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Comparing *Hypericum perforatum* Q and petroleum O in sandalwood oil by UV-Visible spectrophotometer

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Abstract

Background: Prepare the Homoeopathic Medicated Sandal wood oil by mixing *Hypericum perforatum* Q and *Petroleum* O separately in definite drug and vehicle proportion with quality control done by UV-visible spectrophotometer.

Methodology: Through this research work preparing the Homoeopathic Medicated Sandal wood oil by mixing *Hypericum perforatum* Q and *Petroleum* O separately in definite drug and vehicle which undergoes into indirect heating (Hot water bath)

Results: The absorbance capacity of *Hypericum perforatum* Q is 0.997 at 596.00 nm, *Petroleum* O is 0.221 at 400 nm, *Hypericum perforatum* sandal wood oil is 0.972 at 420.00 nm, *Petroleum* sandal wood oil is 2.281 at 697 nm.

Conclusion: *Hypericum perforatum* Q in sandal wood oil gives better absorbance capacity whereas *Petroleum* O in sandal wood oil has not shown the expected result by UV.

Keywords: UV- VIS, Spectrophotometer, *Hypericum perforatum* Q and *Petroleum* O

Introduction

Plants are significant regular wellsprings of anticancer mixtures what's more, numerous anticancer specialists in current use have been disengaged from different plant sources ^[1]. A larger part of chemotherapeutic specialists, including those secluded from plants for example, taxol and vincristine, actuate malignant growth cell apoptosis. At similar time, they additionally seriously harm ordinary cells of the have ^[2]. The sandalwood tree and its items have been known for their restorative properties since old times. A number of studies including those from our research facility have shown anticancer impacts of sandalwood oil and its major compound constituent α -santalol, without causing any noticeable secondary effects ^[3-14]. It is non-mutagenic and has low intense oral what's more, dermal harmfulness in lab creatures ^[15]. Sandalwood is a root hemiparasitic tree having a place with the family Santalaceae and relies upon have trees to get supplements for its development. The wood is exceptionally sweet-smelling and is the second most costly sort of wood on the planet, later African Blackwood, *Dalbergia melanoxylon* ^[16]. Sandalwood fills in tropical Asia, Australia, Pacific islands furthermore, Hawaii. There are numerous types of sandalwood, one of which the Indian sandalwood (*Santalum collection* Linn.) (Figure 1A), called the 'Illustrious Tree' in India ^[17], is a wellknown and monetarily significant species, having the most fragrant wood and most elevated oil content. It has been classified as 'defenseless' by the Worldwide Association for Preservation of Nature (IUCN) in 1997 ^[16]. All things considered, sandalwood is viewed as quite possibly of the most sacrosanct tree and a significant piece of reflection and profound customs of certain religions. Sculptures of divine beings and portions of numerous antiquated sanctuaries have been made of this wood. The Egyptians involved it in treating the dead and in custom consuming to worship the god ^[16]. The results of sandalwood have been generally utilized for incense, wood cutting and memorial service fires; in the food business as a flavor fixing, and in bug anti-agents, scents, cleansers, cleansers and beauty care products to add aroma.

Petroleum

Itching around evening time. Chilblains, damp, tingle and consume. Bed-wounds. Skin dry, tightened, exceptionally touchy, unpleasant and broke, rough. Herpes. Smallest scratch makes skin fester (Hepar). Intertrigo; psoriasis of hands. Thick, greenish outside layers, consuming and tingling; redness, crude; breaks drain without any problem. Skin inflammation. Rhagades more terrible in winter. [By William Boericke, M.D.]

Hypericum perforatum

Hyperidrosis, perspiring of scalp, more terrible in morning after rest; falling of hair from injury; dermatitis of hands and face, extraordinary tingling, emission is by all accounts under the skin. Herpes zoster. Old ulcers or wounds in mouth when extremely delicate. Slashed injuries with much surrender from loss of blood. [By St. John's-wort.]

