## Pharmaceutical technology third stage

## Aromatic Water

1. Are liquid pharmaceutical preparations of volatile oil or essential oil or volatile solid material.
2. Aromatic water has low therapeutic effect since small amount of volatile substance present in water.
3. They are used in pharmacy as pleasant and flavoring medium or vehicle for administration of water-soluble drugs in order to mask the undesirable taste and odor of the drugs.

Preparation of aromatic water

1. Distillation method
2. Solution method
3. Alternate solution method
4.dilution method.

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## 1. Distillation method

Rose water, hamamels water, camphor water, peppermint water and orange flower water are prepared by this method because they are prepared directly from fresh plant materials.

## 2. Solution method

The essential oil which contains the aromatic material is agitated with purified water ( 2 ml or 2 gm of aromatic materials agitated with 1000 ml of water) in a closed container for $\mathbf{1 5}$ minutes then the mixture is set aside for at least 12 hour longer to permit the excess oil and solid substance to settle. Then filter through wetted filter paper, and then pass enough purified water through the filter paper to make the product measure 1000 ml .

Pass the solution through filter paper in order to:


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The disadvantage of solution method
In spite of repeated filtration it is difficult to get clear preparation (the turbidity is related to the presence of fine particles of oil in the filtrate ) and this turbidity may be avoided by using boiling water and it consume time.

Example on this method:


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## Chloroform water

| Chloroform oil | 2 ml |
| :--- | :--- |
| p.w | 1000 ml |

It is prepared by solution method but without filtration .it is prepared by placing excess amount of chloroform in a bottle then adds water and shake vigorously .some of chloroform dissolve in water and form aromatic water and excess will settle down on the bottom of the bottle because it is heavier than water (there is no clarification problem).

## Uses of chloroform water

it is used as a pharmaceutical aid (preservative, vehicle and general anesthetic.

Note: chloroform water is stored in light resistant bottle since the light will oxidize the chloroform to a poison gas (phosgene.

## 3. Alternate solution method

In this method the aromatic water is prepared by mixing 2 ml of volatile oil with 15 gm of talc powder then adds 1000 ml of $\mathbf{p} . \mathrm{w}$ mix then filter. This method offer time saving and clear solution example on this method is peppermint water.

## Talc powder

It is inert insoluble substance used in alternate method because it function as filter aid (it adsorbs the excess amount of oil that cause turbidity ) and as distributing agent (it have the ability to break up aromatic substance into fine particles so the surface area exposed to the solvent increase so the solubility will increase.)

Peppermint water
Peppermint oil 2ml
Talc powder 15gm
P.W. 1000ml

Weigh 15 gm . of talc powder and put it in a beaker then add 2 ml of peppermint oil and triturate well then add 1000 ml of p.w. mix the content thoroughly then shake for 10 minutes and filter through wetted filter paper.

## Uses of Peppermint water:

.It is used as antispasmodic and carminative
.It is one of the most popular aqueous vehicles
It is used as ingredient in mouth washes because menthol gives a pleasant and cool sensation on mucous membrane.

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## 4. Dilution method

Volume of concentrated aromatic water is diluted with 39 volume of water to get diluted solution
.Example on this method is: Peppermint water
Note: concentrated aromatic waters are 40 times stronger than ordinary aromatic water.

