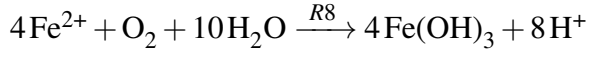
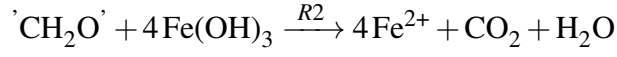
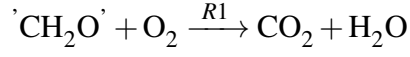


Reactions:



Rates:

$$R_1 = k_{OM} \cdot [OM] \cdot \frac{[O_2]}{K_m^{O_2} + [O_2]} \quad (1)$$

$$R_2 = k_{OM} \cdot [OM] \cdot \frac{[Fe(OH)_3]}{K_m^{Fe(OH)_3} + [Fe(OH)_3]} \cdot \frac{K_m^{O_2}}{K_m^{O_2} + [O_2]} \quad (2)$$

$$R_8 = k_8 \cdot [Fe^{2+}] \cdot [O_2] \quad (3)$$

Rates with Temperature dependence:

$$R_1 = Q_{10}^{(T-T_0)/10} \cdot k_{OM} \cdot [OM] \cdot \frac{[O_2]}{K_m^{O_2} + [O_2]} \quad (4)$$

$$R_2 = Q_{10}^{(T-T_0)/10} \cdot k_{OM} \cdot [OM] \cdot \frac{[Fe(OH)_3]}{K_m^{Fe(OH)_3} + [Fe(OH)_3]} \cdot \frac{K_m^{O_2}}{K_m^{O_2} + [O_2]} \quad (5)$$

$$R_8 = k_8 \cdot [Fe^{2+}] \cdot [O_2] \quad (6)$$