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Tinctures; fluid extracts; extracts of resins and oleoresins

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Outlines

- Tinctures
- Fluidextracts
- Extracts
- Resins
- Oleoresins

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Tinctures

- **Tinctures are alcoholic or hydroalcoholic solutions prepared from vegetable materials or from chemical substances.**
- **They vary in method of preparation, strength of the active ingredient, alcoholic content, and intended use in medicine or pharmacy.**

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- **Depending on the preparation, tinctures contain alcohol in amounts ranging from approximately 15 to 80%.**
- **The alcohol content protects against microbial growth and keeps the alcohol-soluble extractives in solution.**
- **In addition to alcohol, other solvents, such as glycerin, may be employed.**

- **Tinctures must be tightly stoppered and not exposed to excessive temperatures.**
- **Many tinctures must be stored in light-resistant containers and protected from sunlight.**

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Disadvantages of Tinctures

1. Unpleasant tasting
2. Physician will prefer single drug instead of preparation from plants
3. High alcohol content

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Examples Of Tinctures Applied Topically

1. Green soap Tincture - **Coconut & Vegetable Oil-based Soap Blend, 30% Ethyl Alcohol, Glycerin, 2% Lavender Oil.** for use in**:**

- Traditional bulk-fill soap dispensers.
- skin cleaning after tattoo and piercing.
- suitable for cleaning the surgical instruments.
- Its oily base makes it a great skin soother and help to keep the skin soft.
- Glycerin content will help to restore moisture to skin and minimize the drying effects of alcohol.
- Gets its name from its natural yellowy green but can in fact be any colour.

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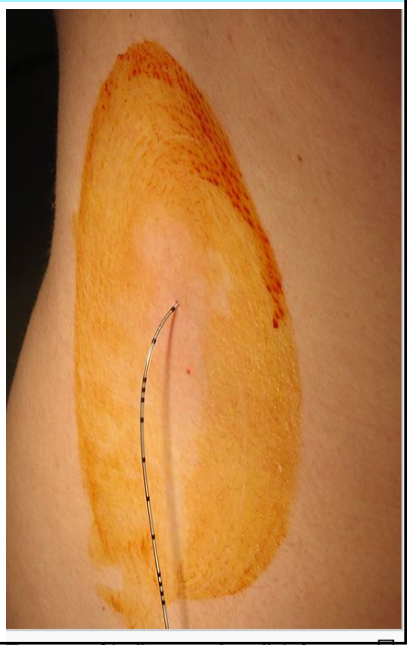
Examples Of Tinctures Applied Topically

2. Iodine Tincture

is an antiseptic, it is also called weak iodine solution. It is usually 2–7% elemental iodine, along with potassium iodide or sodium iodide, dissolved in a mixture of ethanol and water.



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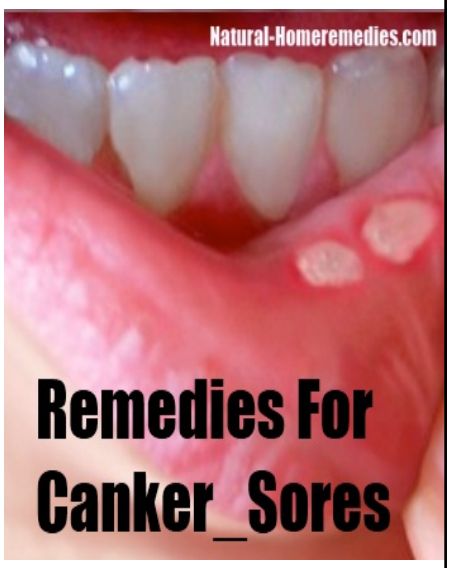
Examples Of Tinctures Applied Topically

3. Compound Benzoin Tincture

- (CTB) is applied to skin before applying adhesive bandages. It protects the skin from allergy to the adhesive and it makes the tape adhere much longer.
- Orthopedists applying a cast often spray CTB in an aerosol can onto skin before casting, as it protects the skin under the cast, and diminishes itching.
- it is also used as an oral mucosal protectant,



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Variations of Official Tinctures are on:

1. Method of Preparation
2. Strength of their active constituent
3. Alcohol content
4. Intended use in medicine or pharmacy

Method of Preparation of Tinctures

1. By simple solution - tinctures prepared from chemical substances.
   Example: Iodine, Thimerosal, and Nitromersol tinctures
2. By extraction - by maceration or percolation
   Examples: Compound Cardamom Tincture

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Preparation of Tinctures

1. Maceration
   Examples: Compound Benzoin Tinctures; Sweet Orange Peel Tincture and ToLu Balsam Tincture
2. Percolation
   Examples: Belladona Tincture and Vanilla Tincture

Strength of their Active components

- There is no set strength for compound tincture. They vary with particular preparation.
- The amount of crude drugs used to prepare each 100mL of tincture is generally as follows: (Belladona Tincture)
  - Potent drugs: Balledona leaf –10 g
  - Non potent drug: Tolu Balsam – 20 g
  - Undried fresh fruit peel: sweet orange peel – 50 g

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❖ Alcohol Content

Tinctures are considered to be stable preparation containing alcohol to protect against microbial growth.

