

Title (en)

CONTINUOUS METHOD FOR THE CARBONYLATION OF ALCOHOLS, IN PARTICULAR OF PHENYL ALCOHOLS

Title (de)

KONTINUIERLICHES VERFAHREN ZUR CARBONYLIERUNG VON ALKOHOLEN, INSBESONDERE VON PHENYLALKOHOLEN

Title (fr)

PROCÉDÉ CONTINU DE CARBONYLATION D'ALCOOLS, ET NOTAMMENT DE PHÉNYLALCOOLS

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Application

EP 11811095 A 20111213

Priority

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Abstract (en)

[origin: WO2012080647A2] The invention relates to a continuous method for the carbonylation of an (R1R3)C - X alcohol in acid, where: R1 and R3 are radicals bonded to the carbon atom by means of a single covalent bond, or an aliphatic cyclic compound that integrates the central carbon atom and bonds to the latter on each side by means of a single covalent bond; and C - X is C(R) - OH, where R is (Z1Z2)HC- or (Z1Z2)C-, it being a given that said radical (Z1Z2)C- can be a substituted or unsubstituted unsaturated cyclic compound such as a benzene cyclic compound. Said method is carried out in a piston reactor provided with a mechanical axial agitation means, and in said method: a) at least one liquid phase comprising said raw alcohol is continuously added, optionally into an appropriate solvent, and a strong acid is also continuously added; b) said at least one liquid phase is subjected to mechanically axially agitated under the influence of a CO pressure of 2 to 250 bar during a transit time t of between 10 seconds and 10 minutes; and c) the liquid phase is removed from said reactor, and in said method, the temperature increase ΔT of the liquid, between the input thereof and removal thereof in/from the reactor, is controlled such that the ratio $\Delta T / AT_{ad}$ (where AT_{ad} is the adiabatic temperature increase) is between 0.02 and 0.6 when the ratio between the characteristic heat transfer time t_{therm} and the characteristic matter transfer time t_{mat} is between 1 and 50.

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