

CHAPTER - VIDENTIFICATION OF THE FINAL PRODUCTS

A knowledge of the products formed in a reaction subjected to kinetic study is an important step in the elucidation of the mechanism of the reaction.

The reaction mixture, (after keeping for 24 hours) was treated with potassium chloride to precipitate out all the silver nitrate added. The solution was filtered and further heated to destroy peroxydisulphate remained in the solution. The solution was further concentrated and the tests were performed as follows :

The final oxidation product was acetaldehyde and ammonia, but the reaction was studied in acetic acid medium hence we could not detect ammonia. Test for acetaldehyde is given as follows :

- (1) Aqueous solution + Tollen's reagent or Fehling's solution \longrightarrow grey/black or red ppt shows the presence of acetaldehyde.
- (2) Add 1 cc of freshly prepared aqueous sodium nitroprusside to 1 cc of the original test solution. Add 5-10 drops of aqueous NaOH. A deep wine red colour shows the presence of acetaldehyde.

- (3) Dissolve 0.5 gm of 2:4 - dinitrophenylhydrazine in 2 cc dil. HCl by heating. Cool the solution and add 0.5 cc of the test solution. An intense yellow ppt shows the presence of acetaldehyde.

The above tests were carried out according to Feigl.¹⁹²