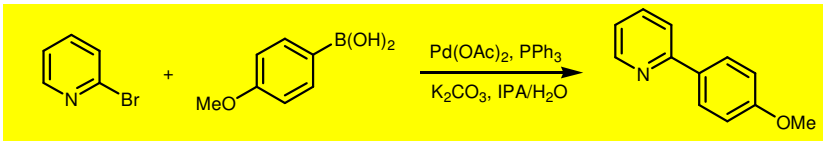
Examples of QuadraPure™ TU SP Cartridge Scavenging Applications:

1. **Efficient removal of multi-valent mixed metals in the presence of ligand and base following a Sonogashira reaction:**

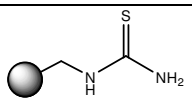
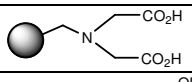
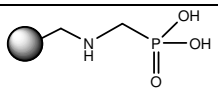
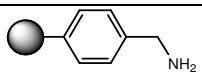


Cu 54 ppm, Pd 58 ppm
PPh_3 & Et_3N in crude solution → **QuadraPure™ TU cartridge** → **Cu and Pd <1 ppm, zero product absorption**

2. **Highly selective removal of palladium species, compared to standard laboratory methods, following a Suzuki reaction and work up:**



Method	% Pd removed	% product absorbed
Silica (pad)	6	2
Carbon cartridge	56	28
QuadraPure™ TU cartridge (12M)	>99	<1

Product	Structure	Metals removed	Availability
QuadraPure™ TU		Pd, Pt, Ru, Rh, Au, Ag, Cu, Hg, Pb, Cd, Ni, Co, Fe, V, Zn	12M, 25S ex stock 40M info@reaxa.com
QuadraPure™ IDA		Cu, Al, Ga, In, V, Pb, Ni, Zn, Cd, Be, Mn, Sr, Ba, Co, Fe	info@reaxa.com
QuadraPure™ AMPA		Fe, Cu, Ni, Al, Co, V	info@reaxa.com
QuadraPure™ BZA		Rh, Pd, Cu, Co, Ni and electrophiles*	info@reaxa.com

* Literature example: A Fully Automated Continuous Flow Synthesis of 4,5-Disubstituted Oxazoles, M. Baumann, IR. Baxendale, S. V. Ley, C. D. Smith, G. K. Tranmer, *Org Lett.*, 2006, *8*, 5231.

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