

Ligand Substitution Reactions in Biology

Textbook page 415.

Define the following terms

- Ligand Substitution

Make notes on complex ions.

Use the following questions as a guide

1. Sketch a simplified diagram of the complex that forms in Haem when oxygen binds with the iron contained within.
2. Give a brief description of the structure of the haemoglobin protein.
3. Using $[\text{Fe}(\text{haem})(\text{protein})]^{2+}$ to represent the haem complex,
 - a. write an equation showing what happens when O_2 is bonded to the complex.
 - b. Write an equation showing what happens when CO_2 is bonded to the complex.
 - c. Write an equation showing what happens when CO is bonded to the complex.

Take care to show, in your equations, why carbon monoxide is toxic.