

ABSTRACT  
ANHYDROUS CARBONYLATION PROCESS FOR THE PRODUCTION OF  
ACETIC ACID

An anhydrous process for the production of acetic acid by the reaction of methanol, and/or dimethyl ether, with a gaseous reactant comprising carbon monoxide and hydrogen, the hydrogen being present in an amount less than 9 mole %, in the presence of a catalyst system comprising at least one noble metal of Group VIII of the Periodic Table as catalyst, a halo-compound as co-catalyst and an iodide salt as catalyst stabiliser which process comprises feeding methanol, and/or dimethyl ether, and gaseous reactant to a carbonylation reactor in which there is maintained a liquid reaction composition comprising (i) methyl acetate in an amount from 1 to 35% w/w, (ii) acetic anhydride in an amount up to 8% w/w, (iii) halo-compound in an amount from 3 to 20% w/w, (iv) Group VIII noble metal catalyst in an amount from 1 to 2000 ppm, (v) sufficient iodide salt to provide from 0.5 to 20% by weight iodine as I<sup>-</sup> and (vi) acetic acid comprising the remainder of the composition.

No fig.