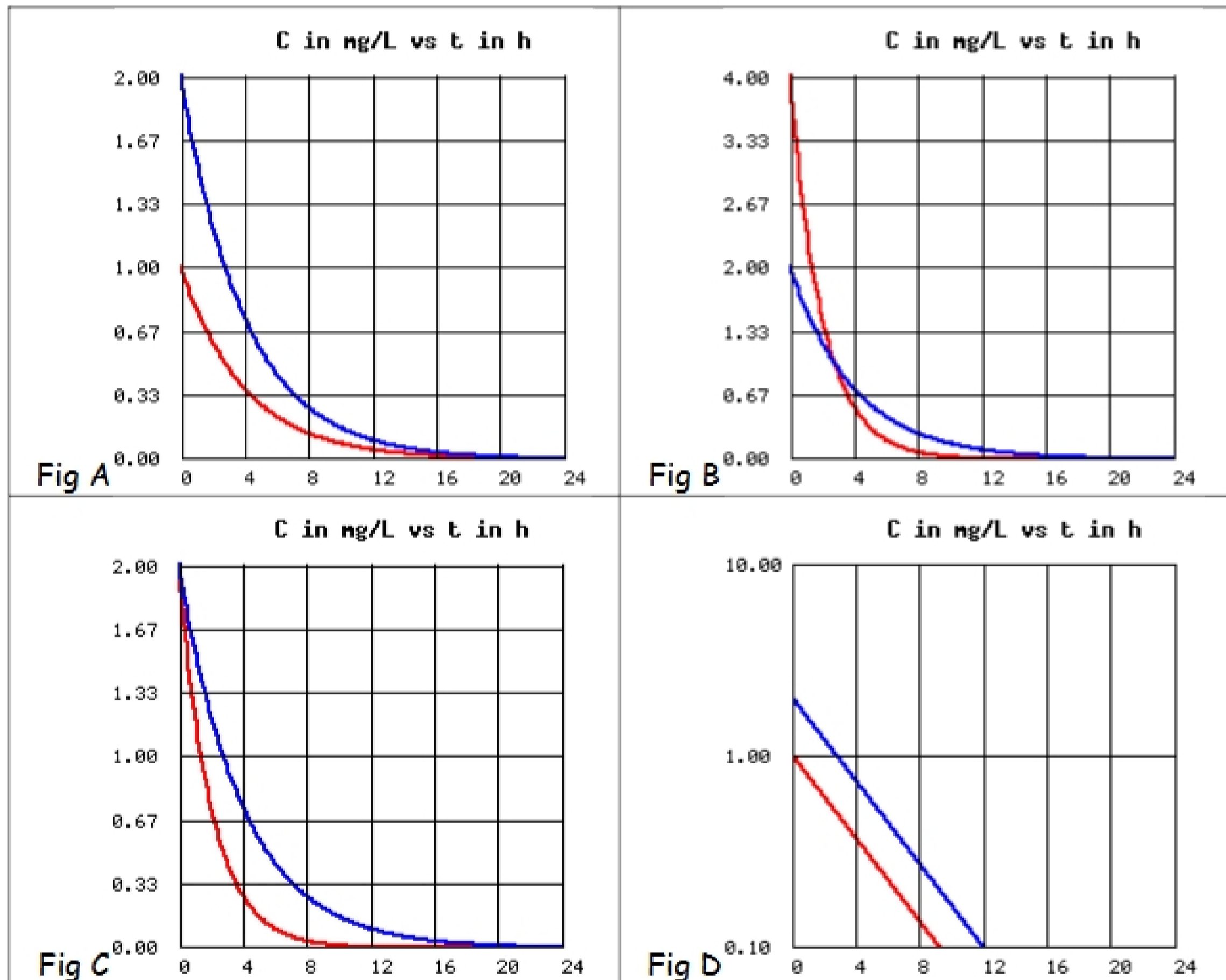


- 1) Identify the Pharmacokinetic metrics: **Dose**, **Volume of Distribution** or the **Clearance** (only pick one per scenario), whose changes would determine the differences observed in the following concentration time profiles. (eg: The structure of the answer would look like - The changes in the profiles of Fig A would be because of \_\_\_\_\_ parameter)



Ans) Fig A - Dose; Fig B - Vd; Fig C - Clearance; Fig D - Dose

2. List the assumptions that apply for a one compartment body model. (IV bolus administration).

a) The Distribution is instantaneous

b) Elimination is a first order process

c) Linear Pharmacokinetics

True or False:

1) For a drug characterized by a one compartment body model and administered as an IV bolus the expression  $AUC_{0-\infty} = C_0/K_e$  can be used to calculate the  $AUC_{0-\infty}$ . (T/F)

2)  $CL_{tot} = CL_{bil} + CL_{ren} + CL_{met}$  is always true. (T/F)

3) In the equation  $C = \left(\frac{Dose}{V_d}\right) * e^{(-k_e * t)}$ , the expression  $e^{(-k_e * t)}$  has a value between 0 and 1. (T/F)