

METHOD FOR PREPARING METHYL FORMATE

ABSTRACT

5 This application relates to a method for preparing methyl formate. A raw material containing formaldehyde, methanol and/or dimethyl ether is introduced into a first reaction zone to come into contact with a catalyst A, and a component I is obtained by separation. The component I is introduced into a second reaction zone to come into contact with a catalyst B so as to obtain, by separation, methyl formate as a product, dimethyl ether that is
10 returned to the first reaction zone and a component II that is returned to the second reaction zone. The ratio of formaldehyde, methanol and/or dimethyl ether in the raw material is formaldehyde:methanol and/or dimethyl ether = 1:2-4 based on the mole number of carbon atoms contained in respective component; the mass hourly space velocity of formaldehyde in the raw material is 0.01-15.0 h⁻¹; the temperature is 50-100°C in the first reaction zone;
15 the temperature is 50-200°C and the pressure is 0.1-10 Mpa in the second reaction zone; and the components are each independently in a gas phase and/or a liquid phase. In the present application, the catalysts have a long service life, the reaction conditions are mild, and the utilization rate of the raw material is high, and thus the invention enables a continuous production and has the potential for large-scale industrial application.

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[No Suitable Figure]