

Title (en)
METHOD FOR PRODUCING N-BUTYRALDEHYDE AND/OR N-BUTANOL

Title (de)
VERFAHREN ZUR HERSTELLUNG VON N-BUTYRALDEHYD UND/ODER N-BUTANOL

Title (fr)
PROCEDE DE PRODUCTION DE N-BUTYRALDEHYDE ET/OU DE N-BUTANOL

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Abstract (en)
[origin: WO9841494A1] The invention relates to a method for producing n-butyraldehyde and/or n-butanol, whereby a) 1.3 butadiene or hydrocarbon mixtures containing butadiene are reacted with an alcohol of the formula (I) ROH wherein the radical R is an unsubstituted C2- to C20-alkyl- or alkenyl- or a C2- to C20-alkyl- or alkenyl- substituted with 1 to 2 C1- to C10-alkoxy- or hydroxy groups, a C6- to C10-aryl- or a C7- to C11- arylkyl group or methyl group at a high temperature and under high pressure in the presence of a bronsted acid or in the presence of a complex of an element from group IA, VIIA or VIIIA of the periodic table of elements with ligands containing phosphor or nitrogen to form a mixture of adducts of formulae (II) and (III); b) isomerizing adduct (III) to adduct (II); c) converting adduct (III) into acetal of formula (IV) in the presence of a sufficient quantity of an alcohol ROH I to form acetal (IV) and a homogeneous or heterogeneous transitional metal element catalyst which is different from dicobaltoctacarbonyl or hydridocobalttetracarbonyl in the liquid phase in essentially water-free conditions and d) then reacting this acetal (IV) with hydrogen and water or water in the presence of a homogenous or heterogeneous transitional metal element catalyst which is different from dicobaltoctacarbonyl or hydridocobalttetracarbonyl in liquid phase to produce n-butyraldehyde and/or n-butanol and releasing the alcohol ROH I and returning the released alcohol ROH I to the reaction in accordance with partial reaction a) and/or c).

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