

Inorganic Qualitative Analysis (B.Sc.Semester-6)

Subject: Chemistry

Practical No-

Date:.....

[A] Preliminary Test

No	Test	Observation	Inferences
1	State	Crystalline \ Amorphous	
2	Colour of Mixture		
3	Odour		

[B] Dry Test

(a) Dry Test for Positive Radical.

No	Test	Observation	Inferences
1	Heating in dry Test Tube		
2	Flame test		
3	Borex Bead Test		
4	Sub + NaOH Heat		
5	Acid extract test for (Fe^{+2} and Fe^{+3})		

(b) Dry Test for Negative Radical.

No	Test	Observation	Inferences
1	Mix +dil. HCl		
2	Mix + Con. H_2SO_4		
3	Mix + MnO_2+ Con. H_2SO_4		
4	Borate Test (BO_3^{-3})		
5	Acid extract + excess con. HNO_3 +Ammonium molibledam		

	(Soda extract Test) Test for PO_4^{3-}		
	Test for AsO_4^{3-}		
	Test for AsO_3^{-3}		

[C] Water Extract Test.

No	Test	Observation	Inferences
1	W.E. + Nessler's reagent		
2	W.E.+ Zinc Urenylacetate.		
3	W.E.+ Picric Acid		
4	W.E.+ FeSO_4 (frees solution) + Con. H_2SO_4		
5	W.E. + AgNO_3		
6	W.E.+ BaCl_2		
7	W.E.(Yellow)+HCl +H_2S		
8	W.E.(Orange)+H_2S		

Result from the Dry Test and W.E. test.

Positive Radical :	Negative Radical:
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[D] Wet Test

(a) Wet Test for Positive Radical

(i) Preparation of Original Solution:

(ii) Group Separation for Positive Radical

No	Test	Observation	Inferences
1	O.S.+ dil HCl		
2	O.S.+ dil HCl + H_2S (g)		
3	O.S.+ NH_4Cl + NH_4OH		
4	O.S.+ NH_4Cl + NH_4OH + H_2S (g)		
5	O.S.+ NH_4Cl + NH_4OH + $(\text{NH}_4)_2\text{CO}_3$		
6	O.S.+ NH_4Cl + NH_4OH + $\text{NH}_4\text{H}_2\text{PO}_4$		

[If PO_4 is present as anion and substance is water insoluble, follow the Insoluble Phosphate scheme after II-group test.] **Insoluble Phosphate scheme**

No	Test	Observation	Inferences

(iii) _____ Group Classification.

No	Test	Observation	Inferences

(iii) _____ Group Classification.

No	Test	Observation	Inferences

(iv) Confirmative Test for Positive Radical.

No	Test	Observation	Inferences

(v) Confirmative Test for Negative Radical

No	Test	Observation	Inferences

[E] Result Table

Positive Radical	Negative Radical