

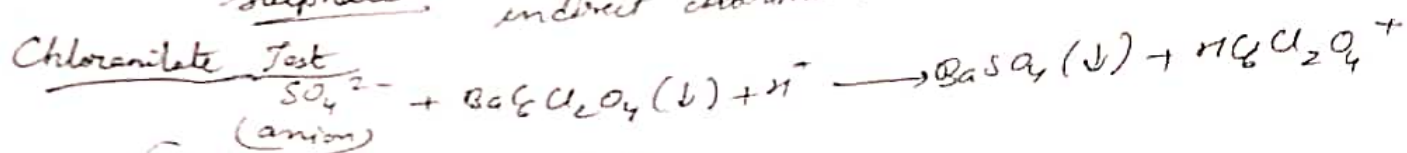
Cl<sup>-</sup> ions : DPD method (colorimetric)

- Reagents:
- i)  $\text{Cl}_2$  sol<sup>n</sup> demand-free
  - ii) Acetic acid
  - iii) KI
  - iv)  $\text{Na}_2\text{S}_2\text{O}_3$  titrant
  - v) Starch indicator
  - vi) Phosphate buffer sol<sup>n</sup>
  - vii) DPD indicator
  - viii)  $\text{KMnO}_4$

Interference: Chromate (Removal by thioacetamide)

22nd Oct 2022.

Sulphate: indirect colorimetric detection of sulphate.



(Barium chloranilate)?

(Both cation & anion interference)

insoluble ppt  $\rightarrow$  cause high incorrect sulphate value

can be removed by (anion exchange method)?

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Kaolin clay

$\rightarrow$  adsorption of  $\text{SO}_4^{2-}$

$\downarrow$   
desorption

Methylthymol Blue is other option.

Turbidimetric method:

$\text{SO}_4^{2-}$  is precipitated in an acetic acid medium with Barium Chloride ( $\text{BaCl}_2$ ) so as to form Barium  $\text{SO}_4$  crystals of uniform size. Light absorbance of the  $\text{BaSO}_4$  suspension is measured by a photometer & the  $\text{SO}_4^{2-}$  conc. is determined by comparison of the reading with a standard curve.