

Marks
4

- What is a chelate ligand?

Draw all possible isomers of $[\text{CoCl}_2(\text{en})_2]$. en = ethylenediamine = $\text{NH}_2\text{CH}_2\text{CH}_2\text{NH}_2$

- Explain briefly why the $[\text{Fe}(\text{H}_2\text{O})_6]^{3+}$ cation has a K_a of 6×10^{-3} M, whilst the $[\text{Fe}(\text{H}_2\text{O})_6]^{2+}$ cation has a K_a of 4×10^{-9} M.

2