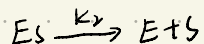
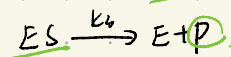
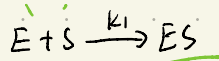
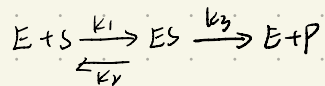




$$v = k \cdot (C_A)^a \cdot (C_B)^b$$



生成

$$V + [ES] = k_i [E] [S]$$

$$V + [E] = k_p [ES] + k_r [ES]$$

$$V + [P] = k_p [ES]$$

$$V + [S] = k_r [ES]$$

消耗速率 =  $k$  和反应物的

$$V - [ES] = k_p [ES] + k_r [ES]$$

$$V - [S] = k_i [S] \cdot [E]$$

$$V - [E] = k_i [S] \cdot [E]$$

$$\therefore V - [S] = V - [E]$$

生成

$$V + [ES] = V - [S] = V - [E]$$

$$\text{for } ES: V + [ES] - V - [ES]$$

$$= k_i [E] [S] - k_p [ES] - k_r [ES]$$

$$\text{for } E: V + [E] - V - [E]$$

$$= k_p [ES] + k_r [ES] - k_i [S] [E]$$

$$\text{for } P: V + [P] - V - [P]$$

$$= k_p [ES] - 0$$

$$= k_p [ES]$$

$$\text{for } S: V + [S] - V - [S]$$

$$= k_r [ES] - k_i [S] [E]$$