	CHROMIUM. (Cr)	
opiciti	(a) With writer; Cr (c) + HzO(g) -> C(2O3 (e) + Hz(g)	
	b) With AR; Cr(s) + O2 (9) -> Cr2O2(s)	
heated CrN (s) — CrN (s) (c) With Acids; heated?		
Dilute S	No rxn with nitre and rendered passive. Or (s) +2+1+(20) - Cr2+ + +2(9) Jav HCI H2504	
Conc. HzQ	Cr &, + H2504 (1) -> Cr2(504)3 (9) + 502 (9) + H20 1,	
	6) NaOH chamite ions	
. 6	Crs + OH + HO, -> Cr(OH) (9) + H2(9)	
	(d) NaOH Cr & + $\overline{O}H$ + $H_2O_{(1)} \rightarrow Cr(OH)_{+}^{-}$ (e) Chlorine Chromite ions Cr (OH) + $H_2(g)$ Chromite ions Chromite ions	
	Cres + Clargo -> CrClares)	
HICA	(F) Hydrogen Chloride	
	(f) Hydrogen chloride Crclz(s) + HClg) -> CrClz(s) + Hz(g)	
1.0.1	Chronium (11) Compounds.	
•	CV203-green solid & amphotenc	
<u> </u>	Chromium(III) Compounds. $C_{2}O_{3}$ —green schid & amphotenic $(NH_{4})_{2}C_{12}O_{7}$ (s) heat $C_{2}O_{3}$ (s) $+ N_{2}$ (g) $+ H_{2}O$	
	Swith Acade > Cro Da (s) + Ht cag) -> Cr cag) + H2O(1)	
	with Acade → Cr ₂ O ₃ (s) + H [†] cag) → Cr ^{3†} cag) + H ₂ O ₃ , with Next → Cr ₂ O ₃ (s) + OH(cg) + H ₂ O ₃ → Cr(OH) ₄ (ag)	
A 300 21	Explain why an aqueous solution of chromium (111) chloride has	
Prosalt Bruit	a pH Celow 7.	
- Jinda	ALLY -	
	Chromium ion in Chromium (11) chlorde has a small ioniz radius	
	hence high charge density and high pokinsing power on witer morecules forming heraaquachtomium(III) ions that undergo	
	Cationic hydrolysis forming hydrogonium ions that make	
	tto Column acidica	
(Select	C13+(1) +6H2O1) -> Cr(H2O) (95)	
Accode	$(C_1(H_2O)_6(qq) + H_2O_1) \rightarrow C_1(H_2O)_3(OH)_3(s) + H_3O_{(qq)}$	
The His	1 00 + 14 D> Cr(OH) (5) + HT MONO Cr(OH) 2+HCL)	

State what was observed and write an equation for the reaction when the following are added to chromium (11) Chloride solution (a) Sodium Carbonate, side (CO3 (ag) + Htag) > CO2 (g) + HD Cr3+ H2O, + CO2-1ep -> Cr(OH)3(5) + CO2-15)

(b) Sodium hydrogen carbonate; Cr3+ HCO3 (9) -> (r(OH)35)+(O2 (Sodium sulphite Ammonium Sul phide Sodjum Sul phide (NaS) side work & Szago + Hap -> H2 S 5) Magnesium | Zinc metal Mg & + Htag - Mg ag + Hzs tetrahedrally linked through oxygen atom.

IONIC CHEMISTRY OF Cr3+ions

	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
1 NaOH dopwise until in excess.	Green precipitate soluble in excess forming given solution $Cr^{3+}(qq) + 3\overline{OH}(qq) \longrightarrow Cr(OH)_3(s)$ $Cr(OH)_3(s) + \overline{OH}(qq) \longrightarrow Cr(OH)_4(qq)$		
2) Ammonia solution dropurise Until in excess	Green precipitate insoluble in excess $Cr^{3+}(ag) \rightarrow Cr(OH)_{3}(s)$ But in Concentrated ammonia solution $Cr(OH)_{3}(s) + 6NH_{3}(ag) \rightarrow Cr(NH_{3})_{cag}^{3+} + 35H_{ag}$ Violet Solution.		
Add excess NaOH + H2O2 solution 4 Add excess NaOH + H2O2 colution + butan=1=0l at + dd. H2SO4	Cr(OHV_{4p} Cr 3t Cr^{3t} Cr^{3		
Last minute review on Chromium [DD] KIBU GO DENNIS. Therday 3rd october 2023.			