	Date 22-02-22
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Aim.	
2 Cumar	
To be form the chemical array of Ferra	ous Sulphate.
Rederence:	
Requirements:	
(a) Glasswases: Conical flark, beaker, buset Cylinder, funnel, glass sod	te, measuring
Cylinder, funnel, glass sod	, dropper etc.
(b) Reagents: - Ferrous suphate (1g), 0.1 permanganate (kMn04), dil.	N potassium
permanganate (kMnog), dil.	sulphyric acid.
Reagent Preparation:	
0.1 N KMnog: Dissolve 3.39 of reagen	t grade
0.1 N KMnog : Dissolve 3.3 g of reagen potassium permanganate (KMnog) in 1L	of purified
water and heat on a steam bath of	or two hours.
Cover and allow standing for 24' h	ours.
Prinuple:	
It is assayed by redox titrations	8

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## Observation

S.No.	Initial reading	final neading	Vol. Consumed.		
1.	0	6.4	6.4 ml		
2.	6.4	12.7	6.3 ml		
3.	12.7	18.6	s.g ml		

## Calculation : -

"I. purity W/W = permanganate required permanganate. x 0.0278×100

Weight of somple x 0.1.

or Chashages: Convert black brakes, buselle, moved

December to Francis with the 12 sty but N

$$= \frac{6.2 \times 0.1 \times 0.00238 \times 100}{0.2 \times 0.1}$$

$$= 8.61 \cdot 1.$$

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	In the reaction of chemical assay, servous sulphate is
-	Unased to fessic sulphate and the electron released
	during oxidation is helpful in the reduction of
	manganese for from Mn ++ to Mn +- Hence KMnog
	(potassium permanganate) here is used as an oxidising
	a gent.
	$Fe^{+2} \longrightarrow Fe^{3+} + e^{-}$
	Ferrous ion Ferric
	ion
	N +7 - +2
	$Mn^{+7} + 5e^{-} \longrightarrow Mn^{+2}$
	(From Mnsog) (From Mnsog)
	Overall reaction is
	OVERAGE REACTOR SO
	10 Fe sog + 2 KMn0g + 8H2SOg → K2SOg +2MnSOg + SFe2604)3+8H20
	2 2 7 7 2 3 7 2 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7
	OR
	Mnoq + 8H++5e Mn+2 + 4H20.
	Procedure:
1.	An accurately weighed 1 gm bowder is dissolved in 25 ml of water in a conical flask.
	in 25 ml of water in a conical flask.
2.	Now add 20 ml of dilute sulphuric acid and
	this solution is treated to titrated against 0.1 N KMnoq until a faint pink colour is obtained.
	KMnog until a faint pink colour is obtained.

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3.	Note o	down	the ,	volume	of	KMnOq	Consum	ied.	
	Eac	ch 1 m	n of	0.1N	KMn0	<u>+</u> ≡ 0.	0291 gm sulph	of ferrate.	ous
		- Here		N KM	1109	solution	taken		
	<del>Ca</del> Resw								
	The was	1. pur	to be	f fers	ous	sulphat	te by the	mical a	ssay
	7. 1		<u>,                                     </u>		n' -			1 3	
						Teacher'	s Signature		