

# 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**

**Cleaner waste streams**

**Fast, efficient processes**

**Improved metal recovery**

**Improved yields**

**Process intensification**

typically less than 1-10 ppm residual metal contamination

removal of metal contaminants from organic & aqueous processes

the QuadraPure™ beads filter easily

simple, efficient recovery & recycling of metal value

reduced work-up and isolation losses

can be used in batch & flow processes

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

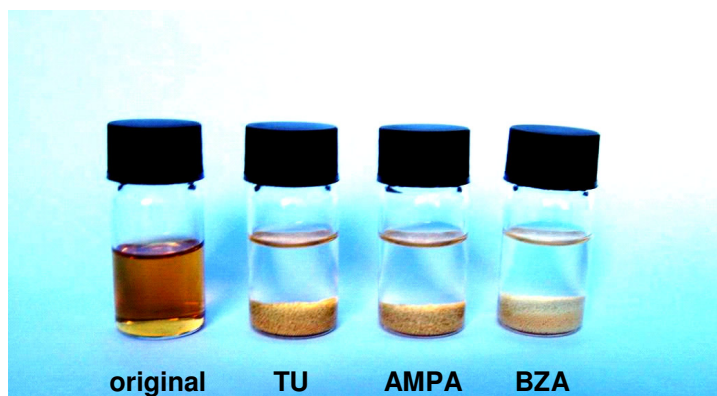
# QuadraPure™ Applications

## 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.



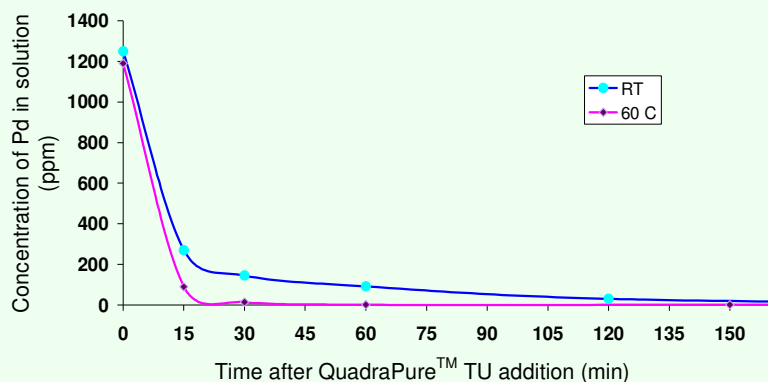
## Process Scale Palladium Scavenging Example:

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

Palladium concentration after QuadraPure™ TU addition



R&D quantities of QuadraPure™ products are available from Sigma-Aldrich at:  
[www.sigma-aldrich.com](http://www.sigma-aldrich.com)

For technical support, bulk quotations & information on QuadraPure™ products please contact:  
[info@reaxa.com](mailto:info@reaxa.com)