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(54) Title: ONE STEP PROCESS FOR PREPARING A 1,3-DIOL

(57) Abstract: A process for an improved oxirane hydroformylation catalyst, the improved oxirane hydroformylation catalyst, and a one step process for preparing a 1,3-diol in the presence of such a catalyst. One process for preparing the hydroformylation catalyst involves: a) forming a complex (A) by contacting a ruthenium(0) compound with a ditertiary phosphine ligand; and b) forming a complex (B) by subjecting complex (A) to a redox reaction with a cobalt(0) carbonyl compound. The one step hydroformylation process for preparing a 1,3-diol comprises the reaction of an oxirane with syngas at hydroformylation conditions in an inert solvent in the presence of the above hydroformylation catalyst where recovery of product is preferably accomplished via phase separation of a diol rich phase from the bulk reaction liquor.



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