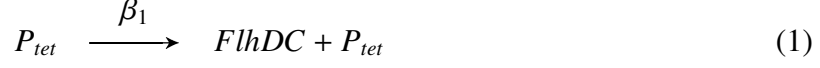
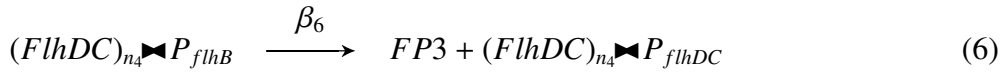
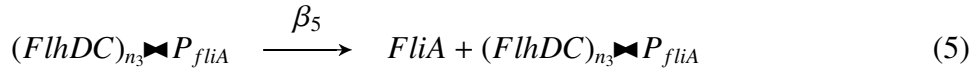
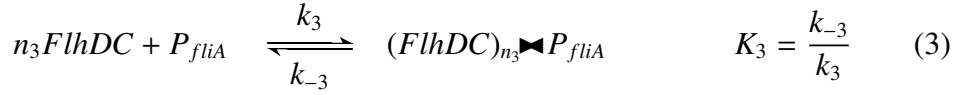


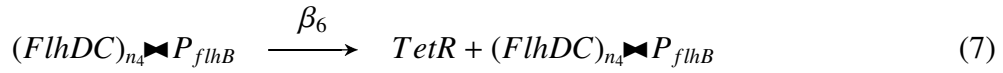
specific to P_{tet} -circuit



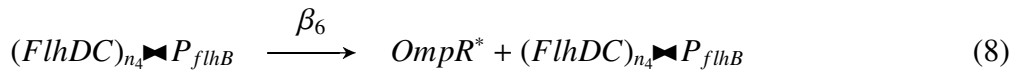
specific to P_{flhDC} -circuit

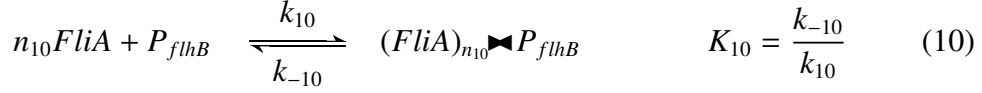
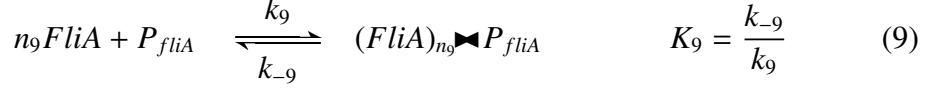


specific to P_{tet} -circuit

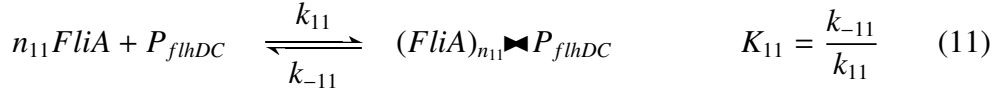


specific to P_{flhDC} -circuit

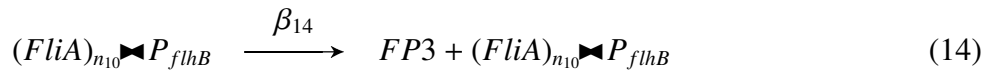
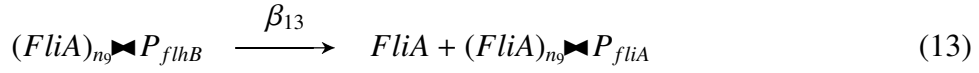
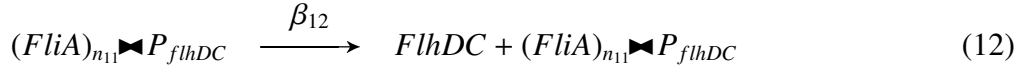




