GHSS KALLUR PUDUROWNATDA CASALAI 289536

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SYSTEMATIC ANALYSIS OF SIMPLE SALT- I [LEAD NITRATE]					
S NO	Experiment	Observation	Inference		
	Analysis of anions				
1	Colour: Note the colour of the salt	Colourless	Absence of copper sulphate, iron salt		
2.	Action of heat: A small amount of a salt is heated inatest tube	A reddish brown gas with afishy odour evolves	Presence of a nitratesalt		
3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	No Characteristic Colourflame Observed.	Absence of a copper, barium, calcium		
4.	Action of dil. HCI: Small amount of salt + 1mL of dil.HCl . Gently heat it	A reddish brown gas with thefishy odour turning a moist ferrous sulphate paper brownevolves	Presence of nitrate		
5	Action of Conc.H2SO4: Small amount of a salt in a dry test tube + Conc. H2SO4 and gently heatit	Reddish brown gas turning acidified ferrous sulphate paper green evolves.	Presence of nitrate		
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube +pinch of MnO2 + Conc.H2SO4 and gently heat it	No Characteristic Change is Observed.	Absence of chloride, bromide		
7.	Action of Conc. H2SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H2SO4. Gently heat it	A reddish brown gas with fishyodour turning a moist ferrous sulphate paper brownevolves	Presence of nitrate.		
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	No Characteristic gas is Observed.	Absence of ammoniumsalt		
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it.	No Red Orange is Observed.	Absence of chloride.		
Analysis carbona Take 1g called so	s with Sodium carbonate extract Preparation of So te extract of the given salt + 3g of solid sodium carbonate + 20g of dium carbonate extract.	dium distilled water. Boil the solutionfor fewmins	s, filter.The filtrate is		
10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	No Characteristic ppt is Observed.	Absence of chloride, bromide, sulphide		
11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of bariumchloride solution and shake	No white ppt is formed	Absence of sulphate		
12	Test with lead acetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it +1mlof lead acetate	No white ppt is formed	Absence of sulphate		
13	Brown ring test: Iml of the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of thetest tube.	A brown ring is formed	Presence of nitrate confirmed.		
14	Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about1ml each of ammonium molybdate and Conc.HNO3	No canary yellow ppt is formed.	Absence of phosphate		
15	Test with sodium nitrobruside: 1mlof the sodium carbonate extract + 1ml of dil .aommonia. + few drops of sodium nitrobruside.	No purple or violet colouration appears	Absence of sulphide.		

Propara	tion of salt solution Padasalai.Net	W	ww.CBSEtips.in		
To a sma solution"	all amount of salt in a test tube add 2 to 3ml of water, sh	ake it and gently heat it. Thissolution is calle	ed "original		
1	GROUP 0 1ml of the original salt solution add about 1ml each of Nessler's reagentandNaOH.	No chocolate brown ppt is obtained.	Absence of ammonium		
2	GROUP I Take about 1 ml of the salt solution in a test tube Add about 1mL of dil HCl, and shake it	A White ppt is formed.	Presence of 1st groupmetal ions (Pb ²⁺)		
Analysis	Analysis of the 1st group ppt:				
	To the ppt add about 1ml of waterandboil it	The ppt dissolves	Presence of Lead		

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1	Test for Lead: To one portion of the hot solutionadd about 1ml of K2CrO4	A yellow ppt is obtained	Presence of Lead
2	To an another portion of the hot solution add about 1ml of KI. To the yellow ppt add about 1ml of water, boiland cool.	A yellow ppt is obtained.The yellow ppt dissolves on boiling , and on cooling golden spangles appear	Presence of lead is confirmed.
Result:			
The Anio	on Present : NITRATE		
The catio	on Present : LEAD		
The Given simple salt : LEAD NITRATE			

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S NO	Experiment	Observation	Inference
	Ar	alysis of anions	I
1	Colour: Note the colour of the salt	Blue	May be coppersulphate
2.	Action of heat: A small amount of a salt is heated inatest tube	Blue Changes into White dueto dehydration	May be coppersulphate
3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	Bluish green flame.	Presence of a Coppersalt
4.	Action of dil. HCI: Small amount of salt + 1mL of dil.HCl . Gently heat it	No Charactristic gas evolves	Absence of Carbonate,Nitrate, Sulphide
5	Action of Conc.H ₂ SO4: Small amount of a salt in a dry test tube + Conc. H ₂ SO4 and gently heatit	No Charactristic gas evolves	Absence of Chloride, Bromide, Nitrate
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube +pinch of MnO2 + Conc. H2SO4 and gently heat it	No Characteristic Gas is evolved.	Absence of chloride, bromide
7.	Action of Conc. H2SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H2SO4. Gently heat it	No reddish brown gas evolves	Absence of nitrate.
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	No Characteristic gas is Observed.	Absence of ammoniumsalt
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it.	No Red Orange Vapour is Observed.	Absence of chloride.
Analysi carbona Take 1g called so	s with Sodium carbonate extract Preparation ofSo ate extract of the given salt + 3g of solid sodium carbonate + 20g of dium carbonate extract.	dium distilled water. Boil the solutionfor fewmins	s, filter.The filtrate is
10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	No Characteristic ppt is Observed.	Absence of chloride, bromide, sulphide
11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of barium chloride solution and shake	A white ppt insoluble in dil H2SO4 is formed	Prsence of sulphate is Confirmed.
12	Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1mlof Lead Acetate	A whit ppt soluble in excessof ammonium acetate is formed	Presence of sulphate
13	Brown ring test: 1ml of the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of thetest tube.	No brown ring is formed	Absence of Nitrate
14	Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about 1mL each of ammonium molybdate andConc. HNO3	No canary yellow ppt is formed.	Absence of Phosphate

15	Test with sodium nitro bruside: 1ml of the sodium carbonate extract + 1ml of dil. aommonia. + few dropsofsodium nitro bruside.	W No purple or violet colouration appears	ww.CBSEtips.in Absence of sulphide.
Preparation of salt solution:			

To a small amount of salt in a test tube add 2 to 3ml of water, shake it and gently heat it. Thissolution is called "original solution".

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1	GROUP 0 1ml of the original salt solution add about 1ml each of Nessler's reagentandNaOH.	No chocolate brown ppt is obtained.	Absence of ammonium	
2	GROUP I Take about 1 ml of the salt solution inatest tube Add about 1ml of dil HCl, andshake it	No ppt is formed.	Absence of 1st groupmetal ions (Pb ²⁺)	
3	GROUP II To the above solution pass H2S gas.	A Black ppt is formed	Presence of 2nd groupmetal ions (Cu ²⁺)	
Analysis	s of the 2nd group ppt:	•		
1	Test for copper: i). To one portion of the solution add ammonium hydroxide	No ppt is obtained, but the solution is blue	Presence of Copper	
2	ii) To the blue coloured solution addabout 1ml each of acetic acid and potassium ferro cyanide	A red brown ppt is obtained	Presence of Copper Confirmed	
Result: The Anion Present The : SULPHATE cation Present The : COPPER Given simple salt : COPPER SULPHATE				

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	SYSTEMATIC ANALYSI	S OF SIMPLE SALT-III [COPPER CARE	BONATE]
S NO	Experiment	Observation	Inference
	An	alysis of anions	
1	Colour: Note the colour of the salt	Green	May be Copper Carbonate
2.	Action of heat: A small amount of a salt is heated inatest tube	A colourless, odourless gasturning lime water milky evolves	Presence of carbonate
3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	Bluish green flame.	Presence of a coppersalt
4.	Action of dil. HCI: Small amount of salt + 1mL of dil.HCl . Gently heat it	A colourless, odourless gas evolves as a brisk Effervescenceand turns limewater milky	Presence of carbonateis Confirmed
5	Action of Conc.H2SO4: Small amount of a salt in a dry test tube + Conc. H2SO4 and gently heatit	No Charactristic gas evolves	Absence of Chloride, Bromide, Nitrate
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube +pinch of MnO2 + Conc. H2SO4 and gently heat it	No Characteristic Gas is evolved.	Absence of chloride, bromide
7.	Action of Conc. H2SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H2SO4. Gently heat it	No reddish brown gas evolves	Absence of nitrate.
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	No Characteristic gas is Observed.	Absence of ammoniumsalt
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it.	No Red Orange Vapour is Observed.	Absence of chloride.
Analysis arbona Fake 1g (s with Sodium carbonate extract Preparation of So te extract of the given salt + 3g of solid sodium carbonate + 20g of	dium distilled water. Boil the solutionfor fewmin	s. filter.The filtrate is

called sodium carbonate extract.

