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# DISPERSE SYSTEMS

### Chapter at a Glance

Suspensions

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Features Desired in a Pharmaceutical

Suspension

Physical Features of the Dispersed Phase of

a Suspension Dispersion Medium

Preparation of Suspensions

Sustained-Release Suspensions

Extemporaneous Compounding of

Suspensions

Packaging and Storage of Suspensions

Examples of Oral Suspensions

Antacid Oral Suspensions

Antibacterial Oral Suspensions

Examples of Other Suspensions

Otic Suspensions

Rectal Suspensions

Dry Powders for Oral Suspension

Emulsions

Purpose of Emulsions and of

Emulsification

Theories of Emulsification

Preparation of Emulsions

Emulsifying Agents

The HLB System

Methods of Emulsion Preparation

Continental or Dry Gum Method

English or Wet Gum Method

Bottle or Forbes Bottle Method

Auxiliary Methods

In Situ Soap Method

Microemulsions

Stability of Emulsions

Aggregation and Coalescence

Examples of Oral Emulsions

Mineral Oil Emulsion

Castor Oil Emulsion

Simethicone Emulsion

Gels and Magmas

Colloidal Dispersions

Terminology Related to Gels

Classification and Types of Gels

Preparation of Magmas and Gels

Examples of Gelling Agents

Gel Formulation Considerations

Examples of Magmas and Gels

Bentonite Magma, NF

Aluminum Hydroxide Gel, USP

Milk of Magnesia, USP

Starch Glycerite

Lubricating Jelly Formula

Clear Aqueous Gel with Dimethicone

Poloxamer Gel Base

Proper Administration and Use of

Disperse Systems

Aerosols

Advantages of the Aerosol Dosage

The Aerosol Principle

Aerosol Systems

Two-phase Systems

Three-phase Systems

Compressed Gas Systems

Aerosol Container and Valve Assembly

Containers

Valve Assembly

Metered Dose Inhalers (MDIs)

Filling Operations

Cold Filling

Pressure Filling

Testing the Filled Containers

Packaging, Labeling, and Storage

Proper Administration and Use of

Pharmaceutical Aerosols

Topical Aerosols

Vaginal and Rectal Aerosols



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