

ABSTRACT

A method for preparing acetic acid and/or methyl acetate by means of an isomerisation reaction and a carbonylation reaction is disclosed. Specifically, the method for preparing acetic acid and/or methyl acetate comprises reacting reagents that provide formyl radicals and reagents that provide methyl radicals, in the presence of carbon monoxide, water, a solvent and a catalytic system including at least one halogenated promoter and at least one iridium compound. According to the method, a partial carbon monoxide pressure of $0.1 \cdot 10^5$ Pa to $25 \cdot 10^5$ Pa is maintained, the amount of reagent providing formyl radicals is maintained at no more than 20 wt % based on the weight of the reaction mixture, and the reagents providing methyl and formyl radicals are supplied in such a way that the molar ratio of the methyl radicals to the formyl radicals is greater than 1. The method is particularly useful for preparing acetic acid and/or methyl acetate from mixtures of methanol and methyl formate.

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