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10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	No Characteristic ppt is Observed.	Absence of chloride, bromide, sulphide
11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of barium chloride solution and shake	No white ppt is obtained	Absence of sulphate
12	Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1mlof Lead Acetate	No white ppt is obtained	Absence of sulphate

			CDCD4:
13	Brown ring test: Iml of the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of thetest tube.	W	Absence of nitrate
14	Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about1ml each of ammonium molybdate and Conc.HNO3	No canary yellow ppt is formed.	Absence of phosphate
	GHSS KALLUR PUDUKOTTAI DT CELL94428799	36	7
15	Test with sodium nitro bruside: 1ml of the sodium carbonate extract + 1ml of dil. aommonia. + few dropsofsodium nitro bruside.	No purple or violet colouration appears	Absence of sulphide.
Prepara To a sma solution"	tion of salt solution: Il amount of salt in a test tube add 2 to 3ml of dil. HCl,	shake it and gently heat it. Thissolution is ca	lled "original
1	GROUP 0 1ml of the original salt solution add about 1ml each of Nessler's reagentandNaOH.	No chocolate brown ppt is obtained.	Absence of ammonium
2	GROUP I Take about 1 ml of the salt solution inatest tube Add about 1ml of dil HCl, andshake it	No ppt is formed.	Absence of 1st groupmetal ions (Pb ²⁺)
3	GROUP II To the above solution pass H2S gas.	A Black ppt is formed	Presence of 2nd groupmetal ions (Cu ²⁺)
Analysis	s of the 2nd group ppt:		
1	Test for copper: i). To one portion of the solution add ammonium hydroxide	No ppt is obtained, but the solution is blue	Presence of Copper
2	ii) To the blue coloured solution addabout 1ml each of acetic acid and potassium ferro cyanide	A red brown ppt is obtained	Presence of Copper Confirmed
Result: The Anio The catio The Give	on Present : CARBONATE on Present : COPPER en simple salt : COPPER CARBONATE		

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S NO	Experiment	Observation	Inference
	 	alveis of anions	
	יר ו		-
1	Colour: Note the colour of the salt	Brown	May be an iron salt
2.	Action of heat: A small amount of a salt is heated inatest tube	No Characteristic ChangeOccurs	Absence of Zinc, Ammonium, Nitrate
		1	
3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	No Characteristic flame Colour is Observed.	Absence of Copper, Barium, Calcium
4.	Action of dil. HCI: Small amount of salt + 1ml of dil. HCl . Gently heat it	No Charactristic gas evolves	Absence of Carbonate,Nitrate, Sulphide
5	Action of Conc.H2SO4: Small amount of a salt in a dry test tube + Conc. H2SO4 and gently heatit	A colourless gas evolves. Itgives a dense white fumes when a glass rod dipped inliquid ammonia is brought close to its mouth	Prsence of Chloride
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube + pinch of MnO2 + Conc.H2SO4 andgently heat it	A greenish yellow gas turning starch iodide paper blue evolves	Prsence of Chloride
7.	Action of Conc. H ₂ SO ₄ and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H ₂ SO ₄ . Gently heat it	No reddish brown gas evolves	Absence of nitrate.
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	No Characteristic gas is Observed.	Absence of ammoniumsalt
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it. Pass the vapours into dilute sodiumhydroxide solution. If a yellow solution is obtained, add dil. Acetic acid and leadacetate	A yellow ppt is obtained	Presence of chloride.
Analysis carbona Fake 1g called so	s with Sodium carbonate extract Preparation of So ate extract of the given salt + 3g of solid sodium carbonate + 20g of dium carbonate extract.	dium	ns, filter.The filtrate is
10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	A curdy white ppt insoluble in dil. Ammonia isformed	Presence of chloride
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11	lest with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of bariumchloride solution and shake	No white ppt is obtained	Absence of sulphate
12	Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1mlof Lead Acetate	No white ppt is obtained	Absence of sulphate
13	Brown ring test: 1mL of the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of thetest tube.	No brown ring is formed	Absence of nitrate

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14	Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about1mleach of ammonium molybdate and Conc.HNO3	W No canary yellow ppt is formed.	Absence of phosphate
15	Test with sodium nitrobruside: 1ml of the sodium carbonate extract + 1ml of dil .aommonia. + few dropsofsodium nitro bruside.	No purple or violet colouration appears	Absence of sulphide.
Prepara To a sma solution'	tion of salt solution: all amount of salt in a test tube add 2 to 3ml of water, sh ?.	ake it and gently heat it. Thissolution is call	ed "original
1	GROUP 0 1ml of the original salt solution add about 1ml each of Nessler's reagentandNaOH.	No chocolate brown ppt is obtained.	Absence of ammonium
2	GROUP I Take about 1 ml of the salt solution inatest tube Add about 1ml of dil HCl, andshake it	No White ppt is formed.	Absence of 1st groupmetal ions (Pb ²⁺)
3	GROUP II To the above solution pass H2S gas.	No Black ppt is formed	Absence of 2nd groupmetal ions (Cu ²⁺)
4	GROUP III To about 1ml of the salt solution add about 1ml each of NH4Cl,NH4OH and shake it well	A brown ppt is formed	presence of 3rd groupmetal ions (Fe ³⁺)
Analysi	s of the 3rd group ppt:		
1	To the ppt add a pinch of sodiumperoxide and boil it	A red or brown ppt is obtained	Presence of Iron

i.) To one portion of the red ppt addabout1mL of dil HCl and boil it andthen add about 1ml of potassium ferocyanide 2 A blue ppt is obtained Presence of Iron is Confirmed ii.) To an another portion of the pptaddabout 1mL of dil. HNO3 A blood red colouration isseen Presence of Iron is 3 boil it and then add about 1ml of KCNS Confirmed **Result:** : CHLORIDE The Anion Present The cation Present : FERRIC The Given simple salt : FERRIC CHLORIDE

www.Padasalai.Net Systematic analysis of simple salt- v [aluminium sulphate]

S NO	Experiment	Observation	Inference		
	Ar	nalysis of anions			
1	Colour: Note the colour of the salt	Colourless	Absence of copper,Iron salts		
2.	Action of heat: A small amount of a salt is heated inatest tube	No Characteristic ChangeOccurs	Absence of Zinc, Ammonium, Nitrate		
3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	No Characteristic flame Colour is Observed.	Absence of Copper, Barium, Calcium		
4.	Action of dil. HCI: Small amount of salt + 1ml of dil. HCl . Gently heat it	No Charactristic gas evolves	Absence of Carbonate,Nitrate, Sulphide		
5	Action of Conc.H2SO4: Small amount of a salt in a dry test tube + Conc. H2SO4 and gently heatit	No Charactristic gas evolves	Absence of Chloride, Bromide, Nitrate		
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube + pinch of MnO2 + Conc.H2SO4 andgently heat it	No Characteristic Gas is evolved.	Absence of chloride, bromide		
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7.	Action of Conc. H2SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H2SO4. Gently heat it	No reddish brown gas evolves	Absence of nitrate.
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	No Characteristic gas is Observed.	Absence of ammoniumsalt
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it.	No Red Orange Vapour is Observed.	Absence of chloride.

Analysis with Sodium carbonate extract Preparation of Sodium

carbonate extract

Take 1g of the given salt + 3g of solid sodium carbonate + 20g of distilled water. Boil the solution for fewmins, filter. The filtrate is called sodium carbonate extract.

10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	No Characteristic ppt is Obtained.	Absence of chloride, bromide, sulphide
11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of bariumchloride solution and shake	A white ppt insoluble in dil H2SO4 is formed	Prsence of sulphate is Confirmed.
12	Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1mlof Lead Acetate	A whit ppt soluble in excessof ammonium acetate is formed	Presence of sulphate
13	Brown ring test: 1ml o f the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of thetest tube.	No brown ring is formed	Absence of nitrate

Kindly send me your questions and answerkeys to us : Padasalai.net@gmail.com

14	Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about1mleach of ammonium molybdate and Conc.HNO3	No canary yellow ppt is formed.	ww.CBSEtips.in Absence of phosphate
15	Test with sodium nitrobruside: 1ml of the sodium carbonate extract + 1ml of dil .aommonia. + few dropsofsodium nitro bruside.	No purple or violet colouration appears	Absence of sulphide.

