

Mixtures

- A mixture is liquid oral preparation consisting of one or more medicaments either dissolved or suspended in an aqueous vehicle.
- A mixture refers to the physical combination of two or more substances which are mixed but are not combined chemically on which each ingredient substance retains its own chemical properties and mixed in the form of alloys, solutions, suspensions, and colloids.
- Mixtures can be either homogeneous or heterogeneous

Mixtures

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graph TD; Mixtures --> Simple; Mixtures --> Compound; Mixtures --> Miscellaneous; Compound --> ID[Insoluble Diffusible]; Compound --> IID[Insoluble In diffusible]; Compound --> PFL[Precipitate forming liquid]; Compound --> SML[Slightly miscible liquid];
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Simple

Compound

Miscellaneous

Insoluble
Diffusible

Insoluble
In diffusible

Precipitate
forming
liquid

Slightly miscible
liquid

Simple Mixture

Anti-dehydrating
mixture

Rhei & soda
mixture

Iron ammonium
Citrate
mixture

Simple mixture: In which all ingredients are soluble in the vehicle

Solution: Homogenous liquid preparation In which all ingredients are soluble (**solute**) or miscible with the vehicle (**solvent**) may be used for internal or external use.

Anti-dehydrating Mixture

R/

Potassium citrate	0.05	g
Sodium chloride	0.045	g
Sodium bicarbonate	0.01	g
Chloroform water	Ad 5	ml

Fiat mistura Mitta VI

Sig. MDS

- ✓ Calculations
- ✓ Preparation
- ✓ Label
- ✓ Use

Anti-dehydrating Mixture(Calculations)

R/

Potassium citrate	0.05	g	$\times 6 = 0.3$	g
Sodium chloride	0.045	g	$\times 6 = 0.27$	g
Sodium bicarbonate	0.01	g	$\times 6 = 0.06$	g
Chloroform water	Ad 5	ml	$\times 6 = 30$	ml

Fiat mistura Mitta VI

Sig. MDS

Anti-dehydrating Mixture(preparation)

- Grind all solid materials.
- Weigh each material.
- Put all weighed materials in your mortar.
- Add 12 ml vehicle in the mortar.
- Stir with your pestle until materials completely dissolve.
- Transfer to your measure.
- Rinse your mortar with 5 ml vehicle and transfer them to the measure.
- Complete your measure to the required volume (mark 30 on your measure).
- Transfer to your white glass bottle.
- Write your label.

Anti-dehydrating Mixture(label, use)

Anti-dehydrating Mixture To Be Taken As Directed

Use: Anti-dehydrating Mixture (**diarrhea**, vomitting)

➤ K citrate, NaCl, Na bicarbonate are source of electrolytes.

➤ Na bicarbonate is alkalizer for treatment of hyperacidosis.

Effervescent Mixture

Potion Reverie Mixture

R/

Solution A

Na bicarbonate.

Simple syrup

Aqua ad

$$\text{gr X} = 600 * 2 = 1200 \text{ mg}$$

$$\text{fl}\overline{3} = 4 * 2 = 8 \text{ ml}$$

$$\text{fl}\overline{3}\text{ss} = 15 * 2 = 30 \text{ ml}$$

Solution B

Citric acid

Simple syrup

Aqua ad

$$\text{gr X} = 600 * 2 = 1200 \text{ mg}$$

$$\text{fl}\overline{3} = 4 * 2 = 8 \text{ ml}$$

$$\text{fl}\overline{3}\text{ss} = 15 * 2 = 30 \text{ ml}$$

Fiat mistura Mitta II

Sig. fl $\overline{3}$ ss aa T.d.s.p.c

Calculations✓

Preparation✓

Label✓

Use✓

Potion Reverie mixture (Preparation)

- 1- Grind citric acid and Na bicarbonate in the mortar
 - 2- Weigh 1.2g of citric acid and Na bicarbonate
 - 3- Dissolve 1.2g of Na bicarbonate in about 11ml of water in a mortar.
 - 5- Add Simple syrup to the mortar.
 - 6- Transfer your mixture to the measure
 - 7- Rinse the mortar by 5ml of water & transfer to the measure
 - 9- Complete your volume in the measure to 30 ml.
 - 10- Transfer your preparation (**solution A**) to the bottle and write the label.
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- 3- Dissolve 1.2g of citric acid in about 11ml of water in a mortar.
 - 5- Add Simple syrup to the mortar.
 - 6- Transfer your mixture to the measure
 - 7- Rinse the mortar by 5ml of water & transfer to the measure
 - 9- Complete your volume in the measure to 30 ml.
 - 10- Transfer your preparation (**solution B**) to the bottle and write the label.

Role of each ingredient :

- ✓ **Sodium bicarbonate** : antacid.
- ✓ **Simple syrup**: sweetening agent. .
- ✓ **Citric acid**: by reacting with sodium bicarbonate it forms sodium citrate (an antiemetic) and carbon dioxide gas (digestant by stimulating the gastric secretions, and refreshment and masking the bad saline taste of salts).
- ✓ **Water**: vehicle.

Potion Reverie mixture (Label)

<u>The Alkaline Solution</u>	<u>The Acid Solution</u>
One Tablespoonful Of Each To Be Taken Three Times Daily after Meals	One Tablespoonful Of Each To Be Taken Three Times Daily after Meals

White labels

Potion Reverie mixture (use)

The mixture is used as Anti-emetic and digestive mixture.

Thank You!

