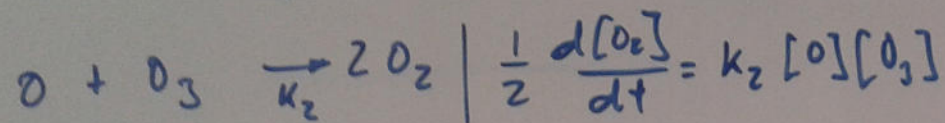
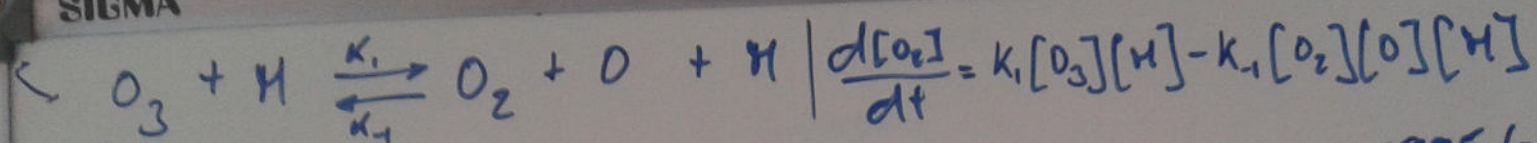


SIGMA

1995-6-3

$$\frac{d[\text{O}_2]}{dt} = k_1 [\text{O}_3][\text{H}] - k_{-1} [\text{O}_2][\text{O}][\text{H}] + 2k_2 [\text{O}_3][\text{O}]$$

$$\frac{d[\text{H}]}{dt} = k_1 [\text{O}_3][\text{H}] - k_{-1} [\text{O}_2][\text{O}][\text{H}] = 0 \quad \left| \quad [\text{O}] = \frac{k_1 [\text{O}_3]}{k_{-1} [\text{O}_2]} \right.$$

$$\frac{d[\text{O}_2]}{dt} = k_1 [\text{O}_3][\text{H}] - \cancel{k_{-1} [\text{O}_2]} \frac{k_1 [\text{O}_3]}{\cancel{k_{-1} [\text{O}_2}]} [\text{H}] + 2k_2 [\text{O}_3] \frac{k_1 [\text{O}_3]}{k_{-1} [\text{O}_2]}$$

$$\frac{d[\text{O}_2]}{dt} = \cancel{k_1 [\text{O}_3][\text{H}]} - \cancel{k_1 [\text{O}_3][\text{H}]} + 2 \frac{k_2 k_1}{k_{-1}} \frac{[\text{O}_3]^2}{[\text{O}_2]} \quad \left| \quad \frac{1}{2} \frac{d[\text{O}_2]}{dt} = \boxed{\frac{k_2 k_1}{k_{-1}} \frac{[\text{O}_3]^2}{[\text{O}_2]} = v} \right.$$