	0	ootuineu.	Absence of ammonium
2 G T A	GROUP I Fake about 1 ml of the salt solution inatest tube Add about 1ml of dil HCl, andshake it	No White ppt is formed.	Absence of 1st groupmetal ions (Pb ²⁺)
3 G	GROUP II To the above solution pass H2S gas.	No Black ppt is formed	Absence of 2nd groupmetal ions (Cu ²⁺)
4 G T of	GROUP III Fo about 1ml of the salt solution add about 1ml each f NH4Cl and NH4OHandshake it well	A gelatinous white ppt is formed	Presence of 3rd groupmetal ion (Al ³⁺)
alysis c	of the 3rd group ppt:		
1 T a	Fest for Aluminium: Fo the ppt add a pinch of sodiumperoxide Ind boil it	A colourless solution is obtained	Presence of Aluminiun
2 a	To the colourless solution adddil.HCl nd shake it	A gelatinous white ppt is obtained	Presence of Aluminiumis Confirmed
Result The Ar The ca The Gi	t: nion Present : SULPHATE tion Present : ALUMINIUM iven simple salt : ALUMINIUM SULPHA	ATE	

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SYSTEMATIC ANALYSIS OF SIMPLE SALT- VI [ALUMINIUM NITRATE]

S NO	Experiment	Observation	Inference		
	Analysis of anions				
1	Colour: Note the colour of the salt	Colourless	Absence of copper,Iron salts		
2.	Action of heat: A small amount of a salt is heated inatest tube	A reddish brown gas with afishy odour evolves	Presence of a nitratesalt		
3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	No Characteristic flame Colour is Observed.	Absence of Copper, Barium, Calcium		

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4.	Action of dil. HCI: Small amount of salt + 1ml of dil. HCl . Gently heat it	A reddish brown gas with thefishy odour turning a moist ferrous sulphate paper brownevolves	Presence of nitrate			
5	Action of Conc.H2SO4: Small amount of a salt in a dry test tube + Conc. H2SO4 and gently heatit	Reddish brown gas turning acidified ferrous sulphate paper green evolves.	Presence of nitrate			
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube + pinch of MnO2 + Conc.H2SO4 andgently heat it	No Characteristic Gas is evolved.	Absence of chloride, bromide			
7.	Action of Conc. H2SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H2SO4. Gently heat it	A reddish brown gas with fishyodour turning a moist ferrous sulphate paper brownevolves	Presence of nitrate			
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	No Characteristic gas is Observed.	Absence of ammoniumsalt			
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it.	No Red Orange Vapour is Observed.	Absence of chloride.			
Analysis carbona Take 1g called soo	Analysis with Sodium carbonate extract Preparation of Sodium carbonate extract Take 1g of the given salt + 3g of solid sodium carbonate + 20g of distilled water. Boil the solutionfor fewmins, filter. The filtrate is called sodium carbonate extract.					
10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	No Characteristic ppt is Obtained.	Absence of chloride, bromide, sulphide			
11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of bariumchloride solution and shake	No white ppt is obtained	Absence of sulphate			
12	Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it +1mlof Lead Acetate	No white ppt is obtained	Absence of sulphate			
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 Brown ring test:

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 Brown ring test:

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	Ammonium molybdate test:				
	1 ml of the extract + dil HNO3 + about1mleach of	No canary yellow ppt is			
14	ammonium molybdate and Conc.HNO3	formed.	Absence of Phosphate		
	Test with sodium nitrobruside:				
	1ml of the sodium corbonate extract				
15	1 1ml of the southin carbonate extract	No purple or violet	Absence of sulphide.		
	+ Thi of un .aominoma. + Tew ur opsoisourum	colouration appears			
	intro brusiut.				
Prepara	tion of salt solution:				
To a sma	all amount of salt in a test tube add 2 to 3ml of water, sh	ake it and gently heat it. Thissolution is calle	ed "original		
solution'					
	GROUP				
		No chocolate brown ppt is			
1	af Nessler's response divergent	obtained.	Absence of ammonium		
	of Nessier's reagentationaOH.				
	GROUP		1		
	Take about 1 ml of the colt colution instact to be		Absence of 1st groupmetal		
2	Add about 1 ml of the sait solution matest tube	No White ppt is formed.	ions (Pb^{2+})		
	Add about 1111 of dif HCI, andshake it				
	GROUP II				
	To the above solution pass H2S gas		Absence of 2nd groupmetal		
3	To the above solution pass 1125 gas.	No Black ppt is formed	ions (Cu ²⁺)		
	shout ful of the self selection of discussion of	A gelatinous white ppt is	Presence of 3rd grounmetal		
4	NULACE and NULACE and the set of	formed	ion (ΛI^{3+})		
	NII4CI and NII4OIIand snake it wen	lormeu			
Analysi	s of the 3rd group ppt:				
· · · · , · ·					
	Test for Aluminium		1		
1	To the part add a pinch of adjumperovide	A colourless solution is	Presence of Aluminium		
	and hold it	obtained			
2	To the colourless solution adddil.HCl	A gelatinous white ppt is	Presence of Aluminiumis		
_	and shake it	obtained	Confirmed		
Res	ult:				
The	Anion Present : NITRATE The				
catio	on Present : ALUMINIUM				
The	Given simple salt : ALUMINIUM NITRAT	ГЕ			

S NO	Experiment	Observation	Inference		
	Analysis of anions				
1	Colour: Note the colour of the salt	Colourless	Absence of copper,Iron salts		
2.	Action of heat: A small amount of a salt is heated inatest tube	Salt is Yellow when hot,White when cold	May be a zinc salt		
3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	No Characteristic flame Colour is Observed.	Absence of Copper, Barium, Calcium		
4.	Action of dil. HCI: Small amount of salt + 1ml of dil. HCl . Gently heat it	No Charactristic gas evolves	Absence of Carbonate,Nitrate, Sulphide		
5	Action of Conc.H ₂ SO4: Small amount of a salt in a dry test tube + Conc. H ₂ SO4 and gently heatit	No Charactristic gas evolves	Absence of Chloride, Bromide, Nitrate		
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube + pinch of MnO2 + Conc.H2SO4 andgently heat it	No Characteristic Gas is evolved.	Absence of chloride, bromide		
7.	Action of Conc. H2SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H2SO4. Gently heat it	No reddish brown gas evolves	Absence of nitrate.		
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	No Characteristic gas is Observed.	Absence of ammoniumsalt		
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it.	No Red Orange Vapour is Observed.	Absence of chloride.		
Analysis with Sodium carbonate extract Preparation of Sodium carbonate extract Take 1g of the given salt + 3g of solid sodium carbonate + 20g of distilled water. Boil the solution for fewmins, filter. The filtrate is called sodium carbonate extract.					

SYSTEMATIC ANALYSIS OF SIMPLE SALT- VII[ZINC SULPHATE]

10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	No Characteristic ppt is Obtained.	Absence of chloride, bromide, sulphide
11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of bariumchloride solution and shake	A white ppt insoluble in dil H2SO4 is formed	Prsence of sulphate is Confirmed.
12	Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1mlof Lead Acetate	A whit ppt soluble in excessof ammonium acetate is formed	Presence of sulphate

13	Brown ring test: 1ml of the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of thetest tube.	No brown ring is formed	Absence of Nitrate		
14	Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about1ml each of ammonium molybdate and Conc.HNO3	No canary yellow ppt is formed.	Absence of Phosphate		
15	Test with sodium nitrobruside: 1ml of the sodium carbonate extract + 1ml of dil .aommonia. + few dropsofsodium nitro bruside.	No purple or violet colouration appears	Absence of sulphide.		
Prepara To a sma solution"	Preparation of salt solution: To a small amount of salt in a test tube add 2 to 3ml of water, shake it and gently heat it. Thissolution is called "original solution".				
1	GROUP 0 1ml of the original salt solution add about 1ml each of Nessler's reagentandNaOH.	No chocolate brown ppt is obtained.	Absence of ammonium		
2	GROUP I Take about 1 ml of the salt solution in a test tube Add about 1mL of dil HCl, and shake it	No White ppt is formed.	Absence of 1st groupmetal ions (Pb ²⁺)		
3	GROUP II To the above solution pass H2S gas.	No Black ppt is formed	Absence of 2nd groupmetal ions (Cu ²⁺)		
4	GROUP III To about 1ml of the salt solution add about 1ml each of NH4ClandNH4OH and shake it well	No ppt is obtained	Absence of 3rd group metal ions (Al ³⁺ / Fe ³⁺)		
	GHSS KALLUR PUDUKOTTAI DT CELL944287993	36			
	GROUP IV To the above solutionpass (H2S) gas	A dirty white ppt is obtained	Presence of 4 th groupmetal ion (Zn ²⁺)		

Analysis of the 4th group ppt:

1	Test for Zinc: To the ppt add dil HCl and boil it	The ppt dissolves	Presence of Zinc
2	To the 1 ml of Original solution adddil.NaOH in drops to excess	White Ppt Soluble in excessNaOH is Obtained	Presence of Zinc is Confirmed
3	To the 1 ml of Original solution add 2ml K4[Fe(CN)6] solution	White Ppt Soluble in excessNaOH, insoluble in dilute acids, is Obtained	Presence of Zinc is Confirmed
Res	sult:		
The	e Anion Present : SULPHATE		
The	e cation Present : ZINC		
The	e Given simple salt : ZINC SULPHATE		

