Ch 14: Kinetics

Podcast Help Sheet

Podcast 1

* Is spontaneity same as the rate of reaction? Why or why not?
* What are the factors that affect the rate of a reaction?
* What is the difference between average rate, instantaneous rate and initial rate?
* How do you determine the rate of the reaction with respect to one reactant if you know the rate of reaction with respect to another reactant?
* What is the rate law?
* Can you calculate order of a reaction from the reaction stoichiometry without actually conducting an experiment?
* How do you calculate order of a reaction using experimental data from initial rates method?

PODCAST 2

* Why does increase in temperature generally increases the rate of the reaction?
* Is the activation energy same for the forward and the reverse reactions?
* Write Arrhenius equation. What does each quantity stand for? What is the significance of this equation?

PODCAST 3

* How do you calculate activation energy using graphical method?
* What is a reaction mechanism?
* Do the coefficients of an elementary step represent the order of a reaction?
* Why is more than a termolecular reaction unlikely to happen?
* What is the rate determining step? What is its significance? How many rate determining steps are present in any reaction mechanism?