

METHOD FOR PRODUCING ETHANOL AND COPRODUCING METHANOL

ABSTRACT

5 This invention discloses a method for producing ethanol and coproducing methanol
on a catalyst in a reactor using a co-feed of a synthesis gas and acetate as a reaction raw
material. More particularly, this invention provides a method for producing ethanol and
coproducing methanol, characterized in that the method comprises the step of passing a raw
material gas containing an acetate and a synthesis gas through a reactor loaded with a
10 catalyst to produce ethanol and coproduce methanol under the conditions of a reaction
temperature of 150-350°C, a reaction pressure of 0.1-20.0 MPa, a reaction volume hourly
space velocity of 100-45000 $\text{mlg}^{-1}\text{h}^{-1}$, and an acetate weight hourly space velocity of
0.01-5.0 h^{-1} ; and the active components of the catalyst are copper and optionally zinc and/or
aluminum. The method of this invention greatly facilitates the conversion of carbon
15 monoxide to methanol, while an extremely high activity of acetate hydrogenation is
maintained. Also, the method of this invention produces ethanol while a certain amount of
methanol is coproduced, and the proportions of ethanol and methanol may be adjusted,
which increases the flexibility of products.

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[No Suitable Figure]