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solution and shake

S NO	Experiment	Observation	Inference		
	Analysis of anions				
1	Colour: Note the colour of the salt	Colourless	Absence of copper,Iron salts		
2.	Action of heat: A small amount of a salt is heated inatest tube	Salt is Yellow when hot, White when cold	May be a zinc salt		
3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	No Characteristic flameColour is Observed.	Absence of Copper, Barium, Calcium		
4.	Action of dil. HCI: Small amount of salt + 1 ml of dil. HCl . Gently heat it	egg smell turning a paperdipped in lead acetate shining black evolves	Presence of sulphide is Confirmed		
5	Action of Conc.H2SO4: Small amount of a salt in a dry test tube + Conc. H2SO4 and gently heatit	No Charactristic gas evolves	Absence of Chloride, Bromide, Nitrate		
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube + pinch of MnO2 + Conc.H2SO4 and gently heat it	No Characteristic Gas isevolved.	Absence of chloride, bromide		

SYSTEMATIC ANALYSIS OF SIMPLE SALT- VIII [[ZINC SULPHIDE]

7.	Action of Conc. H ₂ SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H ₂ SO4. Gently heat it	No reddish brown gas evolves	Absence of nitrate.	
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	No Characteristic gas is Observed.	Absence of ammoniumsalt	
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it.	No Red Orange Vapour is Observed.	Absence of chloride.	
Analysis with Sodium carbonate extract Preparation of Sodium carbonate extract Take 1g of the given salt + 3g of solid sodium carbonate + 20g of distilled water. Boil the solution for fewmins, filter. The filtrate is called sodium carbonate extract.				
10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	A black ppt is formed	Presence of sulphide	
11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of bariumchloride	No white ppt is obtained	Absence of sulphate	

12	Test with lead acetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1mlof Lead Acetate	No white ppt is obtained	Absence of sulphate
13	Brown ring test: 1ml of the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of thetest tube.	No brown ring is formed	Absence of nitrate
14	Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about1mleach of ammonium molybdate and Conc.HNO3	No canary yellow ppt is formed.	Absence of phosphate
15	Test with sodium nitrobruside: 1ml of the sodium carbonate extract + 1ml of dil .aommonia. + few dropsofsodium nitro bruside.	A purple or violet colouration appears	Prsence of sulphide.
HSS KA	LUR PUDUKOTTAI DT CELL9442879936		
Prenara	tion of salt solution:		
To a sma "original	all amount of salt in a test tube, add 3ml of dil.HCl + dil. I solution".	HNO3, shake it and gently heat it. This solut	ion is called
1	GROUP 0 1ml of the original salt solution add about 1ml each of Nessler's reagentandNaOH.	No chocolate brown ppt is obtained.	Absence of ammonium
2	GROUP I Take about 1 ml of the salt solution inatest tube Add about 1ml of dil HCl, andshake it	No White ppt is formed.	Absence of 1st groupmetal ions (Pb ²⁺)
3	GROUP II To the above solution pass H2S gas.	No Black ppt is formed	Absence of 2nd groupmetal ions (Cu ²⁺)
4	GROUP III To about 1ml of the salt solution add about 1ml each of NH4ClandNH4OH and shake it well	No ppt is obtained	Absence of 3rd group metal ions (Al ³⁺ / Fe ³⁺)
	GROUP IV To the above solutionpass (H2S) gas	A dirty white ppt is obtained	Presence of 4 th groupmetal ion (Zn ²⁺)
Analysi	s of the 4th group ppt:		
1	Test for Zinc: To the ppt add dil HCl and boil it	The ppt dissolves	Presence of Zinc
2	To the 1 ml of Original solution adddil.NaOH in drops to excess	White Ppt Soluble in excessNaOH is Obtained	Presence of Zinc is Confirmed
3	To the 1 ml of Original solution add 2ml K4[Fe(CN)6] solution	White Ppt Soluble in excessNaOH, insoluble in dilute acids, is Obtained	Presence of Zinc is Confirmed
Res The The The	L Ult: Anion Present : SULPHIDE cation Present : ZINC Given simple salt : ZINC SULPHIDE		

S NO	Experiment	Observation	Inference			
	Analysis of anions					
1	Colour: Note the colour of the salt	Colourless	Absence of copper,Iron salts			
2.	Action of heat: A small amount of a salt is heated inatest tube	A colourless, odourless gasturning lime water milky evolves	Presence of carbonate			

SYSTEMATIC ANALYSIS OF SIMPLE SALT- IX[CALCIUM CARBONATE]

3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	Brick red Colour is Observed.	Presence of a calciumsalt	
4.	Action of dil. HCI: Small amount of salt + 1ml of dil. HCl . Gently heat it	A colourless, odourless gas evolves as a brisk Effervescenceand turns limewater milky	Presence of carbonateis Confirmed	
5	Action of Conc.H2SO4: Small amount of a salt in a dry test tube + Conc. H2SO4 and gently heatit	No Charactristic gas evolves	Absence of Chloride, Bromide, Nitrate	
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube + pinch of MnO2 + Conc.H2SO4 andgently heat it	No Characteristic Gas is evolved.	Absence of chloride, bromide	
7.	Action of Conc. H2SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H2SO4. Gently heat it	No reddish brown gas evolves	Absence of nitrate.	
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	No Characteristic gas is Observed.	Absence of ammoniumsalt	
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it.	No Red Orange Vapour is Observed.	Absence of chloride.	
Analysis with Sodium carbonate extract Preparation of Sodium carbonate extract Take 1g of the given salt + 3g of solid sodium carbonate + 20g of distilled water. Boil the solution for fewmins, filter. The filtrate is called sodium carbonate extract.				
10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	No Characteristic ppt is Obtained.	Absence of chloride, bromide, sulphide	
11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of bariumchloride solution and shake	No white ppt is obtained	Absence of sulphate	

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12	Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1mlof Lead Acetate	No white ppt is obtained	Absence of sulphate
13	Brown ring test: 1ml of the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of thetest tube.	No brown ring is formed	Absence of nitrate
14	Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about1mleach of ammonium molybdate and Conc.HNO3	No canary yellow ppt is formed.	Absence of phosphate
15	Test with sodium nitrobruside: 1ml of the sodium carbonate extract + 1ml of dil .aommonia + few dropsofsodium nitro bruside.	No purple or violet colouration appears	Absence of sulphide.
Preparation of salt solution: To a small amount of salt in a test tube add 2 to 3ml of dil.HCl, shake it and gently heat it. Thissolution is called "original solution".			
1	GROUP 0 1ml of the original salt solution add about 1ml each of Nessler's reagentandNaOH.	No chocolate brown ppt is obtained.	Absence of ammonium
2	GROUP I Take about 1 ml of the salt solution inatest tube Add about 1ml of dil HCl, andshake it	No White ppt is formed.	Absence of 1st groupmetal ions (Pb ²⁺)
3	GROUP II To the above solution pass H2S gas.	No Black ppt is formed	Absence of 2nd groupmetal ions (Cu ²⁺)
4	GROUP III To about 1ml of the salt solution add about 1ml each of NH4Cl,NH4OH and shake it well	No ppt is obtained	Absence of 3rd group metal ions (Al ³⁺ / Fe ³⁺)
5	GROUP IV To the above solutionpass (H2S) gas	No dirty white ppt is obtained	Absence of 4 th groupmetal ion (Zn ²⁺)
6	GROUP V To the salt solution add1mleach of NH4Cl, NH4OH and (NH4)2CO3 and shake it well.	A white ppt is obtained	Presence of 5th groupmetal ions (Ba ^{2+/} Ca ²⁺)

Analysis	s of the 5th group ppt:			
1	To the ppt add about 1ml of dil.acetic acid and gently heat it.	The ppt dissolves.	Presence of (Ba2+/Ca2+)	
2	Test for Calcium To the solution add about 1ml of ammonium sulphate	A white ppt is obtained. Filter. To the residue add a drop of Conc. HCl. Take the residue and introduce near the Bunsen flame. A crimsonred colour is seen	Presence of Calcium is Confirmed	
		If no ppt is obtained, to the solution add about 1ml of potassium ferrocyanide andshake it. A pale yellow ppt appears.	Presence of Calcium is Confirmed	
Res The The The	ult: Anion Present : CARBONATE cation Present : CALCIUM Given simple salt : CALCIUM CARBONA	ТЕ		

S NO	Experiment	Observation	Inference
	An	alysis of anions	
1	Colour: Note the colour of the salt	Colourless	Absence of copper,Iron salts
2.	Action of heat: A small amount of a salt is heated inatest tube	No Characteristic ChangeOccurs	Absence of Zinc, Ammonium, Nitrate
3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	Apple green Colour is Observed.	Presence of Bariumsalt
4.	Action of dil. HCI: Small amount of salt + 1ml of dil. HCl . Gently heat it	No Charactristic gas evolves	Absence of Carbonate,Nitrate, Sulphide
5	Action of Conc.H2SO4: Small amount of a salt in a dry test tube + Conc. H2SO4 and gently heatit	A colourless gas evolves. Itgives a dense white fumes when a glass rod dipped inliquid ammonia is brought close to its mouth	Prsence of Chloride

