$$P_\infty(1 - \exp\{-\lambda(t_f - t_0)\})$$

$$1 - P_\infty(1 - \exp\{-\lambda(t_f - t_0)\}) \circlearrowleft \bar{\mathbf{m}} \rightleftarrows \mathbf{m} \circlearrowright P_\infty + (1 - P_\infty)\exp\{-\lambda(t_f - t_0)\}$$

$$(1 - P_\infty)(1 - \exp\{-\lambda(t_f - t_0)\})$$