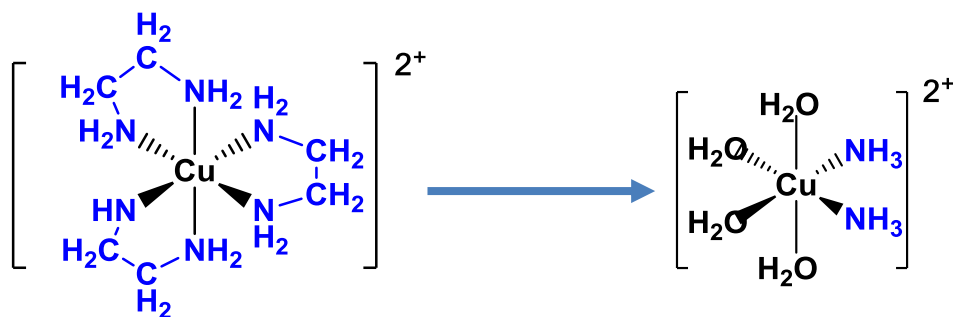


G5-Transition Metals: Questions (Extended)

1. Explain why the reaction below is unlikely to occur, using all correct scientific terms.



2. Re-write the above equation so it is feasible. Include any reagents needed and by-products.

3. Look up the following refcodes in the WebCSD: **IDULOK** **LEBRUF**

One of the compounds has two enantiomers and one does not.

- a) Define the term *enantiomer*.

- b) Give the refcode of the compound which has enantiomers and if you can, also write the formula of the compound.

Name: _____

Formula: _____

G5-Transition Metals: Questions (Extended)

- c) Draw both enantiomers of your chosen compound giving reasons as to why it is enantiomeric.

4. Explain the following order of stability in terms of Inorganic ligands:

Multidentate > Bidentate > Unidentate

5. Draw and name both isomers of the complex $[\text{Co}(\text{H}_2\text{O})_4\text{Cl}_2]$. One of these complexes can be seen in the WebCSD (Ref: **BEVVAB**)

Name:	Name:

6. Two geometric isomers of the complex $[\text{Co}(\text{H}_2\text{O})_3\text{Cl}_3]$ are shown below. Use these images to explain the difference between a *mer* and a *fac* isomer.

