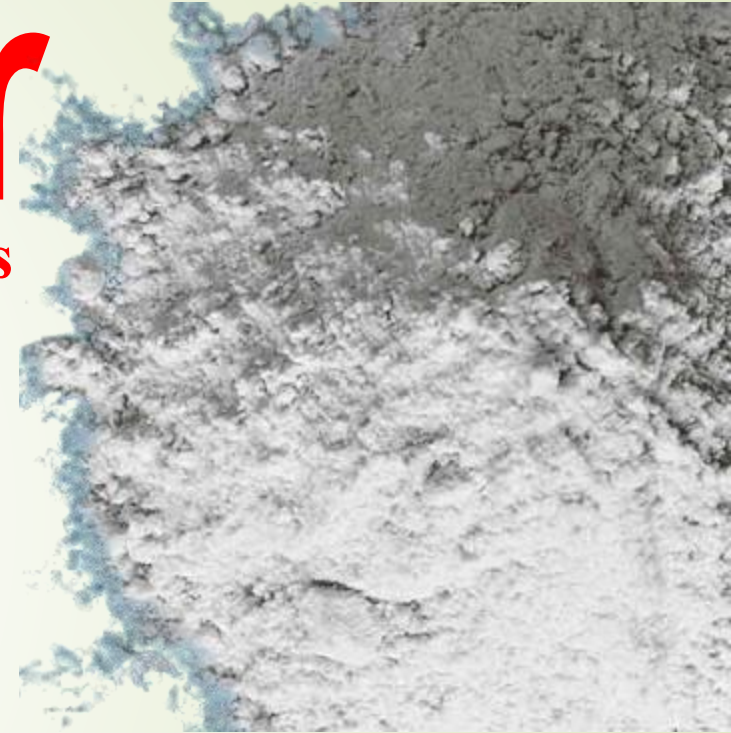


Powder

In Pharmaceutics



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Powder

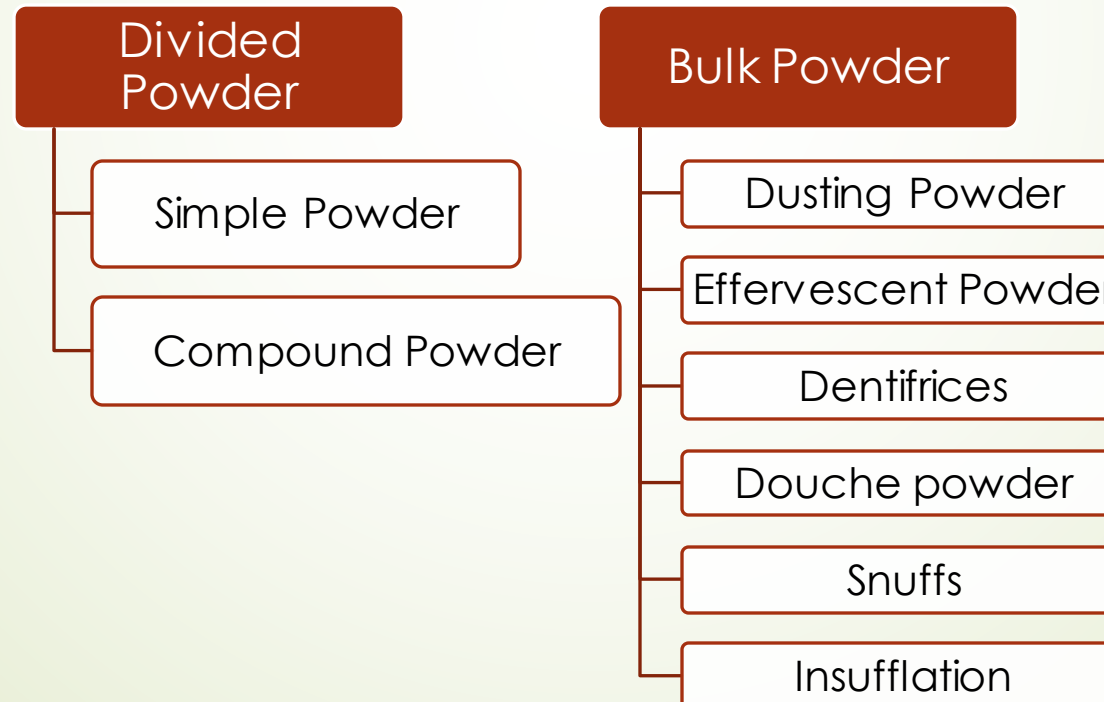
Topic's :-

- ❖ **Definition**
- ❖ **Classification**
- ❖ **Advantage & Disadvantage**
- ❖ **Simple and Compound Powder**
- ❖ **Official preparation**
- ❖ **Dusting Powder**
- ❖ **Effervescent Powder**
- ❖ **Eutectic Mixtures**
- ❖ **Hygroscopic,**
- ❖ **Geometric Dilution.**

Definition –

A Pharmaceutical powder is a solid dosage form of medicament which are meant for internal use. It is a mixture of finely divided drug particles and chemicals in drug form.