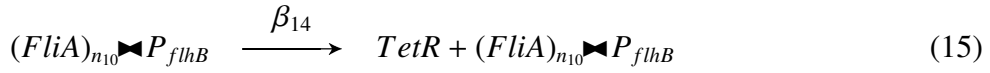
specific to P_{flhDC} -circuit



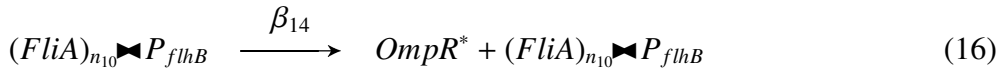
specific to P_{flhDC} -circuit



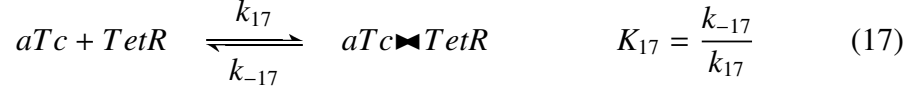
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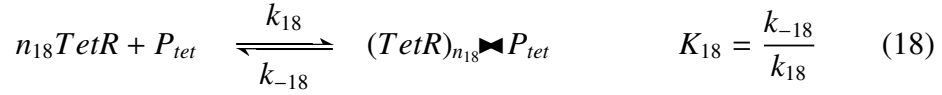
specific to P_{flhDC} -circuit



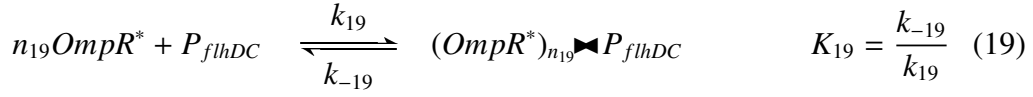
specific to P_{tet} -circuit



specific to P_{tet} -circuit



specific to P_{flhDC} -circuit



specific to P_{tet} -circuit



specific to P_{flhDC} -circuit



$$(3) \Rightarrow \frac{d[(FlhDC)_{n_3} \blacktriangleright P_{fliA}]}{dt} = k_3 [FlhDC]^{n_3} [P_{fliA}] - k_{-3} [(FlhDC)_{n_3} \blacktriangleright P_{fliA}] \quad (25)$$

$$\Rightarrow [(FlhDC)_{n_3} \blacktriangleright P_{fliA}]_{eq} = \frac{[FlhDC]^{n_3}}{K_3 + [FlhDC]^{n_3}} \cdot [P_{fliA}^{total}] \quad (26)$$

$$(4) \Rightarrow \frac{d[(FlhDC)_{n_4} \blacktriangleright P_{flhB}]}{dt} = k_4 [FlhDC]^{n_4} [P_{flhB}] - k_{-4} [(FlhDC)_{n_4} \blacktriangleright P_{flhB}] \quad (27)$$

$$\Rightarrow [(FlhDC)_{n_4} \blacktriangleright P_{flhB}]_{eq} = \frac{[FlhDC]^{n_4}}{K_4 + [FlhDC]^{n_4}} \cdot [P_{flhB}^{total}] \quad (28)$$

$$(9) \Rightarrow \frac{d[(FliA)_{n_9} \blacktriangleright P_{fliA}]}{dt} = k_9 [FliA]^{n_9} [P_{fliA}] - k_{-9} [(FliA)_{n_9} \blacktriangleright P_{fliA}] \quad (29)$$

$$\Rightarrow [(FliA)_{n_9} \blacktriangleright P_{fliA}]_{eq} = \frac{[FliA]^{n_9}}{K_9 + [FliA]^{n_9}} \cdot [P_{fliA}^{total}] \quad (30)$$

$$(10) \Rightarrow \frac{d[(FliA)_{n_{10}} \blacktriangleright P_{flhB}]}{dt} = k_{10} [FliA]^{n_{10}} [P_{flhB}] - k_{-10} [(FliA)_{n_{10}} \blacktriangleright P_{flhB}] \quad (31)$$

$$\Rightarrow [(FliA)_{n_{10}} \blacktriangleright P_{flhB}]_{eq} = \frac{[FliA]^{n_{10}}}{K_{10} + [FliA]^{n_{10}}} \cdot [P_{flhB}^{total}] \quad (32)$$

specific to P_{flhDC} -circuit

$$(11) \Rightarrow \frac{d[(FliA)_{n_{11}} \blacktriangleright P_{flhDC}]}{dt} = k_9 [FliA]^{n_{11}} [P_{flhDC}] - k_{-11} [(FliA)_{n_{11}} \blacktriangleright P_{flhDC}] \quad (33)$$

