WHAT IS CLAIMED IS:

1. A method for producing ethanol and coproducing methanol, comprising the step of passing a raw material gas containing an acetate and a synthesis gas through a reactor loaded with a 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 $mlg^{-1}h^{-1}$, and an acetate weight hourly space velocity of 0.01-5.0 h^{-1}; and the active components of the catalyst are copper, zinc and aluminum, wherein the active component copper comprises 80-85 wt% of the total weight of the catalyst in terms of CuO; the active component zinc comprises 10-15 wt% of the total weight of the catalyst in terms of ZnO; and the active component aluminum comprises 5-10 wt% of the total weight of the catalyst in terms of Al_2O_3.

2. The method according to claim 1, wherein the acetate is methyl acetate and/or ethyl acetate.

3. The method according to claim 1, wherein the catalyst further contains one or more of manganese, molybdenum, zirconium, chromium, iron, barium, magnesium, nickel, and calcium as a promoter.

4. The method according to claim 3, wherein the promoter comprises 0-5.0 wt% of the total weight of the catalyst in terms of the metal oxide thereof.

5. The method according to claim 1, wherein the catalyst is subjected to reduction treatment with hydrogen gas and/or a synthesis gas before use.

6. The method according to claim 1, wherein the molar ratio of synthesis gas/acetate in the raw material gas is 10-101/0.1-4, and the molar ratio of hydrogen gas/carbon monoxide in the synthesis gas is 9-100/1.

7. The method according to claim 1, wherein the molar ratio of synthesis gas/acetate in the raw material gas is 21-101/2-4, and the molar ratio of hydrogen gas/carbon monoxide in the synthesis gas is 20-100/1.

8. The method according to claim 1, wherein the reaction temperature is 180-300°C, the reaction pressure is 1.0-10.0 MPa, the reaction volume hourly space velocity

is 400-35000 $mlg^{-1}h^{-1}$, and the acetate weight hourly space velocity is 0.1-3.0 h^{-1}.