Classification of Powder -



Advantage

- It is used both internally and externally.
- They are more stable.
- Easy to handle and store.
- Less change of Incompatibility.
- Physician prescribed according to the patient need.
- They do not need any special machinery and techniques.
- Easy to transportation

Disadvantage

- Time consuming process.
- It has bitter,unpleasant taste.
- It gives slow response than liquid dosage form.
- Easily affected by atmospheric condition.
- Difficult to weigh less amount.

1. DIVIDED POWDER:

These are unit dose powders normally packed properly.

A. Simple Powder

These are those type of powder which contain only one ingredient.
Which are packed in a folded paper and dispensed in small plastic bags.

Ex: Aspirin

Rx
Aspirin – 300 mg
More Powder

Procedure:

Powder the aspirin



Weigh accurately required quantity of aspirin.



Weigh 300 mg of aspirin for each wrap.

B. Compound Powder

These are those type of powder which contain more than one ingredient and are mixed together then divided into desired number of individual dose.

Ex. Aspirin, Paracetamol and caffeine.

Rx.

Aspirin	–	300 mg
Paracetamol	–	150 mg
Caffeine	–	50 mg

Procedure:



2. BULK POWDER :

These are those type of powder which are store or dispensed in bulk form i.e. powder are deliverd in large quantity.

They are mainly dispense in wide mouth container. It contation non potent substance like. Antacids, Laxatives, Purgatives.

A. Dusting Powder

These are those powders which are meant for external application the skin for local action.

They are applied in very fine state to avoid local irritation.

Eg:- Salicylic acid

Properties -

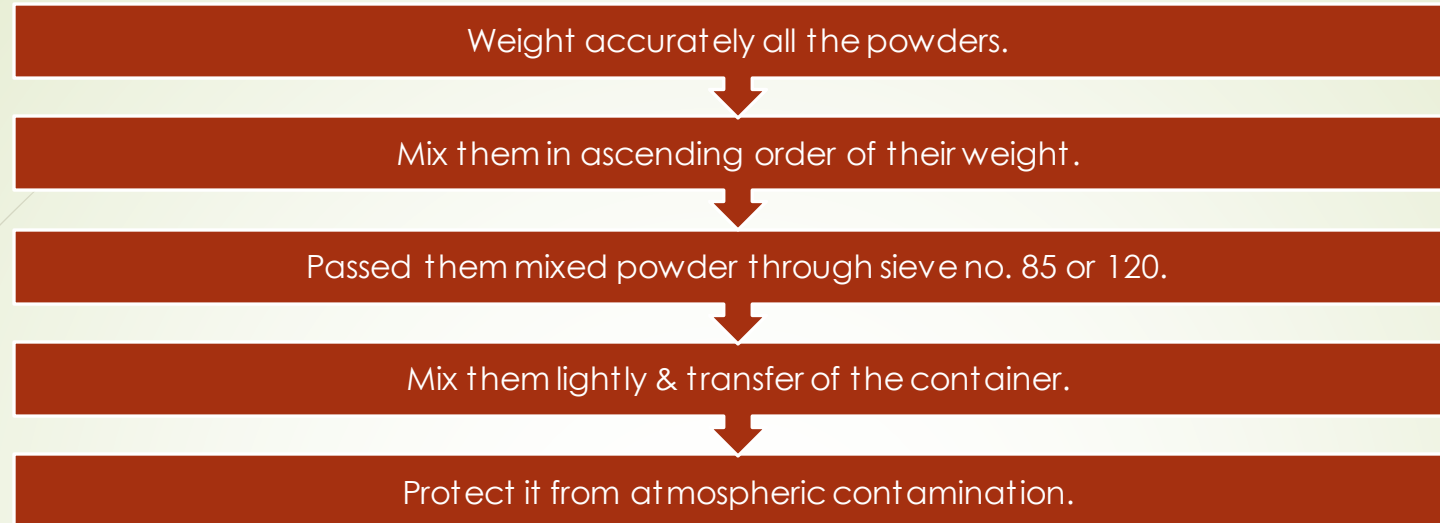
- Not produce any local irritation.
- It should be freely flowing.
- It should have good absorption and absorption capacity.
- It should be homogenous.
- It provide protection to the skin.

Ex. Salicylic acid

Rx.

Purified talc	–	50 mg
Starch powder	–	25 mg
Zinc oxide powder	–	20 mg
Salicylic acid powder	–	5 gm

Procedure:



B. Effervescent Powder

These are those powder which produce effervescence i.e. release CO_2 . it contain medicament API mixed with acid and base which react together and it produce CO_2 .

