

SEVENTH EDITION  
**PHARMACEUTICAL  
DOSAGE FORMS  
AND DRUG  
DELIVERY SYSTEMS**

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## DISPERSE SYSTEMS

**Chapter at a Glance**

Suspensions	Gels and Magmas
Reasons for Suspensions	Colloidal Dispersions
Features Desired in a Pharmaceutical Suspension	Terminology Related to Gels
Physical Features of the Dispersed Phase of a Suspension Dispersion Medium	<i>Classification and Types of Gels</i>
Preparation of Suspensions	Preparation of Magmas and Gels
Sustained-Release Suspensions	Examples of Gelling Agents
Extemporaneous Compounding of Suspensions	Gel Formulation Considerations
Packaging and Storage of Suspensions	Examples of Magmas and Gels
Examples of Oral Suspensions	<i>Bentonite Magma, NF</i>
<i>Antacid Oral Suspensions</i>	<i>Aluminum Hydroxide Gel, USP</i>
<i>Antibacterial Oral Suspensions</i>	<i>Milk of Magnesia, USP</i>
Examples of Other Suspensions	<i>Starch Glycerite</i>
<i>Otic Suspensions</i>	<i>Lubricating Jelly Formula</i>
<i>Rectal Suspensions</i>	<i>Clear Aqueous Gel with Dimethicone</i>
Dry Powders for Oral Suspension	<i>Poloxamer Gel Base</i>
Emulsions	Proper Administration and Use of Disperse Systems
Purpose of Emulsions and of Emulsification	Aerosols
Theories of Emulsification	Advantages of the Aerosol Dosage Form
Preparation of Emulsions	The Aerosol Principle
<i>Emulsifying Agents</i>	Aerosol Systems
<i>The HLB System</i>	<i>Two-phase Systems</i>
<i>Methods of Emulsion Preparation</i>	<i>Three-phase Systems</i>
<i>Continental or Dry Gum Method</i>	<i>Compressed Gas Systems</i>
<i>English or Wet Gum Method</i>	Aerosol Container and Valve Assembly
<i>Bottle or Forbes Bottle Method</i>	<i>Containers</i>
<i>Auxiliary Methods</i>	<i>Valve Assembly</i>
<i>In Situ Soap Method</i>	Metered Dose Inhalers (MDIs)
<i>Microemulsions</i>	Filling Operations
Stability of Emulsions	<i>Cold Filling</i>
<i>Aggregation and Coalescence</i>	<i>Pressure Filling</i>
Examples of Oral Emulsions	<i>Testing the Filled Containers</i>
<i>Mineral Oil Emulsion</i>	Packaging, Labeling, and Storage
<i>Castor Oil Emulsion</i>	Proper Administration and Use of Pharmaceutical Aerosols
<i>Simethicone Emulsion</i>	Topical Aerosols
	Vaginal and Rectal Aerosols

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