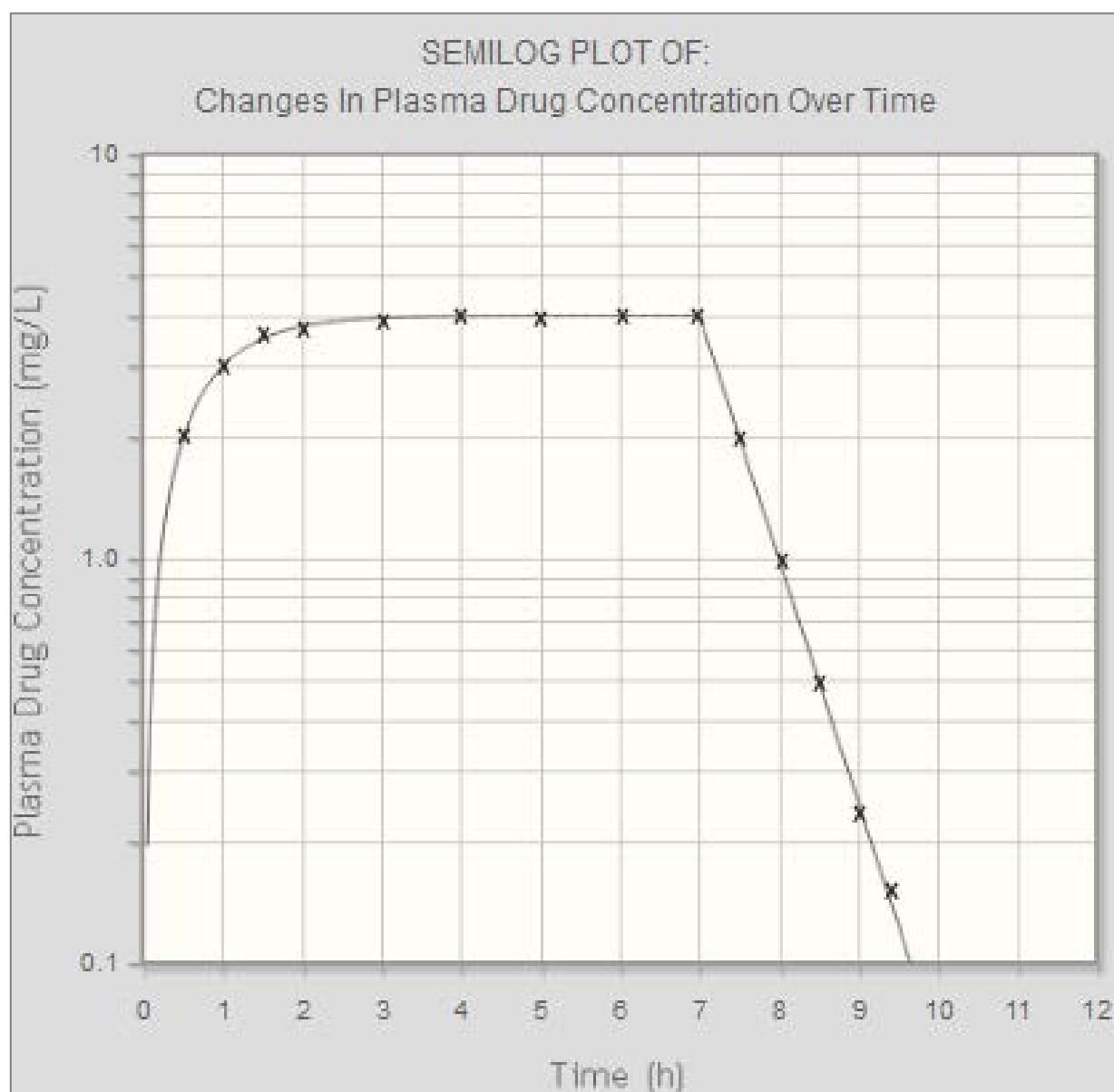
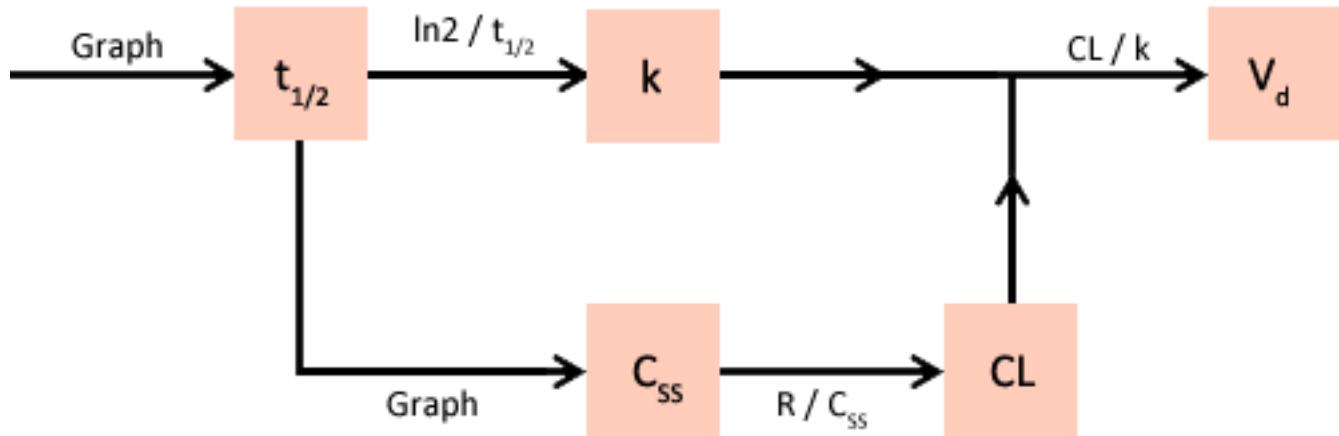


Data, Concentration-Time Curve And Equations For Single Short IV Infusion Exercise

Time Point Hours	Concentration mg/L
0	0.0
0.5	2.0
1	3.0
1.5	3.6
2	3.8
3	3.9
4	4.0
5	4.0
6	4.0
7	4.0
Infusion Stopped	Infusion Stopped
7.5	2.0
8	1.0
8.5	0.5
9	0.25
9.5	0.13



Order For Finding The Parameters And Equations Used



The steady state concentration is reached after approximately five half-lives.

$$k = \frac{\ln 2}{t_{1/2}} = \frac{0.693}{t_{1/2}}$$

$$CL = \frac{R}{C_{ss}}$$

$$V_d = \frac{CL}{k}$$

$$R = \frac{Dose}{T_{Inf}}$$

Plasma concentration during the infusion:

$$C_{pt} = \frac{Dose}{T_{Inf}} \times \frac{1}{k V_d} \times (1 - e^{-kt})$$

Plasma concentration when the infusion has been stopped:

$$C_{pt} = \frac{Dose}{T_{Inf}} \times \frac{1}{k V_d} \times (1 - e^{-kT_{Inf}}) \times e^{-k(t-T_{Inf})}$$