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ABSTRACT :

Syzygium aromaticum commonly known as Clove. Clove is aromatic flower buds of a tree and its belonging to Myrtaceae family. In India clove is very important in Medicine and Ayurveda .It is also used in spice food . Clove is act as anti-microbial, anti-fungal, anti-inflammatory and antioxidant. It is beneficial in home remedy and also in cosmetic product. A drop of clove oil is 400 times more powerful antioxidant than blueberries [1].

KEYWORDS : Champion Medicine , aromatic flower buds , Myrtaceae family.

INTRODUCTION:

Clove is commonly called as LUVANG IN Marathi .Clove is used as spice in food in India. The main component of clove oil is the eugenol . It act as anti-inflammatory, anesthetic. Anti-oxidant activity of clove oil very important because it prevent the cancer. Clove oil also used to treatment of wounds, cuts,rashes and fungal infections. Clove oil has been found very poent for acene removal.



BOTANICAL DESCRIPTION OF CLOVE:

Kingdom: Plantae
Phylum :Angiosperm
Order : Myrtales
Family: Myrtaceae
Genus: Syzygium
Species: aromaticum

COMMON NAME OF CLOVE IN INDIA :

Marathi:Luvang

Sanskrit: Devapuspa , Varala,Lavangm

Hindi:Laung,Lavang

Punjabi:Laung

Tamil:Grambu,Kirambu,Kirampu

Bengali:Lavanga

Telgu:Devakusumamu,Lavangalu

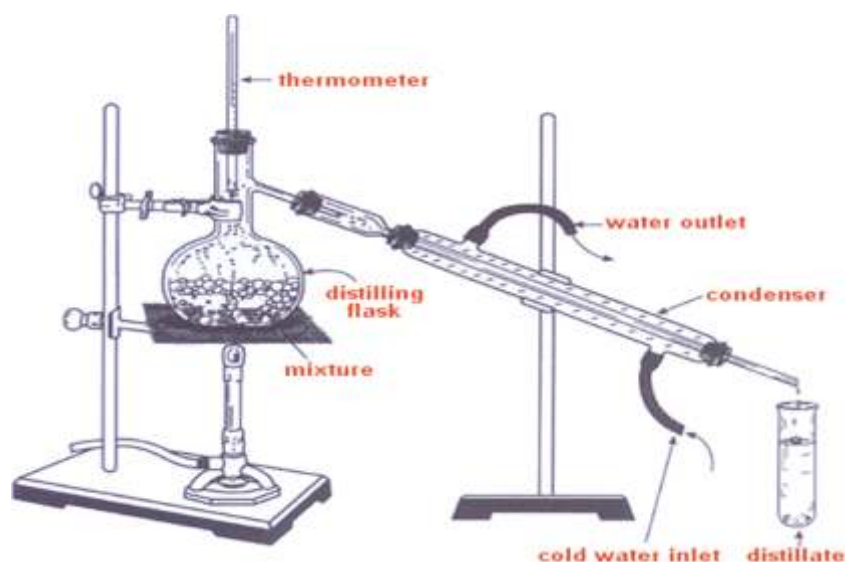
Gujarati:Lavang

HISTORY:

The term of 'clove ' is derived from the French word 'clou' and English word 'clout' both maning is 'nail'.Clove are cultivated only on a small number of island in the Maluku Island . Maluku Island is called spice Island. In China used of Clove more than 2000 years for checking decay of the Tooth.

PROCEDURE:

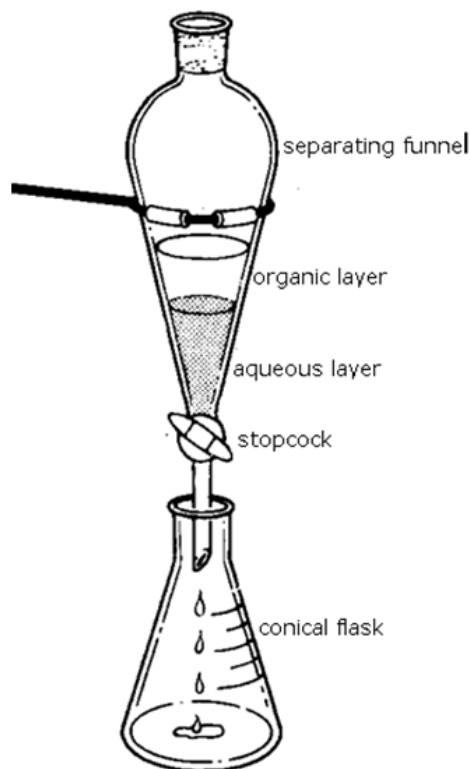
DISTILLATION: Set the distillation apparatus . Take 500ml round bottom flask .the main arm of claisen head to add water then attach adapter with rubber band .then set the ring with asbestos gauze because control the amount of heat. Weight 5-10 gm of clove powder then add these clove powder into round bottom flask. Add to these powder into R.B. flask . Add to these clove powder 100ml of distilled water and also add 1 or 2 biolling sticks or porclean piece place 250 ml separatory funnel with joint by arm of claisen adapter. Turn on water flow through the condenser.Then start the heating of round -bottom flask and collect the distillate[2] .



