

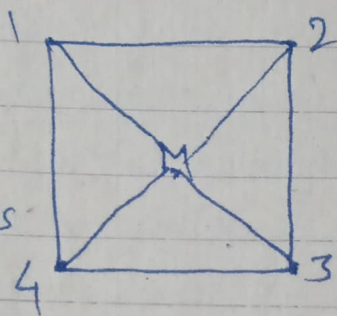
Geometrical Isomers → ✓

Geometrical isomers are named either by using the prefixes *Cis* for adjacent position and *trans* for opposite position i.e.

Cis form → When complexes are placed in adjacent position then it is referred as *Cis*-form.

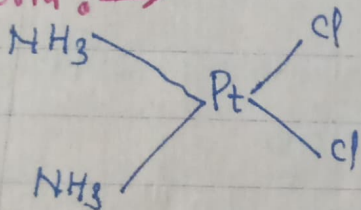
Trans form → When complexes are placed in opposite position then it is referred as *trans* form.

Position (1,3) and (2,4) are example of *Trans* Form.



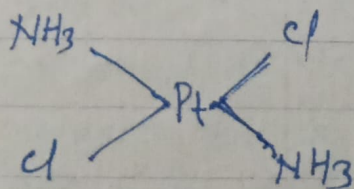
Position (1,4), (2,3) are *Cis* form.

Cis form →



Cis-dichloro diammine Platinum II
or, 1,2-dichloro diammine Platinum II

Trans form



Trans-dichloro diammine Platinum II
1,3-dichloro diammine Platinum II

F. Basolo and R.G. Pearson described the numbering system for naming the mono-nuclear, bi-nuclear bridged and bi-nuclear Planar Octahedral Complexes:—

In mono nuclear Octahedral Complexes of MA_3B_3 type (1,2), (1,3), (1,4), (1,5), (6,2), (6,3), (6,4), (6,5), (2,3), (3,4), (4,5) and (5,2) are *Cis*-Position and (1,6), (2,6), (3,5), (4,6), (5,3), (6,1), (6,2), (6,3), (6,4), (6,5), (6,6) are *Trans*-Position.

5 Optical ISOMERS

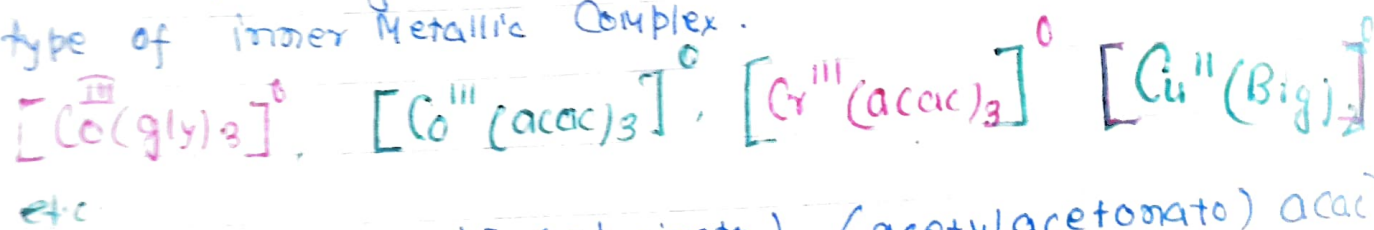
Dextro and levorotatory complexes are respectively designated either by (+) or (-) or by d or l etc.

If the ligand molecules of a complex are optically active, the configuration of the whole ion is represented by D or L and that of the ligand molecules by d or l eg.

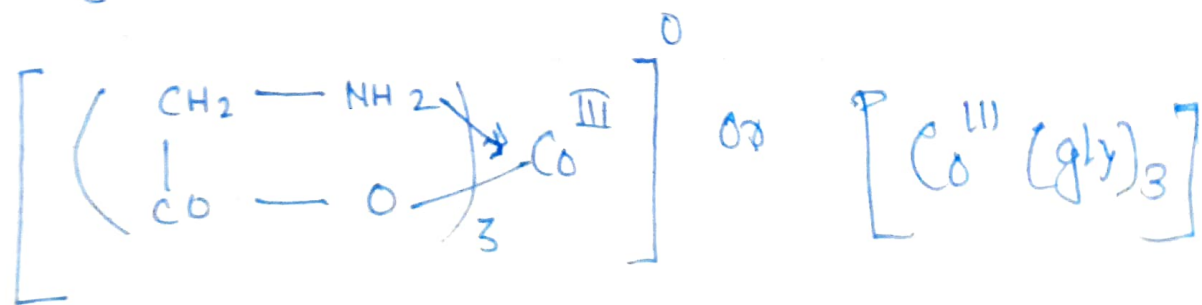
INNER METALLIC COMPLEXES: →

When the ligands like acetyl acetonato, Glycinato etc which have neutral (donor) and anionic (acidic) groups co-ordinated with metallic cation, they form the complexes in which both the co-ordination number and charge of the cation are satisfied simultaneously. Such complexes are called inner metallic complexes or simply inner complexes.

The following are the important complex of these type of inner metallic complex.