Materials & Methodology**Type of study**

Analytical study

Site of study

Centre of Research and Development of Parul University (CR4D)

Investigational tool

UV- Visible spectrophotometer (Double beam)

Formulation prepared by

1. Standard *Petroleum*-O
2. Standard *Hypericum perforatum*-Q
3. Sandal wood oil

Drug and Vehicle Ratio

While formulation the drug and vehicle ratio were made as (1:9)

Standard *Petroleum*-O 2 gm

Standard *Hypericum perforatum*-Q 2 gm

Sandal wood oil- 18 ml

Medicinal product

Standard *Petroleum*-O and *Hypericum perforatum*- Q were

purchase from GMP Certified Pharmaceutical Pvt. LTD.

Preparation of Formulation of oil

The formulation of hair oil takes place in following stages; such as;

1. Sterilization
2. Measurement
3. Mixing
4. Filling
5. Labelling
6. Storage

Sterilization

Before starting the preparation of homoeopathic medicated formulation all the laboratory device were sterilize under hot air oven for atleast 10- 15 minutes.

Measurement

In this step measuring the volume of Drug *Hypericum perforatum* and *Petroleum* as 1 part and Vehicle (Mustard or castor oil) as 9 parts by measuring pipette (10 ml capacity).

Mixing

After mixing homoeopathic mother tincture in sandalwood oil, it undergoes into indirect heating by hot water bath for 10- 15 minutes until unless homoeogenos solution obtained

Filling

The solution must be filled in hard glass, colourless bottles, and sterile bottle.

Storage

The homoeopathic medicated oil were placed under cool, dry place, away from sunlight, strong smelling bottles.

Results

The absorbance capacity of *Hypericum perforatum* Q is 0.997 at 596.00 nm, *Petroleum* O is 0.221 at 400 nm, *Hypericum perforatum* sandal wood oil is 0.972 at 420.00 nm, petroleum sandal wood oil is 2.281 at 697 nm.

