

Chemical Reaction Engineering I

Quiz 1

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Quiz 1 by Sureena

QUESTION

Butene (C_4H_8) is partially oxidized to produce maleic anhydride ($C_2H_2(CO)_2O$), water and hydrogen in an irreversible reaction. Initial feed is equal molar of Butene and Oxygen. The specific reaction rate constant is 0.1 (in liters and minutes) at 398K with the activation energy 23kJ/mol.

- What is the limiting reactant?
- What is the specific rate constant as 573K?
- If the reaction is elementary what is the unit of reaction rate constant in (2) and write the rate law



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