

PHARMACEUTICS-I (BP103T)

UNIT: 2

CLASS: 7

TOPIC: CLASSIFICATION OF POWDERS

1. Bulk powder for internal use
2. Bulk powder for external use
3. Simple and compound powder for internal use
4. Powders enclosed in cachets and capsules
5. Compressed powders (tablets)

Bulk powder for internal use

• Powders are dispensed in bulk, when accuracy of dosage is not important. Bulk powder contains several doses of powder. They are supplied in wide mouthed containers that permits easy removal of a spoonful of powder. The non potent substances which are supplied in bulk are antacids and laxatives etc.

Bulk powders for external use

- Bulk powders meant for external use are non-potent substances. These powders are supplied in cardboard, glass or plastic containers, which are often designed for the specific method of application. The dusting powders are preferably supplied in perforated or sifter top containers.
- The container should bear a label indicating that the powder is meant for external application.
- The bulk powders which are commonly used for external application are as follows:

- a) Dusting powders
- b) Insufflations
- c) Snuffs
- d) Dentifrices

• Dusting powders: These are meant for the external application to the skin and are generally applied in a very fine state of subdivision to avoid local irritation. Hence, dusting powders should be passed through sieve no. 80 to enhance their effectiveness.

- Dusting powders are of 2 types:
- Medical
- Surgical
- Medical dusting powders are used for superficial skin conditions, whereas surgical dusting powder are used in body cavities and also on major wounds as a result of burns and umbilical cords of infants.
- Medical & Surgical dusting powders before use must be sterilized by dry heat method at 160°C for 2 hrs.
- In the preparation of dusting powder, the talc or kaolin, starch are used commonly because these are chemically inert.
- But such ingredients are readily contaminated with pathogenic bacteria so, these must be sterilised before their use by dry heat sterilisation method.
- The dusting powders are dispensed in sifter or aerosol containers.
- Dusting powders are generally non- toxic but inhalation of its fine powdered ingredients by infants may lead to pulmonary inflammation. So proper care should be taken while handling.
- Use: Antiseptic, Astringent, Absorbent, Antiperspirant
- Insufflations: These are medicated dusting powder meant for introduction into body cavities such as, nose, throat, ears & vagina with the help of an apparatus "Insufflator".
- Nowadays, the insufflations are available in the form of pressure aerosols & these aerosols used for potent drugs.
- Insufflations are used to produce a local effect in the treatment of ear, nose, throat infection with antibiotics or to produce a systemic effect from a drug that is destroyed in the gut.
- Snuffs: These are finely divided solid dosage form of medicament which are inhaled into nostrils for antiseptic, bronchodilator & decongestion action.
- Snuffs are dispensed in flat metal boxes or glass container with hinged lid.
- Dentifrices (tooth powders): These are applied on tooth surface with help of brush. They contain suitable detergent or soap; some abrasive substance & suitable flavoring agents are involved.

- Abrasive agents such as calcium sulphate, calcium carbonate, sodium carbonate & sodium chloride are use in fine powder.

Simple and compound powders for internal use

- In this form of powder, each individual dose is enclosed in paper.
 - The number of ingredients is one i.e. simple powder while more than one i.e. compound powder.
 - The minimum qty of each powder should not be less than 100 mg for it can be handled conveniently by patient & can be weighed accurately.
- ✓ Simple powder: In simple powder contains only one ingredient either in crystalline form or amorphous form. If powder present in crystalline form, then it is reduced to fine powder, weighed the powder & divided into number of doses & wrapped as individual dose.
- ✓ Compound powders: contains two or more than two substances which are mixed together. Then divided into desired number of individual doses which are dispensed into each powder paper.

Powders Enclosed in cachets

- Cachets are solid dosage form of drug & cachets are also called as wafer capsules.
- These are moulded from rice paper, which is made by pouring a mixture of rice flour and water between two hot, polishes, revolving cylinders. The water evaporates and a sheet of wafer is formed. They are quite hard to swallow as such but they are softened by dipping in water for a few seconds and then placed on the tongue and swallowed with a draught of water. After swallowing cachet gets disintegrate and drug is released.

Compressed tablets or tablet triturates or moulded tablets

- These are powders moulded into tablets.
- They are flat, circular disc & usually contains potent drug which is mixed with lactose, dextrose or some other diluents.
- The apparatus is made up of stainless steel or plastic. It consists of upper & lower perforated plates which is having an exactly the same number of holes as that of number of pegs in a lower plate.

- The lower plate also has two large pegs which ensure correct fitting of the plates.
- The moulds are available in several sizes having a capacity ranging from 30 to 250 mg.
- Generally, 50 to 250 tablet triturates can be prepared at a time from a tablet triturate mould.
- The powder with diluents is mixed together & made a stiff paste with the help of alcohol 60%.
- Then, paste is introduced on upper plate with the help of spatula & fill all the holes & removes excess.
- This plate is placed over the lower plate. Then little pressure is applied over the top plate which will force the plate move downward, leaving the mould tablet on the projected pegs.
- Then, prepared tablets dried in hot air oven or by keeping in warm place.

2 MARKS QUESTIONS

1. Classify powders.
2. Define dusting powders.
3. What is simple and compound powders?
4. What is an insufflation?
5. Define catchet.

5 MARKS QUESTIONS

1. Write briefly about bulk powders for external use.

10 MARKS QUESTIONS

1. Explain in detail about different types of powders and give their official preparations.