SYSTEMATIC ANALYSIS OF SIMPLE SALT- X [BARIUM CHLORIDE]

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6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube + pinch of MnO2 + Conc.H2SO4 andgently heat it	A greenish yellow gas turning starch iodide paper blue evolves	Prsence of Chloride
7.	Action of Conc. H ₂ SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H ₂ SO4. Gently heat it	No reddish brown gas evolves	Absence of Nitrate.
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	No Characteristic gas is Observed.	Absence of ammoniumsalt
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it. Pass the vapours into dilute sodiumhydroxide solution. If a yellow solution is obtained, add dil. Acetic acid and leadacetate	A yellow ppt is obtained	Presence of chloride.
Analysis carbona Take 1g called so	s with Sodium carbonate extract Preparation of So te extract of the given salt + 3g of solid sodium carbonate + 20g of dium carbonate extract.	dium f distilled water. Boil the solutionfor fewmins	s, filter.The filtrate is
10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	A curdy white ppt insoluble in dil. Ammonia isformed	Presence of chloride
11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of bariumchloride solution and shake	No white ppt is obtained	Absence of sulphate

12	Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1mlof Lead Acetate	No white ppt is obtained	Absence of sulphate
13	Brown ring test: 1ml of the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of thetest tube.	No brown ring is formed	Absence of Nitrate
14	Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about1ml each of ammonium molybdate and Conc.HNO3	No canary yellow ppt is formed.	Absence of Phosphate
15	Test with sodium nitrobruside: 1ml of the sodium carbonate extract + 1ml of dil .aommonia. + few dropsofsodium nitro bruside.	No purple or violet colouration appears	Absence of sulphide.
Prenarat	ion of salt solution.		
riepaiai			
To a sma	ll amount of salt in a test tube add 2 to 3ml of water, sha	ake it and gently heat it. Thissolution is calle	d "original
solution".			
1	GROUP 0 1ml of the original salt solution add about 1mL each of Nessler's reagentandNaOH.	No chocolate brown ppt is obtained.	Absence of ammonium
2	GROUP I Take about 1 ml of the salt solution in a test tube Add about 1mL of dil HCl, and shake it	No White ppt is formed.	Absence of 1st groupmetal ions (Pb ²⁺)
3	GROUP II To the above solution pass H2S gas.	No Black ppt is formed	Absence of 2nd groupmetal ions (Cu ²⁺)
4	GROUP III To about 1ml of the salt solution add about 1ml each of NH4Cl,NH4OH and shake it well	No ppt is obtained	Absence of 3rd group metal ions (Al ³⁺ / Fe ³⁺)
5	GROUP IV To the above solutionpass (H2S) gas	No dirty white ppt is obtained	Absence of 4 th groupmetal ion (\mathbf{Zn}^{2^+})
6	GROUP V To the salt solution add1mleach of NH4Cl, NH4OH and (NH4)2CO3 and shake it well.	A white ppt is obtained	Presence of 5th groupmetal ions (Ba ²⁺ / Ca ²⁺)
Analysis	s of the 5th group ppt:		
1	To the ppt add about 1ml of dil.acetic acid and gently heat it.	The ppt dissolves.	Presence of (Ba ²⁺ /Ca ²⁺)
2	Test for Barium. To the solution add about 1ml of potassium chromate	A yellow ppt is obtained. Filter To the residue add adrop of Conc. HCl. Take aportion of the paste and introduce near the Bunsen flame. A transient green is imparted to the flame	Presence of Barium is Confirmed
Resi	ult:		
The	Anion Present · CHI ORIDE		
The	ration Present · RARIUM		
The	Circuit in DARIUM		
The	Given simple salt : BARIUM CHLORIDE		

solution and shake

SYSTEMATIC ANALYSIS OF SIMPLE SALT- XII [MAGNESIUM PHOSPHATE]

S NO	Experiment	Observation	Inference	
Analysis of anions				
1	Colour: Note the colour of the salt	Colourless	Absence of copper,Iron salts	
2.	Action of heat: A small amount of a salt is heated inatest tube	No Characteristic ChangeOccurs	Absence of Zinc, Ammonium, Nitrate	
28				

3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	No Characteristic flame Colour is Observed.	Absence of Copper, Barium, Calcium
4.	Action of dil. HCI: Small amount of salt + 1ml of dil. HCl . Gently heat it	No Charactristic gas evolves	Absence of Carbonate,Nitrate, Sulphide
5	Action of Conc.H2SO4: Small amount of a salt in a dry test tube + Conc. H2SO4 and gently heatit	No Charactristic gas evolves	Absence of Chloride, Bromide, Nitrate
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube + pinch of MnO2 + Conc.H2SO4 andgently heat it	No Characteristic Gas is evolved.	Absence of chloride, bromide
7.	Action of Conc. H2SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H2SO4. Gently heat it	No reddish brown gas evolves	Absence of nitrate.
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	No Characteristic gas is Observed.	Absence of ammoniumsalt
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it.	No Red Orange Vapour is Observed.	Absence of chloride.
Analysis	with Sodium carbonate extract Preparation ofSo	dium	
carbona Take 1g o called soo	te extract of the given salt + 3g of solid sodium carbonate + 20g of dium carbonate extract.	distilled water. Boil the solutionfor fewmins	s, filter.The filtrate is
10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	No Characteristic ppt is Obtained.	Absence of chloride, bromide, sulphide
11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of bariumchloride	No white ppt is obtained	Absence of sulphate

12	Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1mlof Lead Acetate	No white ppt is obtained	Absence of sulphate
13	Brown ring test: Iml of the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of	No brown ring is formed	Absence of nitrate
14	thetest tube. Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about1ml each of ammonium molybdate and Conc.HNO3	Canary yellow ppt is formed.	Presence of Phosphateis Confirmed
15	Test with sodium nitrobruside: 1ml of the sodium carbonate extract + 1ml of dil .aommonia. + few dropsofsodium nitro bruside.	No purple or violet colouration appears	Absence of sulphide.
Preparat To a sma solution"	tion of salt solution: Il amount of salt in a test tube add 2 to 3ml of water, sha	ake it and gently heat it. Thissolution is calle	d "original
1	GROUP 0 1ml of the original salt solution add about 1mL each of Nessler's reagentandNaOH.	No chocolate brown ppt is obtained.	Absence of ammonium
2	GROUP I Take about 1 ml of the salt solution inatest tube Add about 1ml of dil HCl, andshake it	No White ppt is formed.	Absence of 1st groupmetal ions (Pb ²⁺)
3	GROUP II To the above solution pass H2S gas.	No Black ppt is formed	Absence of 2nd groupmetal ions (Cu ²⁺)
4	GROUP III To about 1ml of the salt solution add about 1ml each of NH4ClandNH4OH and shake it well	No ppt is obtained	Absence of 3rd group metal ions (Al ³⁺ / Fe ³⁺)
5	GROUP IV To the above solutionpass (H2S) gas	No dirty white ppt is obtained	Absence of 4 th groupmetal ion (Zn ²⁺)
6	GROUP V To the salt solution add1mleach of NH4Cl, NH4OH and (NH4)2CO3 and shake it well.	No white ppt is obtained	Absence of 5th group metal ions (Ba ²⁺ / Ca ²⁺)
7	GROUP VI To the original salt solutionadd 1ml each of NH4Cl, NH4OH and NH4H2PO4, and scratchthe sides of thetest tube.	A white ppt is obtained.	Presence of 6th groupmetal ion Mg ²⁺
Analysis	s of the 6th group ppt:		
2	Test for Magnesium: i)To about 1mlofthe original salt solution add dil. NaOH in drops with shaking.	White Ppt insoluble in excessNaOH is Obtained	Presence of Magnesium is Confirmed
3	ii)To about 1ml of the original salt solution add about 1ml of Magnesonreagent.	A blue ppt is formed.	Presence of Magnesium is Confirmed
Resu The catio The	ult: Anion Present : PHOSPHATEThe n Present : MAGNESIUM Given simple salt : MAGNESIUM PHOSP	НАТЕ	

S NO	Experiment	Observation	Inference
	An	alysis of anions	
1	Colour: Note the colour of the salt	Colourless	Absence of copper,Iron salts
2.	Action of heat: A small amount of a salt is heated inatest tube	A colourless, odourless gasturning lime water milky evolves	Presence of carbonate
3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	No Characteristic flameColour is Observed.	Absence of Copper, Barium, Calcium
 4.	Action of dil. HCI: Small amount of salt + 1 ml of dil. HCl . Gently heat it	A colourless, odourless gas evolves as a brisk Effervescenceand turns limewater milky	Presence of carbonateis Confirmed
5	Action of Conc.H2SO4: Small amount of a salt in a dry test tube + Conc. H2SO4 and gently heatit	No Charactristic gas evolves	Absence of Chloride, Bromide, Nitrate
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube + pinch of MnO2 + Conc.H2SO4 and gently heat it	No Characteristic Gas isevolved.	Absence of chloride, bromide

SYSTEMATIC ANALYSIS OF SIMPLE SALT- XIII[MAGNESIUM CARBONATE]

7.	Action of Conc. H2SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H2SO4. Gently heat it	No reddish brown gas evolves	Absence of nitrate.
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	No Characteristic gas is Observed.	Absence of ammoniumsalt
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it.	No Red Orange Vapour is Observed.	Absence of chloride.
Analysis carbona Take 1g called so	s with Sodium carbonate extract Preparation of S ate extract of the given salt + 3g of solid sodium carbonate + 20g o dium carbonate extract.	dium odium of distilled water. Boil the solutionfor fewmin	ıs, filter.The filtrate is
10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	No Characteristic ppt is Obtained.	Absence of chloride, bromide, sulphide
11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of bariumchloride solution and shake	No white ppt is obtained	Absence of sulphate
12	Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1mlof Lead Acetate	No white ppt is obtained	Absence of sulphate
K	indly send me your questions and an	swerkeys to us : Padasalai.ne	t@gmail.com

13	Brown ring test: 1ml of the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of thetest tube.	No brown ring is formed	Absence of Nitrate
14	Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about1ml each of ammonium molybdate and Conc.HNO3	No canary yellow ppt is formed.	Absence of Phosphate
15	Test with sodium nitrobruside: 1ml of the sodium carbonate extract + 1ml of dil .aommonia. + few dropsofsodium nitro bruside.	No purple or violet colouration appears	Absence of sulphide.
Proparat	tion of salt solution:		
Ticpara			
To a sma solution"	ll amount of salt in a test tube add 2 to 3ml of dil.HCl, s	hake it and gently heat it. Thissolution is cal	led "original
1	GROUP 0 1ml of the original salt solution add about 1ml each of Nessler's reagentandNaOH.	No chocolate brown ppt is obtained.	Absence of ammonium
2	GROUP I Take about 1 ml of the salt solution inatest tube Add about 1ml of dil HCl, andshake it	No White ppt is formed.	Absence of 1st groupmetal ions (Pb ²⁺)
3	GROUP II To the above solution pass H2S gas.	No Black ppt is formed	Absence of 2nd groupmetal ions (Cu ²⁺)
4	GROUP III To about 1ml of the salt solution add about 1ml each of NH4ClandNH4OH and shake it well	No ppt is obtained	Absence of 3rd group metal ions (Al ³⁺ / Fe ³⁺)
5	GROUP IV To the above solutionpass (H2S) gas	No dirty white ppt is obtained	Absence of 4 th groupmetal ion (\mathbf{Zn}^{2+})
6	GROUP V To the salt solution add1mleach of NH4Cl, NH4OH and (NH4)2CO3 and shake it well.	No white ppt is obtained	Absence of 5th group metal ions (Ba ^{2+/} Ca ²⁺)
7	GROUP VI To the original salt solutionadd 1ml each of NH4Cl, NH4OH and NH4H2PO4, and scratchthe sides of thetest tube.	A white ppt is obtained.	Presence of 6th groupmetal ion Mg ²⁺
Analysis	s of the 6th group ppt:		
2	Test for Magnesium: i)To about 1mlofthe original salt solution add dil. NaOH in drops with shaking.	White Ppt insoluble in excessNaOH is Obtained	Presence of Magnesium is Confirmed
3	ii)To about 1ml of the original salt solution add about 1ml of Magnesonreagent.	A blue ppt is formed.	Presence of Magnesium is Confirmed
Pas	ult:		
105			
The	Amon rresent : CARBONATE		
The	cauon rresent :MAGNESIUM		
The	Given simple salt : MAGNESIUM CARBO	DNATE	

S NO	Experiment	Observation	Inference
	An	alysis of anions	
1	Colour: Note the colour of the salt	Colourless	Absence of copper,Iron salts
2.	Action of heat: A small amount of a salt is heated inatest tube	A colourless gas with the pungent small turning red litmuspaper into blue evolves. It givesa dense white fumes when a glass roddipped in Conc. HCl isbrought close to its mouth	Presence of an ammonium salt
3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	No Characteristic flame Colour is Observed.	Absence of Copper, Barium, Calcium
4.	Action of dil. HCI: Small amount of salt + 1ml of dil. HCl . Gently heat it	No Charactristic gas evolves	Absence of Carbonate,Nitrate, Sulphide
5	Action of Conc.H2SO4: Small amount of a salt in a dry test tube + Conc. H2SO4 and gently heatit	A colourless gas evolves. Itgives a dense white fumes when a glass rod dipped inliquid ammonia is brought close to its mouth	Prsence of Chloride
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube + pinch of MnO2 + Conc.H2SO4 and gently heat it	A greenish yellow gas turning starch iodide paper blue evolves	Prsence of Chloride
7.	Action of Conc. H2SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H2SO4. Gently heat it	No reddish brown gasevolves	Absence of nitrate.
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	A colourless gas with the pun gent smell giving dense white fumes with a glass rod dipped in dil. HCl evolves	Presence of ammoniumsalt

SYSTEMATIC ANALYSIS OF SIMPLE SALT- XIV [AMMONIUMCHLORIDE]

9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it. Pass the vapours into dilute sodiumhydroxide solution. If a yellow solution is obtained, add dil. Acetic acid and leadacetate	A yellow ppt is obtained	Presence of chloride.
.			
Analysis	s with Sodium carbonate extract Preparation of So	dium	
carbona	te extract		
Take 1g called so	of the given salt + 3g of solid sodium carbonate + 20g of dium carbonate extract.	distilled water. Boil the solution for fewmins	s, filter.The filtrate is
10.	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	A curdy white ppt insoluble in dil. Ammonia isformed	Presence of chloride

11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of bariumchloride solution and shake	No white ppt is obtained	Absence of sulphate
12	Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1mlof Lead Acetate	No white ppt is obtained	Absence of sulphate
13	Brown ring test: 1ml of the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of thetest tube.	No brown ring is formed	Absence of nitrate
14	Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about1ml each of ammonium molybdate and Conc.HNO3	No canary yellow ppt is formed.	Absence of phosphate
15	Test with sodium nitrobruside: 1ml of the sodium carbonate extract + 1ml of dil .aommonia. + few dropsofsodium nitro bruside.	No purple or violet colouration appears	Absence of sulphide.
Preparat To a sma solution"	tion of salt solution: Il amount of salt in a test tube add 2 to 3ml of water, sh	ake it and gently heat it. Thissolution is calle	ed "original

1	GROUP 0 1ml of the original salt solution add about 1ml each of Nessler's reagentandNaOH.	A chocolate brown ppt is obtained.	Presence of 0 group + metal ion (NH4)
2	GROUP I Take about 1 ml of the salt solution inatest tube Add about 1ml of dil HCl, andshake it	No White ppt is formed.	Absence of 1st groupmetal ions (Pb ²⁺)
3	GROUP II To the above solution pass H2S gas.	No Black ppt is formed	Absence of 2nd groupmetal ions (Cu ²⁺)
4	GROUP III To about 1ml of the salt solution add about 1ml each of NH4Cl,NH4OH and shake it well	No ppt is obtained	Absence of 3rd group metal ions (Al ³⁺ / Fe ³⁺)
5	GROUP IV To the above solutionpass (H2S) gas	No dirty white ppt is obtained	Absence of 4 th groupmetal ion (\mathbf{Zn}^{2+})
6	GROUP V To the salt solution add1mleach of NH4Cl, NH4OH and (NH4)2CO3 and shake it well.	No white ppt is obtained	Absence of 5th group metal ions (Ba ²⁺ / Ca ²⁺)
7	GROUP VI To the original salt solutionadd 1ml each of NH4Cl, NH4OH and NH4H2PO4, and scratchthe sides of thetest tube.	No white ppt is obtained.	Absence of 6th groupmetal ion (Mg^{2+})
Analysi	s of the Ammonium		
1	To 1ml of the original salt solutionadd about 1ml each of Nessler's reagent and NaOH.	A chocolate brown ppt is obtained.	Presence of Ammonium is Confirmed
Res	ult:		
The	Anion Present : CHLORIDE		
The	Given simple salt : AMMONIUM CHLOR	IDE	

SYSTEMATIC ANALYSIS OF SIMPLE SALT- XV[AMMONIUM BROMIDE]

S NO	Experiment	Observation	Inference
	An	alysis of anions	
1	Colour: Note the colour of the salt	Colourless	Absence of copper,Iron salts
			36