EXTRACTION:

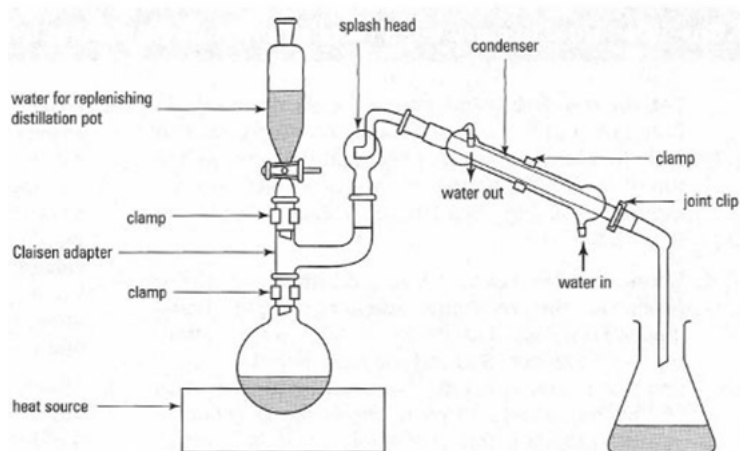
Take Distillate in separatory funnel and add 15 ml dichloromethane. Shake separatory funnel for 5minutes. Cause an emulsion to form then drain the organic layer. Extract the aqueous solution twice with 15ml of dichloromethane. Extract the dichloromethane solution twice more with fresh 20ml portion of 5% potassium hydroxide transfer aqueous solution to beaker and acidify to pH 1 using 5% HCL acid .Addition of the acid is drop wise with constant stirring .Test the pH using universal pH paper.

Transfer aqueous solution into separatory funnel and add to these aqueous solution 10 ml of portion of dichloromethane . Save he dicholoromethane layer. Take dichloromethane layer and wash with it 10 ml of half saturated sodium chloride solution . [8ml NaCl +7ml distilled water] . Transfer the dichloromethane solution in Erlenmeyer flask or beaker .Add to it 8gm granular anhydrous sodium sulphate to the flask in way that dry the organic solution .Then these solution become cloudy , repeat the drying step with the help of anhydrous sodium sulphate[2] .



DISTILLATION:

Take 150ml round bottom flask. Then decant the dicholoromethane solution of eugenol into this flask .set the apparatus for distillation using steam are used for heating. Attach 100ml round bottom flask as he receiving flask and place it in an ice bath. Distill off dichloromethane Heat the flask very slowly. Collect the 98% Eugenol [2].



MEDICINAL USES OF CLOVE:

- 1) Clove is very important in lung cancer, it also prevents skin cancer.
- 2) It is also effectively a digestive problem. It has medicinal quality to cure loose motion, nausea, also useful in vomiting, gastric problem.
- 3) Clove is recommended for relieving brain fog.
- 4) It is also used in various dental problems, clove oil is used in mouth freshener and past because it relieves pain.
- 5) Clove oil purifies the blood and helps to fight various diseases.
- 6) Eugenol plays an important role in the human body system by preventing blood clots.
- 7) Clove benefits diabetic patients by controlling blood glucose levels.
- 8) Clove is used as an anti-inflammatory agent because it contains high flavonoids.
- 9) Chewing of a clove bud reduces the desire for alcohol.
- 10) Clove can be taken for gum diseases like gingivitis and periodontitis.

CULINARY USES OF CLOVE

- 1) Dried clove powder is used in Indian masala tea.
- 2) It is also used in pickles, cakes, drinks, chocolate and sandwiches.
- 3) Clove is very important in kitchen spices used for stuffing particularly salads, herbal teas, soups and also used in onions and tomatoes.

PHARMACOLOGICAL ACTIVITIES

- 1) Anti-viral activity :- Clove acts as a potent antiviral agent.
- 2) Anti-inflammatory activity :- In clove eugenol is the primary component of clove. Eugenol is a volatile oil and it acts as an anti-inflammatory agent. It helps in animal studies.
- 3) Anti-oxidant activity :- Clove and Eugenol are comparable to the activities of the synthetic antioxidant BHA (butylated hydroxyanisole) and pyrogallol.
- 4) Anti-microbial activity :- Eugenol and clove oil show antifungal activity against *Candida Aspergillus* and dermatophyte species. Clove oil is very effective against *Staphylococcus*.
- 5) Anti-diabetic activity :- Clove extract acts like insulin in hepatocytes and hepatoma cells by reducing phosphoenolpyruvate.

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- 2) Extraction of Eugenol from cloves. Copyright [c] Houghton Mifflin Company . All rights reserved.

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