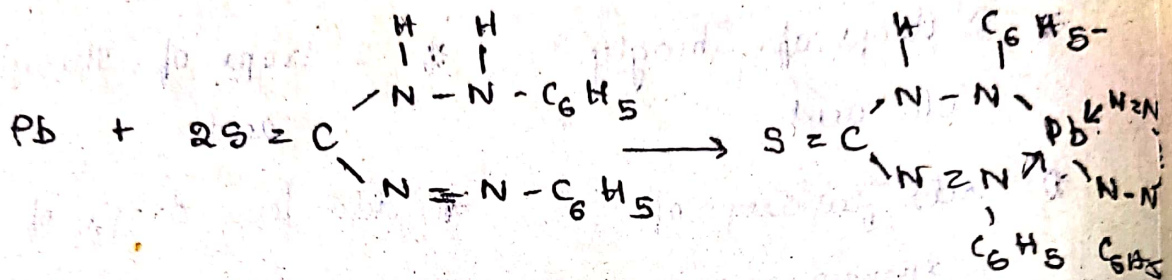


Limit test of Lead

It is a usp method:

It depends on the Reaction between Lead & dithizone to produce Lead dithizonate which gives Red Colour. Here the Red Colour is compared between the test and the Standard.



Test	Standard
→ Sample	* add Standard solution 2ml
→ 6 ml ammonium Citrate 2ml potassium Cyanide 2ml Hydroxylamine hcl, 2 drops phenol Red, Ammonia	* 6ml ammonium Citrate
→ 5 ml of dithizone sol (dithizone + Chloroform) untill green colour is formed	* 5ml of dithizone Sol (dithizone + Chloroform) untill green colour is formed
→ Solution is shaken for 30 Seconds with 30 ml 1% w/v HNO ₃ Chloroform layer is discarded	* Solution is shaken for 30 with 30ml 1% w/v HNO ₃ Chloroform layer is discarded
→ 5ml of dithizone + 4ml Ammonium Cyanide	* 5ml of dithizone + 4ml Ammonium Cyanide
→ Shake for 30 sec	* Shake for 30 sec

→ dithione in Chloroform gives green colour and lead dithionate is violet in colour. So, the end product is Red in colour.

Observation:

If the Red colour is low in test, then Standard, then it passes the limit test.

Standard: 0.1598 of lead nitrate + 10 ml of HNO_3 → 1000 ml with D.W

Bp method:

It is based on the Reaction b/w Lead and Sodium sulphide to give lead sulphide which produces brown to black colour precipitate. Here the test is compared between the test and Standard.



Test

- * 2 gm of Sample
- * dissolve it in ^{hot} distilled water and then add 5 ml of acetic acid
- * Ammonia
- * 1 ml of KCN
- * Colour was observed
- * Any Colour add solution of burnt sugar
- * make it upto 50 ml with distilled water
- * 2 drops of Na_2S
- * Stir with glass rod

Standard

- * 2 gm of sample + 5 ml of acetic acid and then add the Standard solution
- * Ammonia
- * 1 ml of KCN
- * Colour was observed
- * Any Colour was observed add solution of burnt sugar
- * Make upto 50 ml with D.W
- * 2 drops of Na_2S
- * Stir with glass rod - 5 min