

Formula of Complex.

- (a) In formulas of both simple and complex salts, cation precedes the anion. Molecular compounds are written as single units.
- (b) Complex ions are written inside square brackets without any space b/w the ions.
- (c) Metal atom and ligands are written in the following order:
- In the complex part, the metal atom is written first followed by ligands in order, anionic $\rightarrow$ neutral $\rightarrow$ cationic.
 - If more than one ligand of one type (anionic, neutral or cationic) are present, then they are arranged in english alphabetical order between H_2O and NH_3 , H_2O should be written first. Similarly order of NO_2^- , SO_3^{2-} and OH^- will be NO_2^- .
 - When ligands of the same type have similar name for the first time, then the ligand with less number of such atoms is written first.
 - Polyatomic ligands and abbreviations for ligands are always written in lower case letters.
e.g. (en), (py) etc.
 - Charge of a complex ion is represented as superscript or square bracket.

$K_4[Fe(CN)_6]$ - First cation & then anion.
 $[CrCl_2(H_2O)_4] Br \cdot Cl^-$ (negative ligand.) before H_2O