2.	Action of heat: A small amount of a salt is heated inatest tube	A colourless gas with the pungent small turning red litmuspaper into blue evolves. It givesa dense white fumes when a glass roddipped in Conc. HCl isbrought close to its mouth	Presence of an ammonium salt
3.	Flame test: Small amount of salt + A drop of Conc. HCl ,form a paste. Take thepaste at thecharred end of the splinter and introduce it near the Bunsen flame	No Characteristic flame Colour is Observed.	Absence of Copper, Barium, Calcium
4.	Action of dil. HCI: Small amount of salt + 1ml of dil. HCl . Gently heat it	No Charactristic gas evolves	Absence of Carbonate,Nitrate, Sulphide
5	Action of Conc.H2SO4: Small amount of a salt in a dry test tube + Conc. H2SO4 and gently heatit	A reddish brown gas turning moist fluorescein paper greenevolves	Prsence of Bromide
6	Action of MnO2 and Conc. H2SO4: Small amount of salt in a dry test tube + pinch of MnO2 + Conc.H2SO4 andgently heat it	A reddish brown gas turningmoist fluorescein paper red evolves	Prsence of Bromide
7.	Action of Conc. H ₂ SO4 and copper turning: small amount of salt in a drytesttube + few copper turnings + Conc. H ₂ SO4. Gently heat it	No reddish brown gas evolves	Absence of nitrate.
8.	Action of dil. NaOH solution: Small amont of a salt + dil.NaOH solution andgently heat it.	A colourless gas with the pungent smell giving densewhite fumes with a glass rod dipped in dil.HCl evolves	Presence of ammoniumsalt
9	Chromyl chloride test: Small amount of salt in + a pinch of potassium dichromate and three dropsConc. H2SO4.Gently heat it.	No Red Orange Vapour is Observed.	Absence of chloride.
Analysis carbona Take 1g o called soo	s with Sodium carbonate extract Preparation ofSo the extract of the given salt + 3g of solid sodium carbonate + 20g of dium carbonate extract.	dium	s, filter.The filtrate is
10	Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, andshake it	A pale yellow ppt sparingly soluble in ammonia is formed	Presence of Bromide is Confirmed
11	Test with barium chloride: One ml of the sodium carbonateextract + dil. Aceticacid + 1ml of bariumchloride solution and shake	No white ppt is obtained	Absence of sulphate

12	Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1mlof Lead Acetate	No white ppt is obtained	Absence of sulphate
13	Brown ring test: 1ml of the sodium carbonate extract + dil.H2SO4 + freshly prepared ferrous sulphate solution then add Conc. H2SO4along the sides of thetest tube.	No brown ring is formed	Absence of nitrate
14	Ammonium molybdate test: 1 ml of the extract + dil HNO3 + about1ml each of ammonium molybdate and Conc.HNO3	No canary yellow ppt is formed.	Absence of phosphate
15	Test with sodium nitro bruside: 1ml of the sodium carbonate extract + 1ml of dil .aommonia. + few dropsofsodium nitro bruside.	No purple or violet colouration appears	Absence of sulphide.
Preparat To a sma solution"	tion of salt solution: Il amount of salt in a test tube add 2 to 3ml of water, sha	ake it and gently heat it. Thissolution is calle	d "original
1	GROUP 0 1ml of the original salt solution add about 1ml each of Nessler's reagentandNaOH.	A chocolate brown ppt is obtained.	Presence of 0 groupmetal ion (NH ⁺) 4
2	GROUP I Take about 1 ml of the salt solution inatest tube Add about 1ml of dil HCl, andshake it	No White ppt is formed.	Absence of 1st groupmetal ions (Pb ²⁺)
3	GROUP II To the above solution pass H2S gas.	No Black ppt is formed	Absence of 2nd groupmetal ions (Cu ²⁺)
4	GROUP III To about 1ml of the salt solution add about 1ml each of NH4Cl,NH4OH and shake it well	No ppt is obtained	Absence of 3rd group metal ions (Al ³⁺ / Fe ³⁺)
5	GROUP IV To the above solutionpass (H2S) gas	No dirty white ppt is obtained	Absence of 4 th groupmetal ion (\mathbf{Zn}^{2+})
6	GROUP V To the salt solution add1mleach of NH4Cl, NH4OH and (NH4)2CO3 and shake it well.	No white ppt is obtained	Absence of 5th group metal ions (Ba ²⁺ , Ca ²⁺)
7	GROUP VI To the original salt solutionadd 1ml each of NH4Cl, NH4OH and NH4H2PO4, and scratchthe sides of thetest tube.	No white ppt is obtained.	Absence of 6th groupmetal ion (Mg ²⁺)
Analysis	s of the Ammonium		
1	To 1ml of the original salt solutionadd about 1ml each of Nessler's reagent and NaOH.	A chocolate brown ppt is obtained.	Presence of Ammonium is Confirmed
Rest The catio The	ult: Anion Present : BROMIDE The n Present : AMMONIUM Given simple salt : AMMONIUM BROMI	DE	

