→ Limit test of Heavy metals

The metal Impurities like lead, arsenic, mercury, Cadmium, Chromium, Tin, Antimony, bismuth Reacts with Hydrogen Sulphide & Sodium Sulphide to give brown Colour Solution. (due to Sulphates of heavy metals)

They are 3 methods.

method A used for the substances which give Clear, Colourless solution under specified test Condition

method B: used for the substances which do not give Clear Colourless solution under specified test Conclition.

method C: used for the substances which give Clear Colourless solution with Sodium Hydroxide (NaOH)

→ This test is performed in nessler's cylinder

method A:

Test	Standard
* 25 ml of test solution	* 2 ml Standard solution → 25 ml D.W
* PH is adjusted to 3 to 4 by Ammonia & Acetic acid	* PH is adjusted to 3 to 4 by Ammonia & Acetic acid
* make upto 35 ml with D.W.	* make upto 35 ml with DW
* add 10 ml of H_2S and make up to 50 ml with D.W	* add 10 ml of H_2S and make up to 50 ml with D.W.
* Stir with glass rod and wait for 5 min	* Stir with glass rod and wait for 5 min

Metho : B

Test	Standard
* 2gm Sample in Crucible + HNO_3 Exposed to low flame till it Charged	* 2ml Standard Solution → 25 ml with distilled water
* H_2SO_4 Heated in muffle furnace at 500 °C + 4 ml HCl	* pH is adjusted to 3-4 by Ammonia & Acetic acid
* 10 ml HCl	* make upto 35 ml with D.W
* Ammonia make up to 25 ml with DW + Acetic acid make up to 35 ml with DW	* Add 10 ml of H_2S and make upto 50 ml with DW
* 10 ml of H_2S make up to 50 ml with distilled water	* Stir with glass Rod and wait for 5 min
* Stir with glass Rod and wait for 5 minutes	