

Title (en)
PROCESS FOR PREPARING ISOPROPANOL AND 2-BUTANOL FROM THE CORRESPONDING ALKANES

Title (de)
VERFAHREN ZUR HERSTELLUNG VON ISOPROPANOL UND 2-BUTANOL AUS DEN ENTSPRECHENDEN ALKANEN

Title (fr)
PROCÉDÉ DE FABRICATION D'ISOPROPANOL ET DE 2-BUTANOL À PARTIR DES ALCANES CORRESPONDANTS

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Application
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Abstract (en)
[origin: WO2008009648A1] A process for preparing alkanols (I) selected from the group consisting of isopropanol and 2-butanol from the corresponding alkanes (II) selected from the group consisting of propane and n-butane, comprising the steps of: A) a use gas stream a comprising the alkane (II) is provided; B) use gas stream a comprising the alkane (II) is fed into a dehydrogenation zone and the alkane (II) is subjected to a dehydrogenation to the alkene (III), to obtain a product gas stream b comprising the alkene (III), unconverted alkane (II), with or without high boilers, steam, hydrogen and low boilers; C) product gas stream b is at least compressed, and product gas stream b is optionally separated into an aqueous phase c1, a phase c2 which comprises the alkene (III) and the alkane (II), with or without high boilers, and a gas phase c3 comprising hydrogen and low boilers; D) product gas stream b or the phase c2 comprising alkene (III) and alkane (II) is reacted in an esterification zone with an organic acid (IV) to obtain a product mixture d comprising the corresponding alkyl ester (V) of the organic acid and the unconverted alkane (II); E) a gas stream e1 comprising alkane (II) is removed from the product mixture d and is optionally recycled into the dehydrogenation zone, and a product mixture e2 comprising the alkyl ester is obtained; F) product mixture e2 comprising the alkyl ester is reacted in a deesterification zone with water to give a product mixture f comprising the alkanol (I) and the organic acid (IV); G) the alkanol (I) and the organic acid (IV) are removed from the product mixture f, and the organic acid is optionally recycled into the esterification zone.

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