QuadraPure™

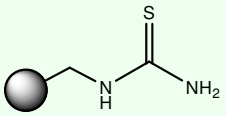
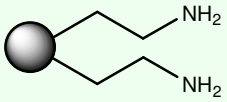
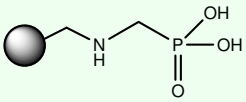
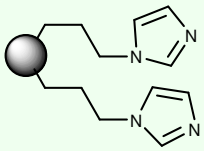
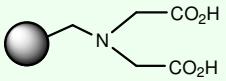
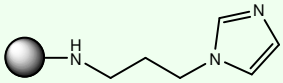
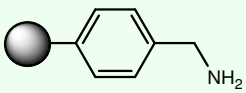
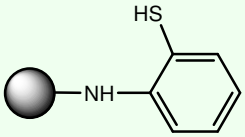
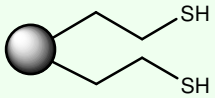
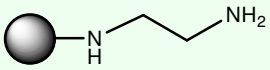
Metal Scavenger Resins

Reaxa's QuadraPure™ scavenger resins offer a convenient solution for removal of metal catalyst residues to allow easier, faster and cleaner processes to be developed

Clean product with < 10 ppm Rhodium using Reaxa's QuadraPure™ MPA scavenger resin

Contaminated crude product with >600 ppm Rhodium made with homogeneous catalyst system

Cleaner products	typically less than 1-10 ppm residual metal contamination
Cleaner waste streams	removal of metal contaminants from organic & aqueous processes
Fast, efficient processes	the QuadraPure™ beads filter easily
Improved metal recovery	simple, efficient recovery & recycling of metal value
Improved yields	reduced work-up and isolation losses
Process intensification	can be used in batch & flow processes

QuadraPure™	Functionality	Metals Removed	QuadraPure™	Functionality	Metals Removed
TU Macroporous		Ag, Au, Cd, Co, Cu, Fe, Hg, Ni, Pd, Pt, Ru, Rh, V, Zn	**EDA Macroporous**		Co, Ni, Pd, Rh
AMPA Macroporous		Al, Co, Cu, Fe, Ni, Sn, V, Zn	**BDZ Macroporous**		Co, Ni, Pd, Rh
IDA Macroporous		Al, Cd, Co, Cu, Fe, Ni, Pb, Pd, V, Zn	**IMDAZ Microporous**		Co, Cu, Fe, Ni, Os, Pd, Ru, Rh, Sn, V
BZA Macroporous		Co, Cu, Ni, Pd, Rh	**MPA Microporous**		Ag, Au, Cd, Cu, Hg, Ni, Pb, Pd, Pt, Ru, Sn
DET Macroporous		Cu, Fe, Pd, Rh	**AEA Microporous**		Cu, Fe, Pd, Rh, V

Reaxa

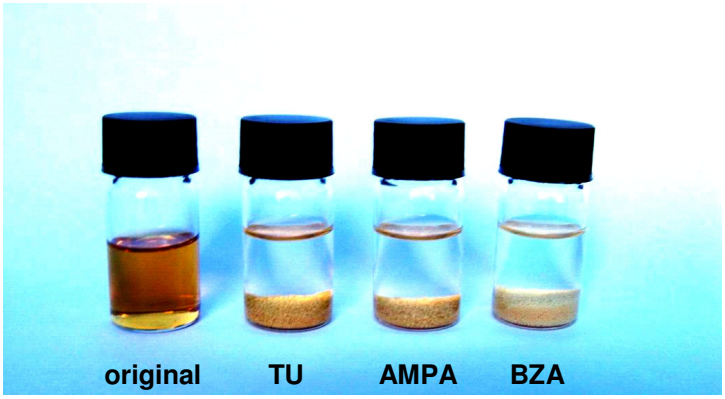
QuadraPure™ Applications

Rhodium Scavenging Example:

QuadraPure™	initial Rh (ppm)	% Rh removal	Time (h)
TU	200	>99	1
AMPA	200	>99	1.3
BZA	200	>99	1.5

QuadraPure™ clean-up of 200 ppm rhodium contamination following hydrogenation of carvone performed in toluene using Wilkinson's catalyst.

0.5 g QuadraPure™ added to 10 ml reaction solution in each case.

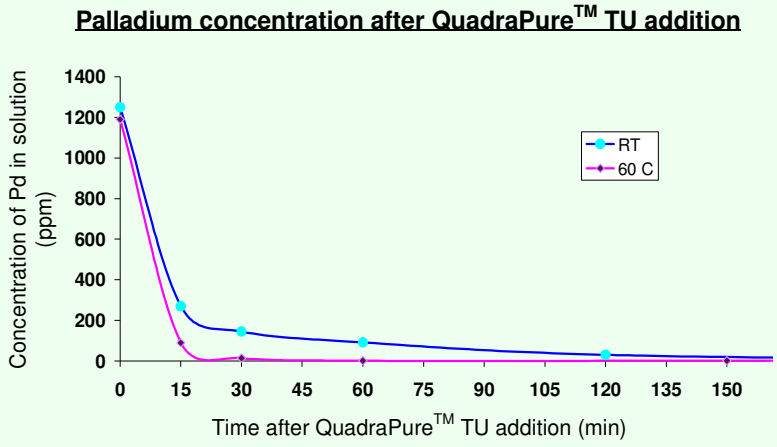


Process Scale Palladium Scavenging Example:

A client's Suzuki coupling process resulted in a drug intermediate with >1200ppm of palladium causing downstream processing problems

Straightforward addition of QuadraPure™ TU to a solution of the intermediate resulted in rapid removal of the Pd impurity

The QuadraPure™ TU was easily filtered off, allowing onward processing with Pd levels <10 ppm



R&D quantities of QuadraPure™ products are available from Sigma-Aldrich at: www.sigma-aldrich.com
For technical support, bulk quotations & information on QuadraPure™ products please contact: info@reaxa.com

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