

ID	Reaction	Reagent	Catalyst
CA 1	Malanic Acid + Benzaldehyde --> Cinnamic Acid	Piperidine	
CA 2	Bromobenzene + Acrylic Acid --> Cinnamic Acid	Tributylamine, Tetrabutylammonium bromide	Palladium
CA 3	Iodobenzene + Acrilic Acid --> Cinnamic Acid	Tributylamine	Troxeerutin, Palladium
CA 4	Cinnamon Alcohol --> Cinnamic Acid		Benzoic acid, Platinum, 1H-Imidazolium, 1,3-bis[3-(trimethoxysilyl)propyl]-, chloride
CA 5	L-Phenylalanine --> Cinnamic Acid	Potassium carbonate, Oxygen	Phenylalanine Ammonia Lyase
CIN-ALD	Cinnamic Acid --> Cinnamaldehyde	ATP, NADPH	carboxylic acid reductase (CAR) and phosphoubiquitin transferase(PPTase)