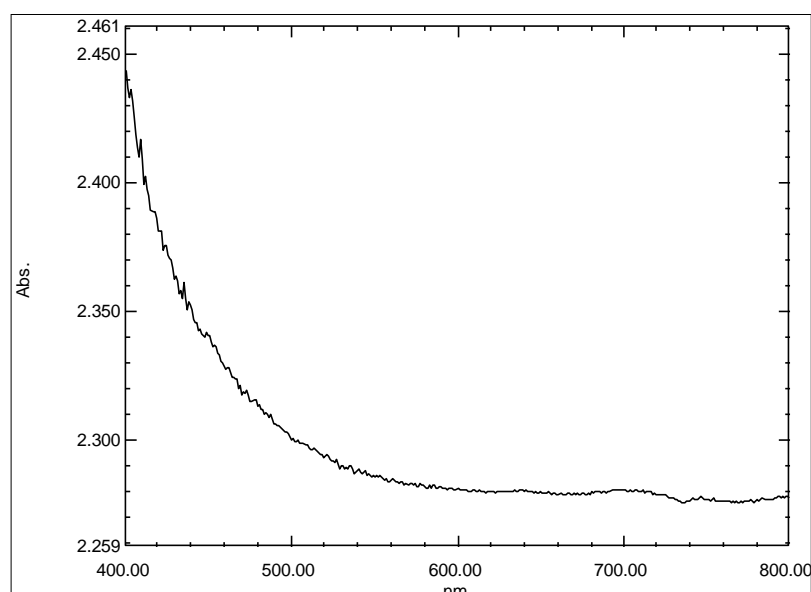


Fig 1: Absorbance value of *Petroleum* sandal oil

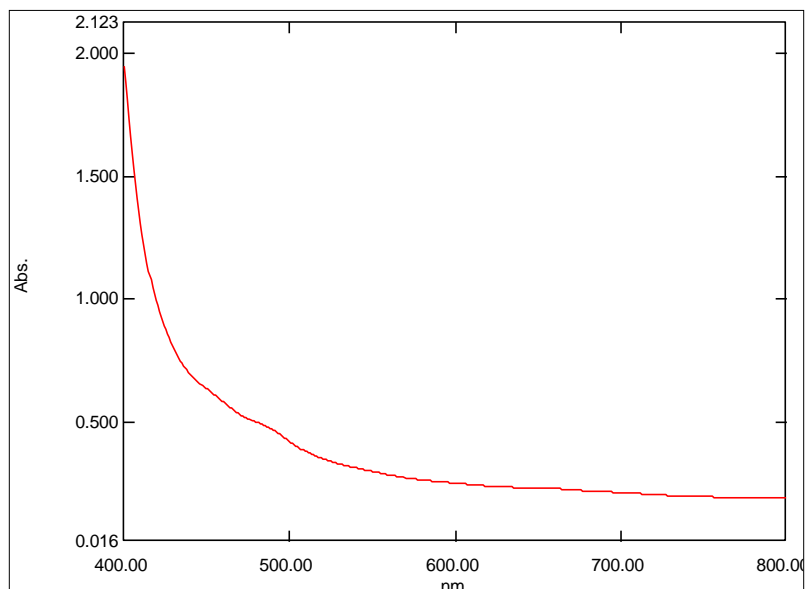


Fig 2: Absorbance value of *Hypericum perforatum* Sandal wood oil

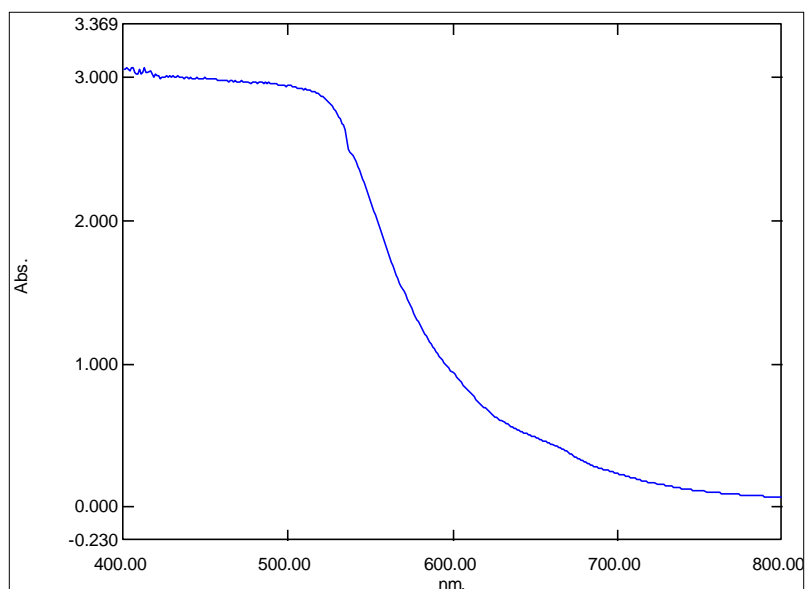


Fig 3: Absorbance value of *Hypericum perforatum* Q

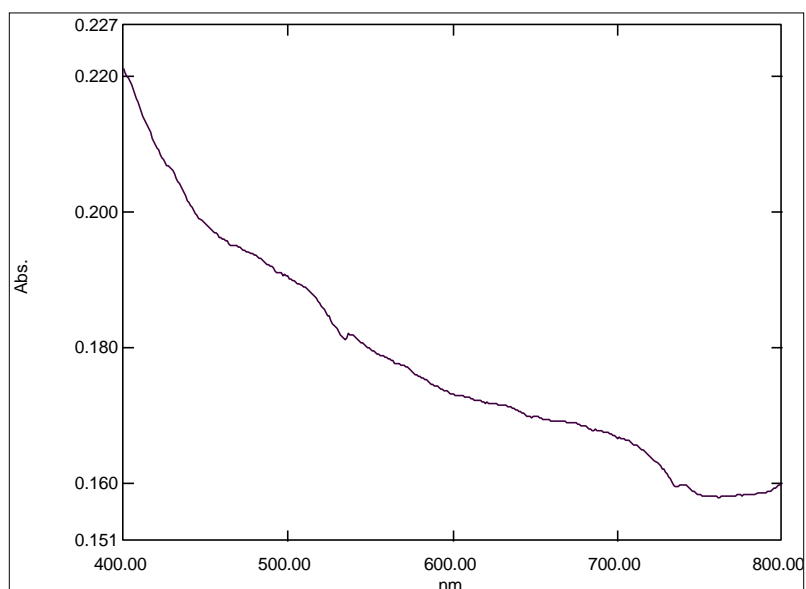


Fig 4: Absorbance value of *Petroleum O*

Conclusion

Through this research work it was concluded that *Hypericum perforatum* gives better result in terms of concentration as compare to Petroleum sandal wood oil by UV- Visible spectrophotometer.

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