	,			
		Experiment	Observation	Inference
Ana	lysis of anions			
1		Colour:	Colourless	Absence of copper, Iron salts
~		Note the colour of the sait	No Characteristic Charac	
2.		Action of neat:		Absence of Zinc, Ammonium,
		A small amount of a salt is beated in a test tube	Occurs	Nillale
з		Flame test:	No Characteristic flame	Absence of Copper Barium
5.		Small amount of salt + A drop	Colour is Observed.	Calcium
		of Conc. HCl ,form a paste.		Calculation
		Take the paste at the charred		
		end of the splinter and		
		introduce it near the Bunsen		
			No Oberestrictio and such as	Absonss of
4.		Action of all. HCI:	No Charactristic gas evolves	Absence of Carbonato Nitrato, Sulphido
				Carbonate, Nitrate, Supride
		. Gently heat it		
5		Action of Conc.H2SO4:	No Charactristic gas evolves	Absence of Chloride.
		Small amount of a salt in a		Bromide, Nitrate
		dry test tube + Conc. H2SO4		7
		and gently heat it		
6		Action of MnO2 and Conc.	No Characteristic Gas is	Absence of chloride, bromide
		H2SO4: Small amount of salt	evolved.	
		In a dry test tube + pinch of		
		gently heat it		
7		Action of Conc. H2SO4 and	No reddish brown gas	Absence of nitrate
<u> </u>		copper turning: small	evolves	
		amount of salt in a dry test		
		tube + few copper turnings +		
		Conc. H2SO4. Gently heat it		
8.		Action of dil. NaOH	No Characteristic gas is	Absence of ammonium salt
		solution: Small amont of a	Observed.	
		gently heat it.		
		<u> </u>		
	Chromyl chloride test:	No Red Orange Var	oour is Observed. Absence	of chloride.
	Chromyl chloride test: Small amount of salt in + a p	No Red Orange Vap	oour is Observed. Absence	of chloride.
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and th	No Red Orange Vap binch of bree drops	oour is Observed. Absence	of chloride.
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it	No Red Orange Vap	oour is Observed. Absence	of chloride.
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3	No Red Orange Vap here drops bonate extract Preparation of Sodi g of solid sodium carbonate + 20g o	oour is Observed. Absence	of chloride.
	Chromyl chloride test: Small amount of salt in + a potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext	No Red Orange Vap hnree drops conate extract Preparation of Sodi bg of solid sodium carbonate + 20g o ract.	bour is Observed. Absence Um carbonate extract f distilled water. Boil the solution f	of chloride. or few mins, filter.The filtrate is
	Chromyl chloride test: Small amount of salt in + a potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Vap here drops bonate extract Preparation of Sodi g of solid sodium carbonate + 20g o ract. Test for halides:	where the solution of the solu	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide,
	Chromyl chloride test: Small amount of salt in + a potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Vap here drops bonate extract Preparation of Sodi to g of solid sodium carbonate + 20g of ract. Test for halides: 1 ml of sodium carbonate	bour is Observed. Absence um carbonate extract f distilled water. Boil the solution f No Characteristic ppt is Obtained.	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide
	Chromyl chloride test: Small amount of salt in + a potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Vap binch of hree drops bonate extract Preparation of Sodi to g of solid sodium carbonate + 20g of ract. Test for halides: 1 ml of sodium carbonate extract	bour is Observed. Absence um carbonate extract f distilled water. Boil the solution f No Characteristic ppt is Obtained.	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide
	Chromyl chloride test: Small amount of salt in + a potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Vap binch of hree drops bonate extract Preparation of Sodi to g of solid sodium carbonate + 20g of ract. Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, ond bolks it	bour is Observed. Absence um carbonate extract f distilled water. Boil the solution f No Characteristic ppt is Obtained.	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Vap binch of bince drops bince drops bi	Description Absence um carbonate extract f f distilled water. Boil the solution f No Characteristic ppt is Obtained. Obtained.	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Vap binch of hree drops boonate extract Preparation of Sodi to g of solid sodium carbonate + 20g of ract. Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, and shake it Test with barium chloride: One ml of the sodium	Description Absence um carbonate extract f f distilled water. Boil the solution f No Characteristic ppt is Obtained. Obtained. A white ppt insoluble in dil H2SO4 is formed	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide Prsence of sulphate is
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Var binch of hree drops binch of bince drops binch of binch of bi	Doour is Observed. Absence um carbonate extract f f distilled water. Boil the solution f No Characteristic ppt is Obtained. Obtained. A white ppt insoluble in dil H2SO4 is formed	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide Prsence of sulphate is Confirmed.
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Var binch of hree drops binch of bince drops binch of binch of bi	Doour is Observed. Absence um carbonate extract f f distilled water. Boil the solution f No Characteristic ppt is Obtained. Obtained. A white ppt insoluble in dil H2SO4 is formed	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide Prsence of sulphate is Confirmed.
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Var binch of bince drops bince drops bi	Doour is Observed. Absence um carbonate extract f f distilled water. Boil the solution f No Characteristic ppt is Obtained. Obtained. A white ppt insoluble in dil H2SO4 is formed	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide Prsence of sulphate is Confirmed.
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Vap binch of hree drops bonate extract Preparation of Sodi bg of solid sodium carbonate + 20g of ract. Test for halides: 1 ml of sodium carbonate extract + dil. HNO3 + 1ml of AgNO3, and shake it Test with barium chloride: One ml of the sodium carbonate extract + dil. Aceticacid + 1ml of bariumchloride solution and shake	Doour is Observed. Absence um carbonate extract f f distilled water. Boil the solution f No Characteristic ppt is Obtained. Obtained. A white ppt insoluble in dil H2SO4 is formed	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide Prsence of sulphate is Confirmed.
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Var binch of hree drops bonate extract Preparation of Sodi bg of solid sodium carbonate + 20g of ract. Test for halides: 1 ml of sodium carbonate extract + dil. HNO3 + 1ml of AgNO3, and shake it Test with barium chloride: One ml of the sodium carbonate extract + dil. Aceticacid + 1ml of bariumchloride solution and shake Test with leadacetate:	bour is Observed. Absence um carbonate extract f f distilled water. Boil the solution f No Characteristic ppt is Obtained. Obtained. A white ppt insoluble in dil H2SO4 is formed A whit ppt soluble in excess A whit ppt soluble in excess	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide Prsence of sulphate is Confirmed. Presence of sulphate
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Variation of once drops ponate extract Preparation of Sodi g of solid sodium carbonate + 20g or ract. Test for halides: 1 ml of sodium carbonate +dil. HNO3 + 1ml of AgNO3, and shake it Test with barium chloride: One ml of the sodium carbonate extract + dil. Aceticacid + 1ml of bariumchloride solution and shake Test with leadacetate: 1ml of the sodium carbonate	Doour is Observed. Absence um carbonate extract f f distilled water. Boil the solution f No Characteristic ppt is Obtained. Obtained. A white ppt insoluble in dil H2SO4 is formed A whit ppt soluble in excess of ammonium acetate is Absence	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide Prsence of sulphate is Confirmed. Presence of sulphate
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Var binch of bince drops bince drops bi	Doour is Observed. Absence um carbonate extract f f distilled water. Boil the solution f No Characteristic ppt is Obtained. Obtained. A white ppt insoluble in dil H2SO4 is formed A whit ppt soluble in excess of ammonium acetate is formed Automatic	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide Prsence of sulphate is Confirmed. Presence of sulphate
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Var binch of bince drops boonate extract Preparation of Sodi big of solid sodium carbonate + 20g of big of solid sodium carbonate + 20g of ract. Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, and shake it Test with barium chloride: One ml of the sodium carbonate extract + dil. Aceticacid + 1ml of bariumchloride solution and shake Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and hati ba fold	Doour is Observed. Absence um carbonate extract f f distilled water. Boil the solution f f No Characteristic ppt is Obtained. A white ppt insoluble in dil H2SO4 is formed A whit ppt soluble in excess of ammonium acetate is formed f	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide Prsence of sulphate is Confirmed. Presence of sulphate
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Var binch of hree drops bonate extract Preparation of Sodi bg of solid sodium carbonate + 20g of ract. Test for halides: 1 ml of sodium carbonate extract + dil. HNO3 + 1ml of AgNO3, and shake it Test with barium chloride: One ml of the sodium carbonate extract + dil. Aceticacid + 1ml of bariumchloride solution and shake Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1 ml of Lead Acetate	Doour is Observed. Absence um carbonate extract f f distilled water. Boil the solution f No Characteristic ppt is Obtained. Obtained. A white ppt insoluble in dil H2SO4 is formed H2SO4 is formed A whit ppt soluble in excess of ammonium acetate is formed H2SO4 is formed	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide Prsence of sulphate is Confirmed. Presence of sulphate
	Chromyl chloride test: Small amount of salt in + a p potassium dichromate and tl Conc. H2SO4.Gently heat it Analysis with Sodium cart Take 1g of the given salt + 3 called sodium carbonate ext 10.	No Red Orange Variation of onree drops Donate extract Preparation of Sodi tog of solid sodium carbonate + 20g or ract. Test for halides: 1 ml of sodium carbonate + 20g or ract. Test for halides: 1 ml of sodium carbonate extract +dil. HNO3 + 1ml of AgNO3, and shake it Test with barium chloride: One ml of the sodium carbonate extract + dil. Aceticacid + 1ml of bariumchloride solution and shake Test with leadacetate: 1ml of the sodium carbonate extract, + 1ml of dil acetic acid and heat it + 1 ml of Lead Acetate Brown ring test: 1ml of the sodium carbonate	Doour is Observed. Absence um carbonate extract f f distilled water. Boil the solution f No Characteristic ppt is No Characteristic ppt is Obtained. A white ppt insoluble in dil H2SO4 is formed A whit ppt soluble in excess of ammonium acetate is formed No brown ring is formed	of chloride. or few mins, filter.The filtrate is Absence of chloride, bromide, sulphide Prsence of sulphate is Confirmed. Presence of sulphate Absence of nitrate
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14		Ammonium molybdate test: 1 ml of the extract + dil HNO3	No canary yellow ppt formed.	is <u>Abs</u>	Absence of phosphate	
15		+ about 1ml each of ammonium molybdate and Conc. HNO3 Test with sodium nitrobruside: 1ml of the sodium carbonate extract + 1ml of dil .aommonia. + few drops of sodium nitro bruside.	No purple or violet colouration <u>Abser</u> appears		ence of sulphide.	
Prep To a s	aration small a on is ca	n of salt solution: mount of salt in a test tube add 2 to 3ml of water, sl alled "original solution".	nake it and gently heat it.	This	X	
1	-	GROUP 0 1ml of the original salt solutior add about 1ml each of Nessler's reagent and NaOH.	No chocolate brown obtained.	opt is <u>Abs</u>	sence of ammonium	
	2	GROUP I Take about 1 ml of the salt solution inatest tube Add about 1ml of dil HCl, andshake it	No White ppt is form	ed.	Absence of 1st groupmetal ions (Pb ²⁺)	
	GROUP II To the above solution pass H2S gas.		No Black ppt is formed		Absence of 2nd groupmetal ions (Cu ²⁺)	
	4	GROUP III To about 1ml of the salt solution add about 1ml each of NH4ClandNH4OH and shake it well	No ppt is obtained No dirty white ppt is obtained		Absence of 3rd group metal ions (Al ³⁺ / Fe ³⁺)	
	5	GROUP IV To the above solutionpass (H2S) gas			Absence of 4 th groupmetal ion (Zn ²⁺)	
	6 GROUP V To the salt solution add1mleach of NH4Cl, NH4OH and (NH4)2CO3 and shake it well.		No white ppt is obtained		Absence of 5th group metal ions (Ba ²⁺ / Ca ²⁺)	
	7	GROUP VI To the original salt solutionadd 1ml each of NH4Cl, NH4OH and NH4H2PO4, and scratchthe sides of thetest tube.	A white ppt is obtained.		Presence of 6th groupmetal ion Mg ²⁺	
A	Analys	nalysis of the 6th group ppt:				
	1	Test for Magnesium: i)To about 1mlofthe original salt solution add dil. NaOH in drops with shaking.	White Ppt insoluble in excessNaOH is Obtained		Presence of Magnesium is Confirmed	
_		ii)To about 1ml of the A b original salt solution add about 1ml of Magneson reagent.	lue ppt is formed.	Presence of N is Confirmed	lagnesium	

Result: The Anion Present : SULPHATE The cation Present : MAGNESIUM The Given simple salt :MAGNESIUM SULPHATE