

Title (en)
METHOD FOR PRODUCING 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 POUR PRODUIRE DE L'ISOPROPANOL ET DU 2-BUTANOL À PARTIR D'ALCANES ADÉQUATS

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Abstract (en)
[origin: WO2009074574A1] The invention relates to a method for producing alcohols (I), selected from isopropanol and 2-butanol, from the corresponding alkanes (II), selected from propane and n-butane, comprising the steps: A) a feed stream a, comprising the alkane (II) is prepared, B) the feed stream a, comprising the alkane (II) is introduced into a dehydrogenation zone and the alkane (II) subjected to a dehydrogenation to give the alkene (III), wherein a product gas stream b containing the alkene (III), unreacted alkane (II), optional high-boilers, steam, hydrogen and low-boilers is obtained, C) the product gas stream b is at least compressed, the product gas stream b is optionally separated into an aqueous phase c1, a phase c2, comprising the alkene (III), the alkane (II) and optionally high-boilers and a gas phase c3, comprising hydrogen and low-boilers, D) the product gas stream b and/or the phase c2, comprising the alkene (III) and alkane (II) is reacted in an esterification zone with an alkanolic acid (IV) having 3 or more carbon atoms, wherein a product mixture d, comprising the corresponding alkyl ester (V) of the alkanolic acid and the unreacted alkane (II) is obtained, E) a gas stream e1 comprising an alkane (II) is separated off from the product mixture d, optionally recycled back to the dehydrogenation zone and a product mixture e2, comprising the alkyl ester (V) is obtained; F) the product mixture e2, comprising the alkyl ester (V) is reacted with water in an ester cleavage zone to give a product mixture f containing the alcohol (I) and the alkanolic acid (IV), G) the alcohol (I) and the alkanolic acid (IV) are separated off from the product mixture f and the alkanolic acid optionally recycled to the esterification zone.

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