$$\Rightarrow [(FliA)_{n_{11}} \blacktriangleright P_{flhDC}]_{eq} = \frac{[FliA]^{n_{11}}}{K_{11} + [FliA]^{n_{11}}} \cdot [P_{flhDC}^{total}] \quad (34)$$

specific to P_{tet} -circuit

$$(18) \Rightarrow \frac{d[P_{tet}]}{dt} = -k_{18}[TetR][P_{tet}] + k_{-18}[(TetR)_{n_{18}} \blacktriangleright P_{tet}] \quad (35)$$

$$\Rightarrow [P_{tet}]_{eq} = \frac{K_{18}}{K_{18} + [TetR]^{n_{18}}} \cdot [P_{tet}^{total}] \quad (36)$$

specific to P_{tet} -circuit

$$(17) \Rightarrow \frac{d[TetR]}{dt} = -k_{17}[TetR][aTc] + k_{-17}[aTc \blacktriangleright TetR] \quad (37)$$

$$\Rightarrow [TetR]_{eq} = \frac{K_{17}}{K_{17} + [aTc]} \cdot [TetR^{produced}] \quad (38)$$

specific to P_{flhDC} -circuit

$$(19) \Rightarrow \frac{d[P_{flhDC}]}{dt} = -k_{19}[OmpR^* \blacktriangleright HSL]^{n_{19}}[P_{flhDC}] + k_{-19}[(OmpR^*)_{n_{19}} \blacktriangleright P_{flhDC}] \quad (39)$$

$$\Rightarrow [P_{flhDC}]_{eq} = \frac{K_{19}}{K_{19} + [OmpR^*]^{n_{19}}} \cdot [P_{flhDC}^{total}] \quad (40)$$

specific to P_{tet} -circuit

$$(1) \text{ and } (38) \text{ and } (20) \Rightarrow \frac{d[FlhDC]}{dt} = \beta_1[P_{tet}]_{eq} - \gamma_{20}[FlhDC] \quad (41)$$

specific to P_{flhDC} -circuit

$$(2) \text{ and } (40) \text{ and } (12) \text{ and } (34) \text{ and } (20) \Rightarrow \frac{d[FlhDC]}{dt} = \beta_2[P_{flhDC}]_{eq} + \beta_{12}[(FliA)_{n_{11}} \blacktriangleright P_{flhDC}]_{eq} - \gamma_{20}[FlhDC] \quad (42)$$

$$(5) \text{ and } (26) \text{ and } (13) \text{ and } (30) \text{ and } (21) \Rightarrow \frac{d[FliA]}{dt} = \beta_5[(FlhDC)_{n_3} \blacktriangleright P_{fliA}]_{eq} + \beta_5[(FliA)_{n_9} \blacktriangleright P_{fliA}]_{eq} - \gamma_{21}[FliA] \quad (43)$$

$$(6) \text{ and } (27) \text{ and } (14) \text{ and } (31) \text{ and } (22) \Rightarrow \frac{d[FP3]}{dt} = \beta_6[(FlhDC)_{n_4} \blacktriangleright P_{fliB}]_{eq} + \beta_{14}[(FliA)_{n_{10}} \blacktriangleright P_{fliB}]_{eq} - \gamma_{22}[FP3] \quad (44)$$

specific to P_{tet} -circuit

$$(7) \text{ and } (28) \text{ and } (15) \text{ and } (32) \text{ and } (23) \Rightarrow \frac{d[TetR]}{dt} = \beta_6[(FlhDC)_{n_4} \blacktriangleright P_{flhB}]_{eq} + \beta_{14}[(FliA)_{n_{10}} \blacktriangleright P_{flhB}]_{eq} - \gamma_{23}[TetR] \quad (45)$$

specific to P_{flhDC} -circuit

$$(8) \text{ and } (28) \text{ and } (16) \text{ and } (32) \text{ and } (24) \Rightarrow \frac{d[OmpR^*]}{dt} = \beta_6[(FlhDC)_{n_4} \blacktriangleright P_{flhB}]_{eq} + \beta_{14}[(FliA)_{n_{10}} \blacktriangleright P_{flhB}]_{eq} - \gamma_{23}[OmpR^*] \quad (46)$$