chapter 5
Creams

Overview

Upon completion of this chapter, you should be able to:

- prepare a cream from first principles
- incorporate solids and liquids into a cream base
- select an appropriate container in which to package a cream
- prepare an appropriate label for a cream.

Introduction and overview of creams

In pharmacy the term 'cream' is reserved for external preparations. Creams are viscous semi-solid emulsions for external use. Medicaments can be dissolved or suspended in creams.

A cream may be 'water-in-oil' or 'oil-in-water' depending on the emulsifying agent used. A cream is always miscible with its continuous phase.

British Pharmacopoeia (BP) definition

Creams are formulated to provide preparations that are essentially miscible with the skin secretion. They are intended to be applied to the skin or certain mucous membranes for protective, therapeutic or prophylactic purposes, especially where an occlusive effect is not necessary.

Definition

Water-in-oil creams (oily creams) as bases
These are produced by emulsifying agents of natural origin, e.g. beeswax, wool alcohols or wool fat. These bases have good emollient properties. They are creamy, white or translucent and rather stiff.

Oil-in-water creams (aqueous creams) as bases
These are produced by synthetic waxes, e.g. macrogol and cetomacrogol. They are the best bases to use for rapid absorption and penetration of drugs. They are thin, white and smooth in consistency.

General method

Terminology used in the preparation of creams, ointments, pastes and gels

The following are common terms that are used within the extemporaneous preparation of creams and in the extemporaneous preparation of ointments, pastes and gels (see Chapter 6).

Trituration

This is the term applied to the incorporation, into the base, of finely divided insoluble powders or liquids. The powders are placed