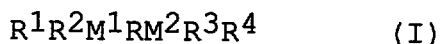


A B S T R A C T

HYDROFORMYLATION OF OLEFIN FEEDS CONTAINING DIENES

A process for the hydroformylation of a feed comprising compounds having a single ethylenically unsaturated group by reaction thereof in the liquid phase with carbon monoxide and hydrogen in the presence of a catalyst system comprising

- a) a source of palladium cations;
- b) a source of anions;
- c) a source of at least one bidentate ligands of the formula



wherein M^1 and M^2 independently represent a phosphorus, arsenic or antimony atom, R represents a bivalent bridging group containing from 1-4 atoms in the bridge, R^1 and R^2 independently represent a substituted or unsubstituted hydrocarbyl group, or together represent a bivalent substituted or unsubstituted cyclic group whereby the two free valencies are linked to M^1 , and R^3 and R^4 independently represent a substituted or unsubstituted hydrocarbyl group, or together represent a bivalent substituted or unsubstituted cyclic group whereby the two free valencies are linked to M^2 ; and

- d) a source of halide chosen from the group of chloride, iodide and bromide and mixtures thereof;
- characterized in that the ethylenically unsaturated feed comprises one or more dienes and/or further multiply unsaturated alkenes to an amount of 0.005 - 5 wt% based on the total amount of ethylenically unsaturated compounds in the feed, and in that component b) of the



catalyst system comprises a source of anions of an acid having a pKa value, measured in aqueous solution at 18 °C, of between -1 and 4.

This Sheet Has Been Replaced

