# SEVENTH EDITION PHARMACEUTICAL DOSAGE FORMS AND DRUG DELIVERY SYSTEMS

Howard C. Ansel Loyd V. Allen, Jr. Nicholas G. Popovich

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#### Section V. Liquid Dosage Forms



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## SOLUTIONS

#### Chapter at a Glance

Solubility Inorganic Molecules Organic Molecules Some Solvents For Liquid Preparations Distillation Method Ion-exchange method Reverse Osmosis Preparation of Solutions Oral Solutions and Preparations for Oral Solution Dry Mixtures for Solution Oral Solutions Oral Rehydration Solutions Oral Colonic Lavage Solution Magnesium Citrate Oral Solution Sodium Citrate and Citric Acid Oral Solution Syrups Components of Syrups Sucrose and Non-Sucrose Based Syrups Antimicrobial Preservative Flavorant Colorant Preparation of Syrups Solution with the Aid of Heat Solution by Agitation without the Aid of Heat Addition of Sucrose to a Medicated Liquid or to a Flavored Liquid Percolation Elixirs Preparation of Elixirs Nonmedicated Elixirs Medicated Elixirs Antihistamine Elíxirs Barbiturate Sedative/Hypnotic Elixirs Phenobarbital Elixir Digoxin Elixir Tinctures

Proper Administration and Use of Liquid Peroral Dosage Forms **Topical Solutions and Tinctures Topical Solutions** Sprays Aluminum Acetate Topical Solution Aluminum Subacetate Topical Solution Calcium Hydroxide Topical Solution Coal Tar Topical Solution Hydrogen Peroxide Topical Solution Chlorhexidine Gluconate Solution Povidone-Iodine Topical Solution Thimerosal Topical Solution Vaginal and Rectal Solutions Vaginal Douches **Retention** Enemas Evacuation Enemas **Topical Tinctures** Iodine Tincture Compound Benzoin Tincture Thimerosal Tincture Special Application Solutions Nasal Preparations Nasal Decongestant Solutions Inhalation Solutions Examples of Medicated Inhalation Solutions Inhalants Amyl Nitrite Inhalant Propylhexedrine Inhalant Proper Administration and Use of Nasal Drops and Sprays Nasal Route for Systemic Effects **Otic Solutions** Cerumen-Removing Solutions Anti-infective, Anti-inflammatory, and

Analgesic Ear Preparations

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