

الصيدلة	الكلية
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Pharmaceutical Technology	المادة باللغة الانجليزية
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الثالثة	المرحلة الدراسية
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<b>Aromatic Water</b>	عنوان المحاضرة باللغة الانجليزية
الماء العطري	عنوان المحاضرة باللغة العربية
10	رقم المحاضرة
Pharmaceutical Dosage forms and Drug Delivery Systems By Haward A. Ansel; latest edition.	المصادر والمراجع
Sprowel's American Pharmacy.	

### محتوى المحاضرة

#### Aromatic Water

- Aromatic waters are clear, aqueous solutions saturated with volatile oils or other aromatic/volatile substances.
- Prepared from various volatile substances:
  - Orange flower oil
  - Peppermint oil
  - Rose oil
  - Anise oil
  - Spearmint oil
  - Wintergreen oil
  - Camphor
  - Chloroform
- Their odors and tastes are derived from the volatile substances used.

- Most aromatic substances have very low water solubility, so even saturated solutions contain only small concentrations.
  - Uses: perfuming and/or flavoring.
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## Nonaqueous Solutions

### Liniments

- Alcoholic or oleaginous solutions/emulsions of medicinal substances for external use (rubbed on the skin).
  - Alcoholic/hydroalcoholic liniments → rubefacient, counterirritant, penetrating action.
  - Oleaginous liniments → mainly for massage.
  - Solvents: fixed oils (almond, peanut, sesame, cottonseed) or volatile oils (wintergreen, turpentine), or combinations.
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### Collodions

- Liquid preparations composed of pyroxylin dissolved in alcohol + ether (with/without drugs).
- Pyroxylin = nitrocellulose (soluble gun cotton), produced by nitration of cotton.
- 1 part pyroxylin soluble in 25 parts of 3:1 ether–alcohol mixture.
- Intended for external use only.

### On application:

- Solvent evaporates quickly, leaving film of pyroxylin.
- Acts as occlusive, protective coating.
- If medicated, holds drug firmly against skin.
- Clear/slightly opalescent viscous liquid.

- Forms protective film useful for holding wound edges together, but uncomfortable due to inflexibility.
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### Flexible Collodion

- Prepared by adding 2% camphor + 3% castor oil to collodion.
  - Castor oil = flexibility (comfortable on moving areas: joints, fingers, toes).
  - Camphor = waterproof.
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### Salicylic Acid Collodion

- 10% salicylic acid in flexible collodion.
  - Used for keratolytic effect, especially in corn removal.
  - Apply drop by drop → allow drying between drops.
  - Must avoid contact with healthy skin (irritant).
  - Protective measure: coat surrounding skin with petrolatum.
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### Extraction Methods for Preparing Solutions

- Certain pharmaceutical preps use extraction: removal of desired constituents from crude drugs using suitable solvents.
  - Crude drugs: vegetable/animal drugs processed only by collection, cleaning, drying.
  - Extracts contain multiple constituents depending on drug and extraction conditions.
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### Methods of Extraction

#### 1. Maceration

- From Latin *macerare* = soak.

- Drug is comminuted and soaked in menstruum (solvent).
- Softens tissues and dissolves active constituents.
- Typically in closed container, shaken for 2–14 days.
- Alternative: porous cloth bag (like a tea bag).
- Extract separated from marc (residue) by pressing and washing.

## 2. Percolation

- From Latin *per* = through, *colare* = strain.
- Drug packed in percolator, menstruum passed slowly through.
- Extract = percolate.
- Common method (like coffee preparation).
- Flow driven by gravity, sometimes assisted by positive pressure at inlet and suction at outlet.

