

chapter 3

Suspensions

Overview

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

- understand the difference between diffusible and indiffusible suspensions
- prepare diffusible and indiffusible suspensions from first principles
- select the correct amount of suspending agent to use when preparing an indiffusible suspension
- understand the 'doubling-up' technique
- select an appropriate container in which to package a suspension
- prepare an appropriate label for a suspension.

Introduction and overview of suspensions

Suspensions are important pharmaceutical dosage forms that are still widely in use today. Owing to their versatility they are often used in situations where an 'emergency' formulation is required.

Common pharmaceutical products that are suspensions include:

- ear drops
- enemas
- inhalations
- lotions
- mixtures for oral use.

British Pharmacopoeia (BP) definition (oral suspensions)

Oral suspensions are oral liquids containing one or more active ingredients suspended in a suitable vehicle.

Suspended solids may slowly separate on standing but are easily redispersed.

Diffusible and indiffusible suspensions

Diffusible suspensions

These are suspensions containing light powders which are insoluble, or only very slightly soluble in the vehicle, but which on shaking disperse evenly throughout the vehicle for long enough to allow an accurate dose to be poured.

Definition

A pharmaceutical suspension is a preparation where at least one of the active ingredients is suspended throughout the vehicle. In contrast to solutions (see Chapter 2), in a suspension at least one of the ingredients is not dissolved in the vehicle and so the preparation will require shaking before a dose is administered.