

Co-ordination Compounds 1.

Degree-II (H) , Paper-III , Group-B

Lecture-12 ,By-Dr.Rinky,01/10/2020

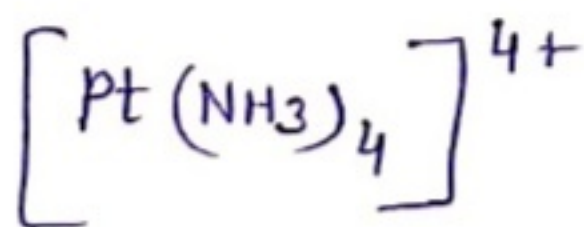
Nomenclature of Coordination

Compounds Continues..

Naming of Coordination Compounds having Cation and Anion both as Complex Continues..

iv) Now in the last, if we consider -4 charge on complex anion then charge on cation will be $+4$.

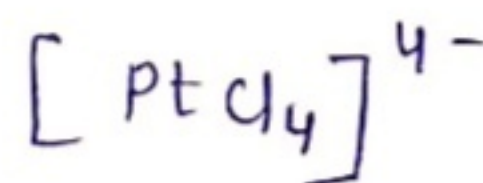
Complex cation:



$$x + 0 = +4$$

$$x = +4$$

Complex anion



$$x - 4 = -4$$

$$x = 4 - 4 = 0$$

* The Oxidation states calculated in point number

(i) , (iii) and (iv) are not common oxidation

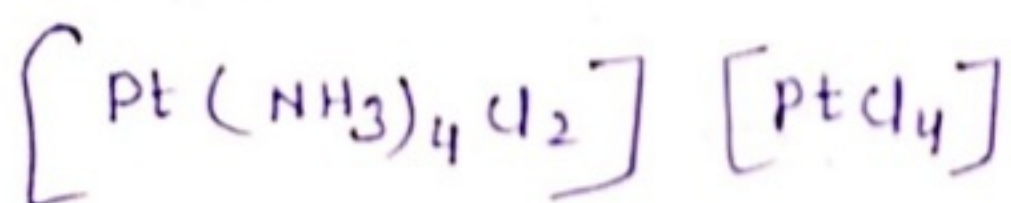
state of Pt. The oxidation state calculated in point number (ii) is $+2$ in both the complex

ion which is the one of the two common oxidation states and it satisfies the charges on the complex cation and anion.

Therefore, the name of the complex is: -

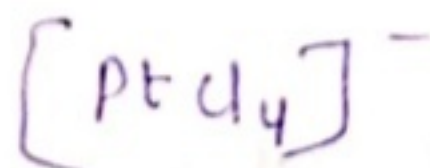
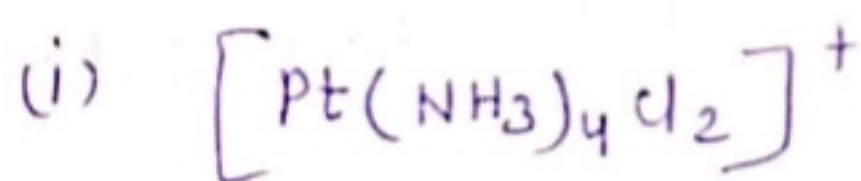
tetraammineplatinum(II) tetrachlorido platinate(II)

Example : 2



Complex cation

Complex anion

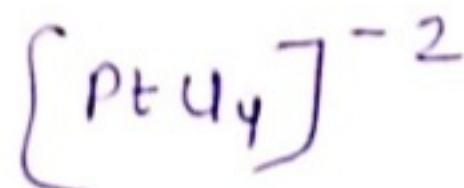
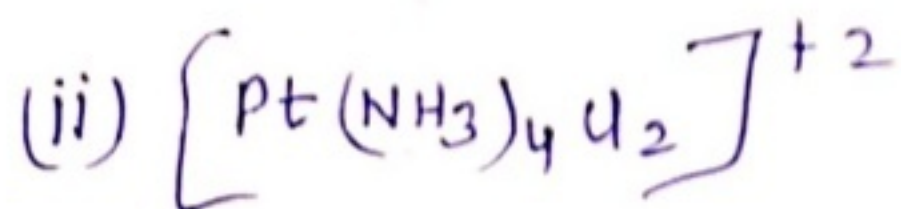


$$x - 2 = +1$$

$$x - 4 = -1$$

$$x = 2 + 1 = +3$$

$$x = +3$$



$$x - 2 = +2$$

$$x - 4 = -2$$

$$x = 2 + 2 = +4$$

$$x = 4 - 2$$

$$x = +2$$

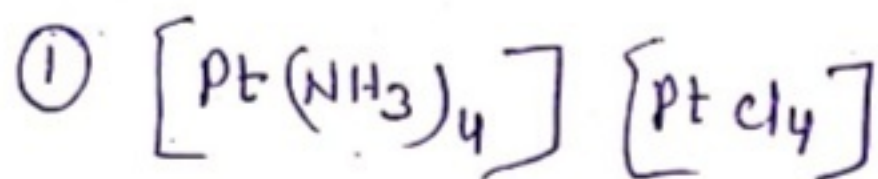
Therefore name is: -

tetraamminedichlorido platinum(IV) tetrachlorido platinate(II)

An another method to decide the oxidation states of Pt in complex ions:

- * Pt in oxidation state of +2 always form complexes or complex ions of co-ordination number 4 and Pt in oxidation state of +4 always forms complexes of co-ordination number of 6.

For example: -



In both complex (No. = 4)

Hence, O.No. of Pt = +2

Thus name of the complex is: -

tetraammineplatinum(II) tetrachlorido platinate(II)

To be continued in next lecture..