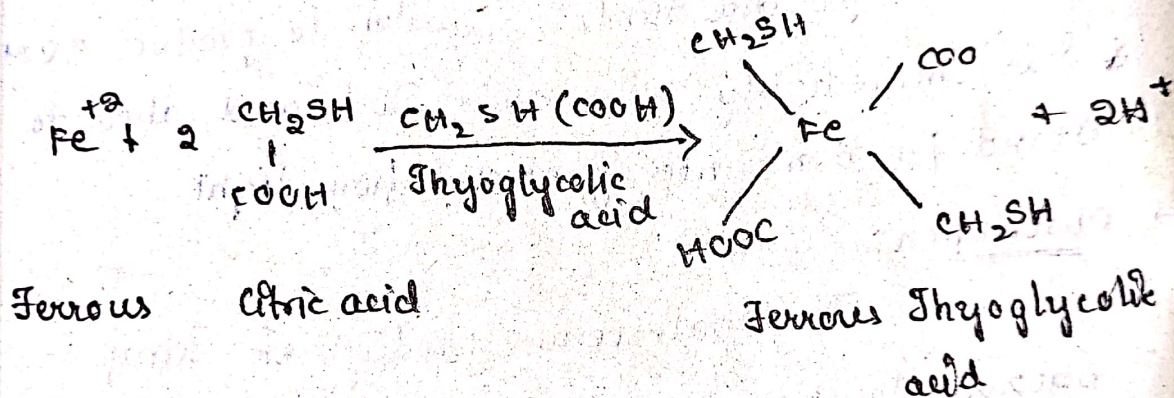


→ Limit test of Iron:

principle:

The limit of Iron is based on Reaction between Iron in Ammonical solution in the presence of Citric acid and Thioglycolic acid to give ferrous Thioglycolate, which results in the formation of pale pink to deep Reddish purple in colour. The colour is compared between the test and the standard.

Chemical Reaction:

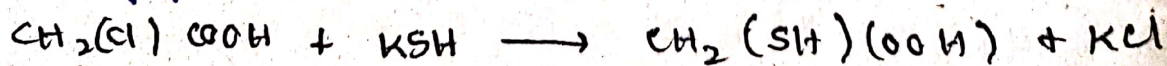


Note:

→ Citric acid: it allows immediate precipitation of Iron

→ Thioglycolic acid: it is an analogue of glycolic acid

• This acid is prepared by treating monochloro acetic acid and potassium hydrogen sulphide to give Thioglycolic and KCl.



Ammonia: it is used to develop colour of the complex ferrous Thioacetate.

Procedure:

0.173 gm of

<u>Test</u>	<u>Standard</u>
* 1 gm of Sample + 40 ml distilled water	* 2 ml of Standard from solution + 40 ml Distilled water
* 2 ml of 20% Citric acid $\frac{W}{V}$	* 2 ml of 20% Citric acid $\frac{W}{V}$
* 2 drops of Thiogly- colic acid	* 2 drops of Thioglycolic acid
* Add few drops of Ammonia	* Add few drops of Amm- onia
* Make upto 50 ml with distilled water	* Make upto 50 ml of Ammonia with distilled water
* Stir with glass rod and wait for 5 min	* Stir with glass Rod and wait for 5 min

→ preparation of Standard:

