

High catalytic activity of RhCl₃·3H₂O in HC(OEt)₃ for the hydroformylation of alkenes: effect of P(OPh)₃ on the selectivity.

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Catalysis Communications (2003), 4(12), 621-626.

Abstract

A new catalytic system formed of RhCl₃·3H₂O as a catalyst and tri-Et orthoformate, HC(OEt)₃, as a solvent showed high catalytic activity in the reaction of hydroformylation of aryl, terminal and internal alkyl alkenes, and also cycloalkenes. Thus, reacting styrene with RhCl₃·3H₂O/HC(OEt)₃ gave PhCHMeCHO and PhCH₂CH₂CHO. The addn. of the tri-Ph phosphite, P(OPh)₃, increased the selectivity toward the branched aldehydes with aryl alkenes.