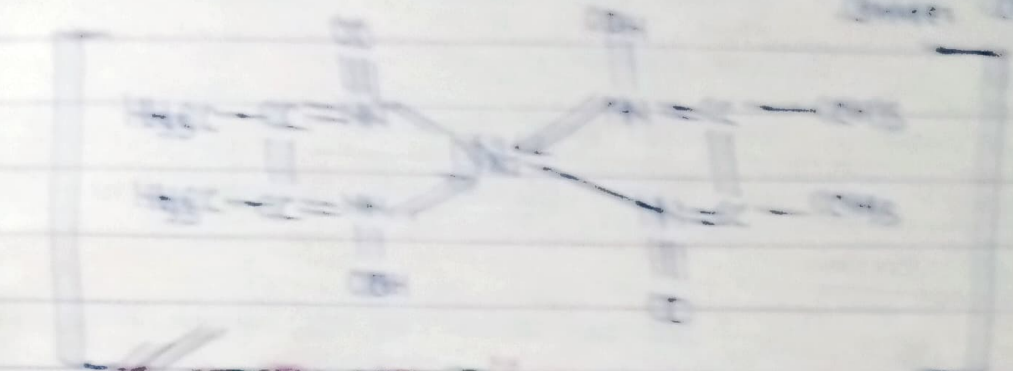
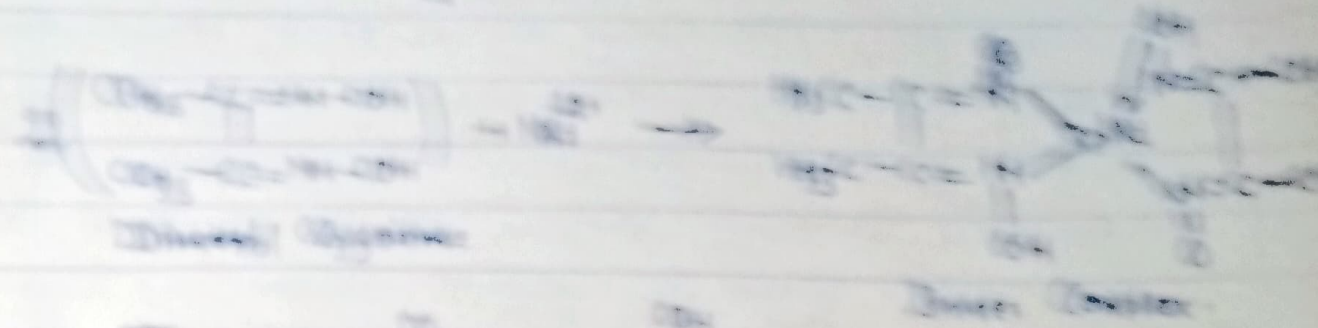


The ligands gly^- (glycinato), (acetylacetonato) acac^- and Big^- (biguanato) functions as monobasic bidentate ligands, one of the groups being acidic and one being donor group, These complexes have the following formulae.



Werner's Coordination Theory

Werner's Coordination Theory explains the structure and properties of coordination compounds. It states that a central metal atom is surrounded by a number of ligands, forming a coordination complex.



WERNER'S COORDINATION THEORY

Introduction:

Theory:

Werner's Coordination Theory explains the structure and properties of coordination compounds. It states that a central metal atom is surrounded by a number of ligands, forming a coordination complex. The theory is based on the following principles:

- (1) The central metal atom is surrounded by a number of ligands, forming a coordination complex.
- (2) The coordination number of a metal atom is the number of ligands attached to it.
- (3) The coordination number of a metal atom is determined by the size of the metal ion and the size of the ligand.
- (4) The coordination number of a metal atom is also determined by the nature of the ligand.

The primary valence of a metal ion is the number of bonds it forms with the ligands.

The secondary valence of a metal ion is the number of bonds it forms with the ligands, which are not primary valence bonds.

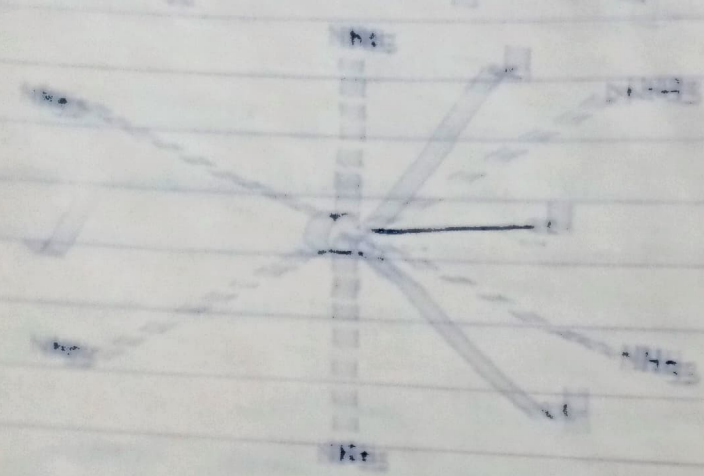
(1) Secondary Variance is the variance of the residuals from the regression of the dependent variable on the independent variable. It is the variance of the error term.

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(3) Secondary Variance is the variance of the residuals from the regression of the dependent variable on the independent variable. It is the variance of the error term.

(4) Secondary Variance is the variance of the residuals from the regression of the dependent variable on the independent variable. It is the variance of the error term.

On the basis of this, we can say that the secondary variance is the variance of the error term.



In the above diagram, the secondary variance is the variance of the residuals from the regression of the dependent variable on the independent variable. It is the variance of the error term.

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