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### ***Health Promoting, Green and Herbal Medicines Synthesis A Step Towards More Gentle And Safe For Long Term Use of Medicines***

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#### **ABSTRACT**

The best source to get health promoting, green, safe and more effective medicines is “The Nature”. The things which we get from the nature are eco-friendly and less harmful. By using eco-friendly medicines not only we can protect our skin and body from harmful chemicals but also we can get better results. Eco friendly and green medicines are free from toxic chemicals and easily manufactured by extraction of essential oils and waters even at our home also. Essential oils are one of nature’s great gifts and are found in different parts of the plant such as flowers, leaves and barks or in the rind of fruit. For example in rose essential oils are found in flower, in basil and neem it is in the leaves. Essential oils can be used aromatically, topically or taken internally. In present study essential oils are prepared in the laboratory of Chemistry and Environment Department of Jodhpur Institute of Engineering and Technology, (Co ed.), Jodhpur and used in the manufacturing of green and herbal medicines.

**KEY WORDS:** Eco-friendly medicines, Essential oil and water, Toxic chemicals, weak immunity system.

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## **INTRODUCTION:**

“We should make people aware to the uncertainties of medicine. Not everybody will be cured and in some cases disasters will occur. That's reality. Medical practice, by necessity, always will be based on trail and error”- By John Raymond Baker. In the Berkeley Medical Journal, spring 1996, Mai Ngo makes the following statement: "Hospitals can be dangerous zones to unsuspecting guests. Nosocomial infections are hospital-acquired infections". Dr. Robert N. Butler expressed, in a Geriatrics editorial, that nosocomial infections victimize one out of every 20 patients with a new infection in the hospital. Viruses, bacteria, protozoa or fungi are usually the culprits. These infections kill 20,000 patients annually and add an estimated \$5-10 billion to health care costs." These problems can be solved by using eco friendly medicines. In present study eco friendly medicines are prepared by extraction of essential oils and water from flora. These essential oils are extracted by simple distillation and solvent extraction processes. Various essential oils have been used medicinally at different periods in history also. The techniques and methods first used to produce essential oils were first mentioned by Ibn al-Baitar (1188–1248), an Andalusian physician pharmacist and chemist.<sup>1</sup> Rose, neem, turmeric, black pepper, tulsi (basil), lemon juice, ginger, jeera powder (cuminum cyminum), ajwain and onion are selected to prepare eco friendly medicines due to their excellent medicinal properties<sup>2</sup>.

## **MATERIALS AND METHODS:**

**Materials used:** Rose, neem, turmeric, black pepper, tulsi, lemon juice, ginger, jeera powder, ajwain, onion and honey.

### ***1. Preparation of essential oil and water:***

**(i) Domestic Method:** Essential oil and water can be prepared at our home easily. For this take heavy deep bowl and place it in a boiling pot of large size. Fill the heavy deep bowl with water to weight it down. Put material in boiling pot and cover with water halfway up the side of the heavy deep bowl. Now place a shallow soup bowl on the top of heavy deep bowl. Cover the whole arrangement with a stainless steel bowl and it should be large enough to seal the boiling pot. Fill the top of the stainless steel bowl with ice. Let the water and material boil. Material extract with water or material water will be vaporized and due to ice at top it will be condensed and collected in the shallow soup bowl. The upper layer of condensed liquid contains material oil and lower layer material water which can be separated by simple decantation method.

**(ii) Laboratory Method:** Extraction of volatile oil from plant is determined by an apparatus called “Clevenger Apparatus”. But in present work essential oil and water are prepared by simple distillation plant. Distillation plant will be assembled and round bottom flask will be filled with water and material. Let the mixture allow boiling. Material extract with water will be vaporized and will be condensed and collected in the beaker. The condensed liquid is transferred in to separating funnel or simple burette. The upper layer of condensed liquid contains material oil and lower layer material water. Both layers can be separated.