Green soap Tincture - 28 to 32% alcohol
Tolu Balsam Tincture - 77 to 83% alcohol

❖ Pharmaceutical Uses

- **As flavoring tinctures** like vanilla, sweet orange peel, Tolu balsam tinctures.
- **Medicinal use** - Iodine Tincture, Thimerosal, Nitromersol Tinctures - Anti-infective; Compound Benzoin Tincture - Topical protectant; Green soap Tincture - Topical detergent; Belladona Tincture - Anticholinergic

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FLUIDEXTRACT

- Fluidextracts are liquid preparations of vegetable drugs prepared by percolation. They contain alcohol as a solvent, preservative, or both and are made so that each milliliter contains the therapeutic constituents of 1 g of the standard drug that it represents.

- Because of their concentrated nature, many fluidextracts are considered too potent to be safely self-administered, and their use is almost nonexistent in medical practice.

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- Also, many fluidextracts are simply too bitter tasting or otherwise unpalatable to be accepted by the patient.

- Therefore, most fluidextracts today are either modified by the addition of flavoring or sweetening agents before use or used as the drug source of other liquid dosage forms, such as syrups.

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Characteristics of Fluidextract

1. Because they contain alcohol and are highly concentrated, fluidextracts are sometimes referred to as *"100% tinctures"*
2. Fluidextracts of potent drugs are ten times as concentrated or as potent as corresponding tincture.
   Example: Belladonna Tincture is 0.6mL while its fluidextract is 0.06mL

Disadvantages of Fluidextract

1. Because of their concentrated nature, many fluidextracts are considered too potent for safe self administration
2. Too bitter tasting or otherwise unpalatable

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Official Preparation

1. **Glycyrrhiza Fluidextract - Licorice root**
   Fluidextract - flavoring agent
2. **Eriodictyon Fluidextract - Yerba Santa**
   Fluidextract - cathartic
3. **Cascara Sagrada Fluidextract - Rhamnus Purshiana**
   Fluidextract- Laxative
4. **Aromatic Cascara Sagrada Fluidextract**
5. **Senna Fluidextract - Fluidextratum Sennae**

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EXTRACTS

Are concentrated preparations of vegetable or animal drugs obtained by removal of the active constituents of the respective drugs with suitable menstruum, evaporation of all or nearly all the solvents, and adjustment of the residual masses or powders to the prescribed standards.

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EXTRACTS

Extracts are potent preparations, usually between two and six times as potent on a weight basis as the crude drug. They contain primarily the active constituents of the crude drug, with a great portion of the inactive constituents and structural components of the crude drug having been removed.

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Methods of Preparation

In the manufacture of most extracts, percolation is employed to remove the active constituents from the drug, with the percolates generally being reduced in volume by distillation under reduced pressure to reduce the degree of heat and to protect the drug substances against thermal decomposition. The extent of removal of the solvent determines the final physical character of the extract.

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Three Forms of Extract (depending upon the extent of the removal of solvent)

(a) semiliquid extracts or those of a syrupy consistency prepared without the intent of removing all or even most of the menstruum.

(b) pilular or solid extracts of a plastic consistency prepared with nearly all of the menstruum removed.

(c) powdered extracts prepared to be dry by the removal of all of the menstruum insofar as is feasible or practical.

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The pilular extract is preferred in compounding a plastic dosage form such as an ointment or paste or one in which a pliable material facilitates compounding, whereas the powdered form is preferred in the compounding of such dosage forms as powders, capsules, and tablets.

- **Packaging and Storage of Extracts**
- Must be packaged in wide mouth containers or plastic tubes and closely tight to prevent loss of moisture which would result in its becoming hard and unstable for use
- Examples: Belladonna Extract NF; Cascara Sagrada Extract NF and Pure Glycyrrhiza Extract

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Resins

- Natural resins are solids or semisolid exudation from plant or from insects feed on plants.
- Chemically, these exudation are oxidized terpenes of volatile oil of the plants.
- Prepared resins are produced by exhaustive percolation of plant having a resin as the major ingredient using alcohol as solvent.

Example: Podophyllum resin USP

Oleoresins

- They are mixture of volatile oils and resins.
- They are prepared by percolation using selective solvent (usually ether or acetone)

Example: Capsicum oleoresin USP

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- *Homework: If 1 mg of active ingredient (AI) is present in each gram of a crude drug, determine the concentration, in mg/g or mg/mL, of AI in the corresponding*

(a) fluidextract,

(b) "400%" extract, and

(c) potent tincture.

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Thanks for your attention

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