IUPAC NOMENCLATURE

- The main rules for naming the complexes are :
 - If the coordination compound is ionic, then the positive part of coordination compound is named first just like simple salts.
 - The ligands of the coordination sphere are to be named first followed by the metal ion. The ligands can be neutral, anionic or cationic.
 - If any ligand is present more than once, then their repetition is indicated by prefixes like di, tri, tetra, etc. When bidentate or polydentate ligands are coordinated to the metal ion, their repetition is indicated by prefixes like bis, tris, tetrakis, etc.
 - When more than one ligands is present in the complex, then the ligands are named in the alphabetical order.
 - After naming the ligands, the central metal ion is to be named followed by its oxidation state in Roman numbers in brackets.
 - If the complex is neutral or provides a cationic complex ion, then the central metal ion is to be named

as it is. If the complex provides anionic complex ion then the name of central metal ion ends as 'ate'.

After the naming of central metal ion, anion which is in the outer sphere is to be named.

Examples :

[CoCl(NO ₂)(NH ₃) ₄]NO ₃	: Tetraamininechloronitrocobalt(III) nitrate
$[CoCl(ONO)(en)_2]^+$: Chlorobis(ethylenediamine) nitrito cobalt(III) ion
$\mathrm{K}_{3}[\mathrm{Al}(\mathrm{C}_{2}\mathrm{O}_{4})_{3}]$: Potassium trioxalatoaluminate(III)
$\frac{[\text{CoCl}_2(\text{NH}_3)_4]_3}{[\text{Cr}(\text{CN})_6]}$: Tetraamminedichlorocobalt(III) hexacyanochromate(III)

ISOMERISM

Two or more substance having the same molecular formula but different structural or spatial arrangement are called isomers and phenomenon is called isomerism.

Isomerism



* Geometrical isomerism is not shown by tetrahedral complexes.