## **2. Preparation of eco-friendly medicines:**

- (i) Medicine No.1-JIET Cough syrup-** ginger water/oil + honey (1:1 ratio)
- (ii) Medicine No.2-JIET High blood pressure controller-** honey + ginger water + jeera powder (1:1:1 ratio)
- (iii) Medicine No.3-JIET Pain killer-** Neem water + ginger water (1:1 ratio)
- (iv) Medicine No.4-JIET Throat Wash-** Rose water/oil + ginger water /oil (1:1 ratio).
- (v) Medicine No.5-JIET cough and cold syrup-** Tulsi water/oil + ginger water /oil + honey (1:1:1ratio)
- (vi) Medicine No.6-JIET Stomach ache reliever-** Tulsi water/oil + neem water/oil + ginger water/oil + ajwain powder (1:1:1:1ratio)
- (vii) Medicine No.7-JIET Asthma remedy-** Onion juice + ground black pepper powder+ honey(1:0.5:1 ratio)
- (viii) Medicine No.8-JIET Fever reliever** – Turmeric powder + black pepper powder + tulsi water/oil + neem water/oil (1:0.5:0.5:0.5ratio) with hot milk
- (ix) Medicine No.9-JIET sensitive skin treatment cream-**Rose water/oil + lemon juice (1:2ratio)
- (x) Medicine No.10-JIET Multi purpose medicine-** Tulsi water/oil + neem water/oil + ginger water/oil + honey (1:0.5:1:1 ratio).

To get fast relief use material oil in place of material water.

**RESULT AND DISCUSSION:** All above ten products are prepared in the laboratory of Chemistry and Environmental Engineering Department, Jodhpur Institute of Engineering and Technology (JIET), Jodhpur successfully. The substances used in manufacture process of all products are easily available and can be prepared at home also. Western medicine and herbal

medicine can be used together to achieve great results. Sometimes pharmaceutical medicines are necessary but have intolerable side effects. Herbal medicines can be used to support the activity of the pharmaceutical preparations so that only the smallest doses of the synthetic medicines need be used, thereby minimizing side effects that can interfere so drastically with a person's quality of life.

#### **APPLICATION:**

- (i)** Rose oil/water used in medicine no. 4 and 9 gives mental relaxation and enhancement of our intellectuality. It is also useful in skin problems<sup>2</sup>
- (ii)** Neem oil/water used in medicine no.3,6,8 and 10 is especially beneficial for treating ailments like diabetes, ulcer, piles, malaria, hypertension, heart ailments hair problems, skin problems etc. It protects body's immunity system.
- (iii)** Turmeric powder used in medicine no.8 with its antibacterial action prevents bacterial infections on wounds. Turmeric also has a long history of use for its anti-inflammatory and ant arthritic effects.
- (iv)** Black pepper powder used in medicine no.7 and 8 can be used to help in the treatment of pain relief, rheumatism, chills, flu, colds, increase circulation, exhaustion, muscular aches, physical and emotional coldness, nerve tonic and fevers. It furthermore increases the flow of saliva, stimulates appetite, encourages peristalsis, tones the colon muscles and is a general digestive tonic.
- (v)** Tulsi used in medicine no.5,6,8 and 10 has many medicinal properties like healing power, fever and cold controller, heart disorder, removes stress, mouth infection, kidney stone ,coughs problem, headaches and eye disorder.
- (vi)** Lemon juice used in medicine no.9 is an astringent and can be used to gargle with for sore throats or as lotion for sunburn. With strong anti-inflammatory properties, lemon juice is recommended for acute rheumatism.<sup>3</sup>
- (vii)** Ginger extract used in medicine no.1, 2,3,5,6 and 10 helps to prevent or treat nausea, vomiting from motion sickness and cancer chemotherapy. It is also used as a digestive aid for mild stomach upset to reduce pain of osteoarthritis and may even be used in heart diseases or cancers. Several studies have found that ginger is better than placebo in relieving morning sickness.<sup>4,5</sup>

- (viii) Jeera powder used in medicine no.2 reduces superficial inflammation and pain. It digests food and normalizes vata in digestive system , reduces pain experienced during indigestion, flatulence or heaviness of stomach .It purifies blood.
- (ix) Ajwain powder used in medicine no. 6 acts as good appetizer, laxative and stomachic. It is used as effective remedy in managing ailments like vomiting, mouth diseases, pile, treatment of as cites, abdominal tumor, abdominal pain etc.
- (x) Onion extract used in medicine no. 7 is useful in heart disease; inhibit strokes, lower blood pressure, breathing and cholesterol problem. It stimulates the immune system. It also has antiseptic, antifungal, anticoagulant and analgesic properties.
- (xi) Honey used in medicine no. 1,2,5,7 and 10 has amazing healing properties .It can be used to treat digestive problems, stomach ulcers and gastroenteritis. It's also a fast remedy for athletes' foot.
- (xii) Medicine No.10 -JIET Multipurpose Medicine improves and protects body's immunity system. It is highly effective in the morning time. For up to 40 years old people material water and for above 40 years people material oil is used to get better results.

**SUGGESTION:** Try to avoid the use of allopathic treatments which may result many side bad effects to your health. Do research about medicines which you are using, you can get eco-friendly, less harmful and suitable products according to your needs. The use of eco friendly medicines does not cause any side effects when consumed in moderate amounts. But over consumption may cause some adverse effects in some people.

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