Heterogeneous Catalyst Applications Table

		1% Pt/C	3% Pt/C	5% Pt/C			5% Pt/Al_2O_3	5% Pd/C							5% Pd/Al_2O_3	5% $Pd/CaCO_3$	10% Pd/C				
		1T128M	3T148	5T117	5T128M	5T892	5T919	5T487	5T58	5T772	5T776	5T87L	5T893	5T896	5T911D	5T405	10T391	10T487	10T760	10T776	10T87L
Carbocycles	Aniline to cyclohexylamine																				
	Benzyl halide to cyclohexylmethyl halide																				
	Carbocyclic ring					■	■			■		■									
	Partial Carbocylic ring						■														
	Phenol to cyclohexane				■	■															
	Phenol to cyclohexanol																				
	Phenol to cyclohexanone							■		■		■									
Heterocycles	Carbocylic and heteroaromatic reduction																				
	Furans									■			■								
	Pyridines				■	■											■		■	■	
	Pyrroles				■	■															
	Selective heteroaromatic reduction										■			■			■		■	■	
Carbon-Carbon Multiple Bonds	Alkene to alkane				■	■					■		■	■							
	Alkyne to alkane										■		■	■							
	Cyclic alkene to cyclic alkane				■	■							■								
	Halo-vinyl to halo-alkane				■	■															
	Selective alkene reduction different substitution							■		■			■								
	Selective alkene reduction same substitution														■						
Carbonyl Compounds	Aldehyde to aliphatic alcohol				■	■	■														
	Ketone to aliphatic alcohol				■	■	■														
	Aldehyde to aromatic alcohol							■					■								
	Alkylcetophenone to cyclohexyk alkyl alcohol																				
	Benzaldehyde to toluene												■	■							
	Ketone to aromatic alcohol							■		■			■								
	Substituted benzylalcohol to phenylalkane												■	■							
	α-β-unsaturated aldehyde to unsaturated alcohol					■	■														
Nitro, Nitroso & Halonitroaromatic Compounds	Alkyl α-β-unsaturated nitro to alkyl amine										■		■	■							
	Nitro to aliphatic amine			■	■	■	■						■	■							
	Nitro to aromatic amine				■	■	■						■	■							
	Nitro to aromatic hydrazine dimer												■								
	Nitro to aromatic hydroxylamine	■																			
	Nitroso to aliphatic amine				■								■								
	Nitroso to aromatic amine				■								■								
	Phenyl α-β-unsaturated nitro to phenyl ethyl amine										■		■	■							

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Heterogeneous Catalyst Applications Table

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Reductive Aminations & Alkylations	Reductive amination from ketone								■				■								
	Reductive alkylation from ketone			■		■					■	■	■								
	Nitro reduction and reductive alkylation from ketone										■	■									
	Imine to amine				■	■				■	■		■								
Imines & Oximes	Amino imine to hydrazine			■	■	■															
	Oxime to amine								■				■								
	Oxime to hydroxylamine								■	■											
Nitriles	Nitrile to 1°–aliphatic amine RNH_2		■			■			■												
	Nitrile to 2°–aliphatic amine R_2NH								■												
	Nitrile to 3°–aliphatic amine R_3N												■								
	Nitrile to 1°–aromatic amine RNH_2				■	■							■								
	Nitrile to 2°–aromatic amine R_2NH		■			■							■								
	Nitrile to aldehyde																				
Hydrogenolysis	Aryl and alkyl halide hydrodehalogenation							■													
	Rosenmund reduction																				
	Vinyl halide to alkane										■		■	■							
	Benzyl X cleavage										■		■								
	O-debenzylation										■		■				■			■	
	N-debenzylation										■		■				■			■	
	N-decarbobenzyloxylation										■		■	■			■			■	
	O-decarbobenzyloxylation										■		■	■			■			■	
	Epoxide opening										■			■							
Transfer Hydrogenation	Nitro to amine							■		■			■								
	Alkene to alkane							■		■			■								
	O-/N-debenzylation												■					■			
	O-/N-decarbobenzyloxylation												■					■			
Dehydrogenation & Alcohol Oxidation	Cyclohexane to benzene																				■
	Cyclohexene to benzene																				■
	Alkene to alkane																				■
	Alcohol to acid				■																
	Alcohol to aldehyde				■																
	Alcohol to carbonyl				■																

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