



$$\begin{aligned}P(\mu) &= \int_{\infty}^{\mu} -e^{-\mu} \mu^{-2} d\mu \\&= \int_{\infty}^{\mu} \mu^{-2} de^{-\mu} = \frac{e^{-\mu}}{\mu^2} \Big|_{\infty}^{\mu} - \int_{\infty}^{\mu} e^{-\mu} d\mu^{-2} \\&= \frac{e^{-\mu}}{\mu^2} \Big|_{\infty}^{\mu} - \int_{\infty}^{\mu} e^{-\mu} (-2)\mu^{-3} d\mu \\&= \frac{e^{-\mu}}{\mu^2} - 2 \int_{\infty}^{\mu} \mu^{-3} de^{-\mu} \\&= \frac{e^{-\mu}}{\mu^2} - 2 \frac{e^{-\mu}}{\mu^3} + \int_{\infty}^{\mu} e^{-\mu} (-6)\mu^{-4} d\mu \\&= \frac{e^{-\mu}}{\mu^2} - 2 \frac{e^{-\mu}}{\mu^3} + 6 \frac{e^{-\mu}}{\mu^4} - \int_{\infty}^{\mu} 24e^{-\mu} \mu^{-5} d\mu \\&= \frac{e^{-\mu}}{\mu^2} - 2 \frac{e^{-\mu}}{\mu^3} + 6 \frac{e^{-\mu}}{\mu^4} - 24 \frac{e^{-\mu}}{\mu^5} + \int_{\infty}^{\mu} 24e^{-\mu} d\mu^{-5} \\&= \frac{e^{-\mu}}{\mu^2} \left(1 - \frac{2!}{\mu} + \frac{3!}{\mu^2} - \frac{4!}{\mu^3} \dots \right) \\&= \frac{e^{-\mu}}{\mu^2} \times \sum_{n=1}^{\infty} (-1)^{n-1} \frac{n!}{\mu^{n-1}}\end{aligned}$$

Figure 1. Solution of $P(\mu)$.

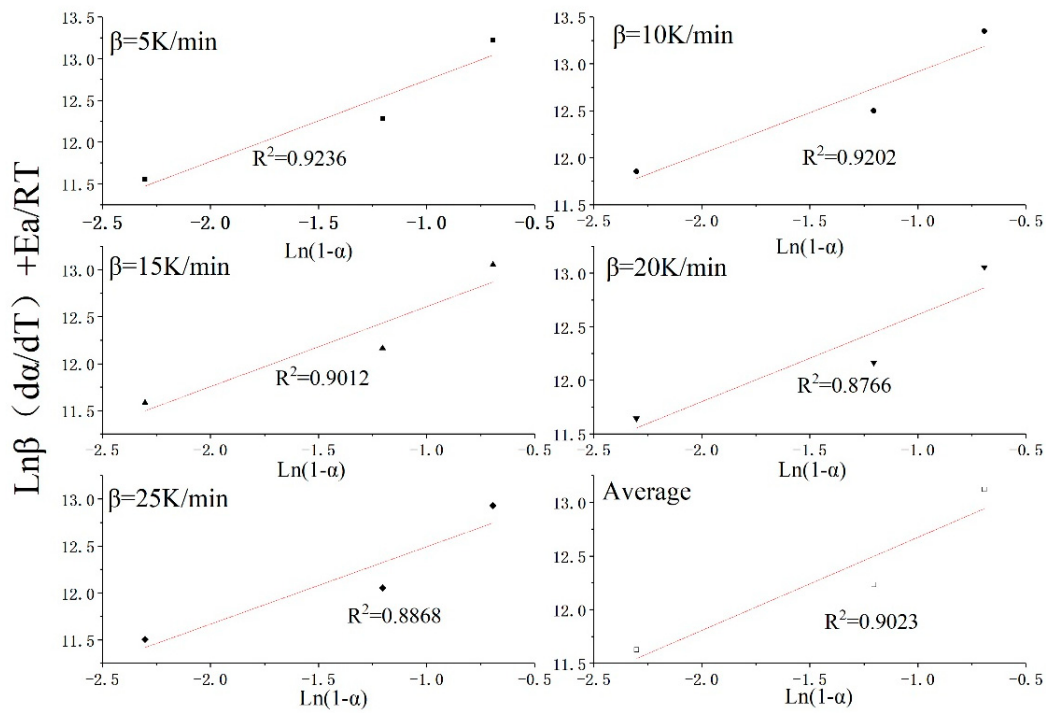


Figure 2. The linear fitting results for reaction orders and pre-exponential factors of stage one.