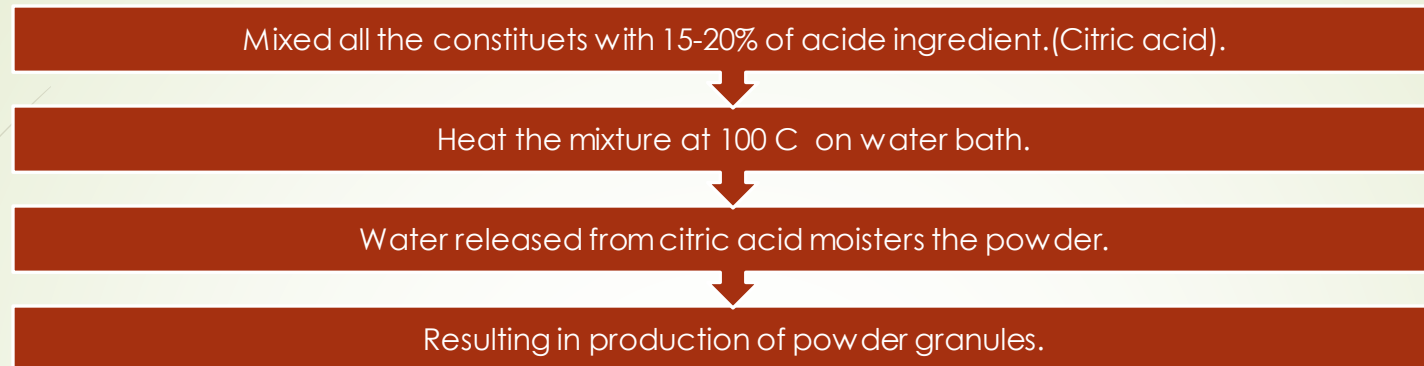
Eg:- ENO, Aspirin etc.

Rx.

Sodium Bicarbonate	– 35 gm
Citric acid	– 25 gm
Tartaric acid	– 15 gm
Anhydrous sodium carbonate	– 25 gm

Procedure:

1. Heat Method -



2. Wet Method -



C. Dentifrices

These are those substance which are meant for external use and applied with the help of tooth brush for cleaning the surface of teeth.

They are available as tooth powder, tooth pastes, liquid and gels.

Eg:- Saccharine sodium, Flouride toothpaste etc.



Rx.

Hard soap, fine powder	– 5 gm
Precipitated Calcium carbonate	– 94 gm
Saccharine sodium	– 2 gm
Peppermint oil	– 4 gm

D. Insufflation

These are those powder which are meant for introduce into the body cavity and inhalation by nose with the help of insufflators.

It sprays the powder into a stream of finely divided particles all over the site of application.

Eg:- Nitrous oxide anaesthesia etc.

E. Snuffs Powder

These are those powder substance which are inhaled into the nostrils for its antiseptic action.

They mainly for the patient suffering from bronchial asthma due to its bronchodilatory action they dispensed in flat metal boxes with vinged lid.

Eg:- Vicks inhaler, Asthama pump inhaler etc.



Stability Problems

These are some stability problems which are face in preparation of powders.

- 1- Efflorescent Powder
- 2- Hygroscopic Powder
- 3- Eutectic mixture

E. Douche Powder

These are those powder substance which are applied in body cavity for antiseptic and cleaning action.

Its main aim is to cleaning vaginal problems.

Ex- boric acid

1. Efflorescent Powder

These are those substance which loses water to form a lower hydrate or become anhydrous is termed as efflorescent.

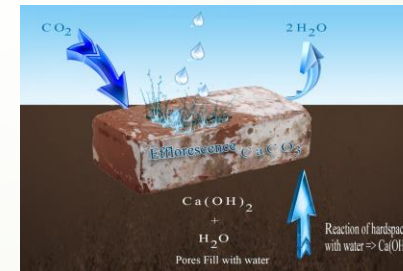
Present in form of crystal granules.

Ex- Sodium Carbonate Na_2CO_3 .

2. Hygroscopic Powder

These are those powders which absorb moisture from the atmosphere are called hygroscopic powder.

Ex- Ammonium chloride, Pepsin, NaCl etc...



3. Eutectic mixture

It is the mixture of two solid particles (Powder) in which their melting point is reduced due to mixing, and the mixture is converted into liquid form at room temperature (Room Temperature).

Ex- Menthol with others powder (Mixture) ---- liquid form

Geometric Dilution

It is the method of preparation of drug, which is basically used for potent drug substances. In this method the potent drug substances are mixed with large quantity of diluents (excipients).

Ex- 100 mg of Potent Drug + 900 mg of diluents – lactose = 1000 mg drug

Now, in this powder are prepared in a following way :-

1- Firstly take less and small quantities of drug and diluents.

100 mg drug + 100 mg diluents = 200 mg Mixture

2- Now, 200mg mixture mix with equal amount of diluents:-

200 mg mixture + 200 mg diluents = 400 mg mixture.

3- follow further step in same way :



Thanks