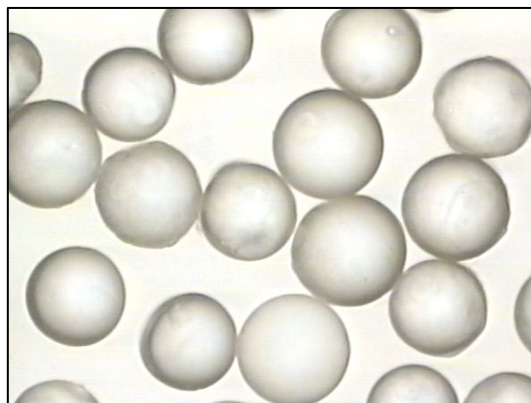


QuadraSil™

Metal Scavenger Beads

Reaxa's QuadraSil™ scavengers based on high-quality spherical silica offer an alternative solution for removal of metal catalyst residues to allow easier, faster and cleaner processes to be developed



Cleaner products

removal of residual metal contamination to give typically less than 1-10 ppm

Cleaner waste streams

removal of metal contaminants from organic & aqueous processes

Fast, efficient processes

the QuadraSil™ beads filter easily

Improved metal recovery

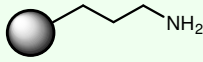
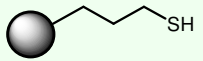
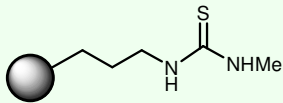
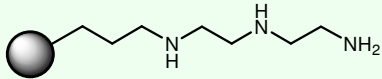
simple, efficient recovery & recycling of metal value

Improved yields

reduced work-up and isolation losses

Process intensification

QuadraSil™ beads are ideal for flow processing

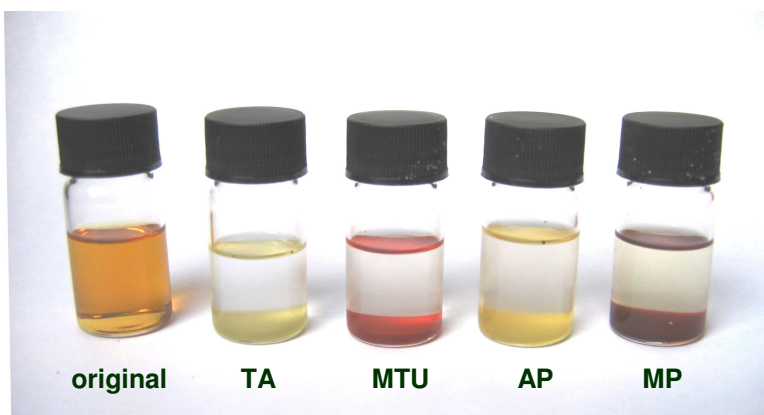
QuadraSil™	Functional Group		mmol/g	Metals Removed
AP		amino propyl	2.0	Pd, Ru, Rh, Cu, Fe, Co, Ni
MP		mercaptopropyl	1.2	Pd, Rh, Cu, Ru, Pt, Pb, Ag, Hg
MTU		methylthiourea	1.4	Pd, Rh, Cu, Ru, Pb, Fe, Co
TA		triamine	1.0	Pd, Rh, Co, Cu, Fe, Ru, Cd, Au, V, Zn, Pt

QuadraSil™ Applications

Palladium Scavenging Example:

QuadraSil™	initial Pd (ppm)	% Pd removal	Time (min)
TA	1000	>99	5
MTU	1000	>99	5
AP	1000	>99	5
MP	1000	>95	18

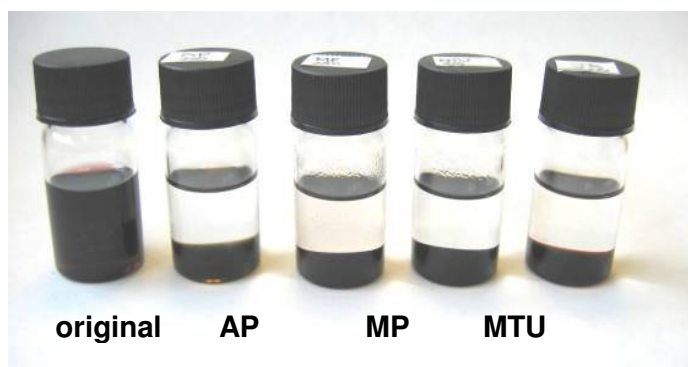
- Pd(OAc)₂ 1000 ppm in THF
- 0.5 g QuadraSil™ added to 10 ml Pd solution
- all clear in under 20 minutes



Grubbs' Catalyst (Ru) Scavenging Example:

QuadraSil™	initial Ru (ppm)	% Ru removal	Time (h)
AP	595	>99	1.5
MP	595	>99	1
MTU	595	>99	<16
TA	595	>99	<16

- Grubbs catalyst in toluene approx. 595 ppm Ru in reaction mixture
- 0.25 g QuadraSil™ added to 5 ml Ru solution
- all cleared overnight (<5 ppm)



R&D quantities of QuadraSil™ products are available from Sigma-Aldrich at:
www.sigma-aldrich.com

For technical support, bulk quotations & information on QuadraSil™ products please contact:
info@reaxa.com