

Rhodium-catalyzed hydroformylation of olefins: Effect of [bis(2,4-di-tert-butyl) pentaerythritol] diphosphite (alkanox P-24) on the regioselectivity of the reaction.

Tijani, Jimoh; El Ali, Bassam. Chemistry Department, KFUPM, Dhahran, Saudi Arabia.

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Abstract

Rhodium(I) assocd. with [bis(2,4-di-tert-butyl)pentaerythritol] diphosphite (alkanox P-24, I) as a ligand represents an active catalyst system for highly regioselective hydroformylation of various alkenes. The com. available I, which has been used so far as an antioxidant in the stabilization of polymers, was used as a diphosphite ligand for the selective hydroformylation reaction of olefins. Excellent selectivity towards linear aldehydes and excellent conversions were achieved in the hydroformylation of alkenes. The hydroformylation reaction was applied to various olefinic substrates including the internal alkenes.