Date _____

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**Aim :-**

To evaluate the given filter media.

**Reference :-**

Sona P.S., A Practical Manual of Pharmaceutical engineering 1st Edition, 2015, University Science Press Pg. No - 130 - 132.

**Requirement :-**

(a) Glassware :-
- Beaker (7)
- Funnel (7)
- Glass rod (3)
- Test tube (7)
- Test tube stand (1)
- Conical flask. (1)

(b) Chemicals → Calcium Carbonate.

(c) Filter media →
- Sand
- Cotton
- Polyster cloth
- Filter paper
- Membrane filter
- Cotton cloth.

Teacher's Signature _____

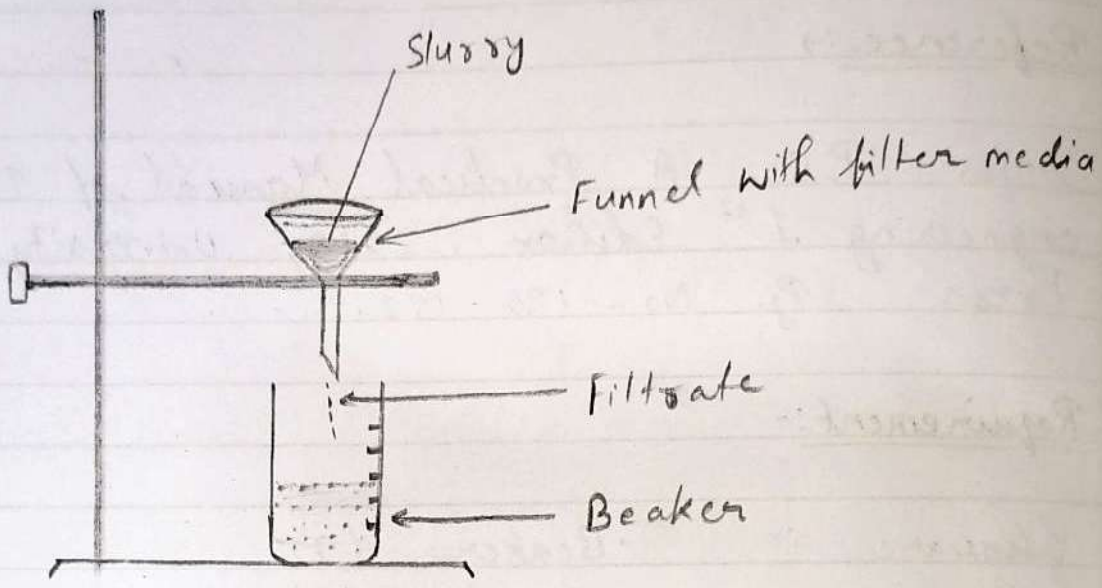


Fig :- Filtration assemble

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Theory :- Filtration is defined as a process in which the particles are separated from a liquid by Parsing the liquid through a permeable ~~liquid~~ material. The filtration can be classified into two types surface and depth filtration.

In surface filtration and screening action takes place by poses or holes. Solids are got deposited over filter medium. Filter media are available in different forms. Sand, Filter, Clothes, belts, bonded fabrics, kraft papers, membrane filters, surface type cartidges are some of the ~~fabrics~~ filter media commonly used. During the filtration depending on the pore size, Particles present in the slurry will either retain over the media or pass through the filter media.

Procedure :-

Filtration of the slurry :-

(i) Arrange filtration assemble as shown in the fig..

(ii) Keep ~~the~~ diff. filtration media to the funnels.

(iii) Prepare the slurry of $CaCO_3$ (10%).

(iv) Add 50 ml slurry to each of the filter media.

Teacher's Signature

| S. No | Samples | % transmittance | Fiter media |
|---|---|---|---|
| 1. | 10% $CaCO_3$ | High | Sand |
| 2.. | 10% $CaCO_3$ | less than sand | Polyster cloth |
| 3. | 10% $CaCO_3$ | less than Polyster cloth | Cotton |
| .4. | 10% $CaCO_3$ | Low | Filter Paper |

(v) Discard the first few drops.

(vi) Wait till 10 ml of filtrate is collected.

(vii) Take the filtrates separately into test tube and mark it accordingly.

(viii) Analyze the samples with the help of spectrophotometer

Result:

The given filter media are evaluated.