

PHARMACEUTICS-I (BP103T)

UNIT: 5 (Semi-solid dosage forms)

CLASS: 4

TOPIC: SEMI-SOLID DOSAGE FORM

Ingredients used in preparation of semisolids dosage forms: i) Bases ii) Preservative iii) Humectants
iv) Antioxidants v) Emulsifier vi) Gelling agent vii) Permeation enhancer viii) Buffers

BASES

It is one of the most important ingredients used in formulation of semisolid dosage form. Ointment bases do not merely act as the carriers of the medicaments, but they also control the extent of absorption of medicaments incorporated in them.

IDEAL PROPERTIES OF A BASE

They should be: Inert, non-irritating and non-sensitizing. Compatible with skin pH and the drug. Good solvent and/or emulsifying agent. Emollient, protective, non-greasy and easily removable. Release medicament readily at the site of application. Pharmaceutically elegant and possess good stability.

ANTIOXIDANTS

Oxygen is a highly reactive atom that is capable of becoming part of potentially damaging molecules commonly called "free radicals." Free radicals are capable of attacking the healthy cells of the body, causing them to lose their structure and function. To prevent this antioxidant are added. E.g. Butylated hydroxy anisole, Butylated hydroxy toluene

PERMEATION ENHANCERS

Skin can act as a barrier. With the introduction of various penetration enhancers, penetration of the drug through the skin can be improved. E.g. Oleic Acid EMULSIFIER An emulsifier (emulgent) is a substance that stabilizes an emulsion by increasing its kinetic stability. Must reduce surface tension for proper emulsification. Prevents coalescence. Ability to increase the viscosity at low concentration.

HUMECTANT

A humectant is a hygroscopic substance Humectants are used to: increase the solubility of the active ingredient, to elevate its skin penetration, elevate the hydration of the skin.

BUFFERS

Buffers are added for various purpose such as: Compatibility with skin. Drug solubility. Drug stability.
E.g. sodium acetate, sodium citrate, potassium metaphosphate.

2 MARKS QUESTIONS

1. What is permeation enhancer.
2. Enlist the excipients used in semi-solid dosage forms.

5 MARKS QUESTIONS

1. Describe about the excipients used in semi-solid dosage forms.

DRCP