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**Physicochemical evaluation of siddha formulation
Sanga dravagam.**

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Abstract

Dravagam (Distillates) are one among the special entities of *Siddha* system of medicine used for its considerable therapeutic effectiveness and in practice of medical alchemy since centuries in *Dravidian* land. Different raw materials from nature are processed in distillation method which aims to extract the pure essence from herbs or minerals including salts. The products of simple or advanced distillation are potent to be used in wide range of medical conditions, very easy to administer with rapid therapeutic results. Numerous formulations are still unexplored from the ancient siddha literatures for its application in medical field and its contributing factors in applied pharmaceutical chemistry. *SANGA DRAVAGAM*, a Siddha drug was prepared as per the procedure mentioned in Siddha literature. The physico-chemical characters like as state, appearance, nature, clarity, PH, specific gravity were analyzed as per AYUSH guidelines.

Keywords: siddha drug, sanga dravagam, physico chemical analysis.

Introduction

In Siddha the diseases of mankind are classified into 4448 types on the basis of Mukkutram. According to Siddha system of medicine health is defined as the state of physical, psychological, social and spiritual component of a human being⁽¹⁾. Metallo herbal drugs have been used in the treatment of various infectious diseases by the Indian System of Medicine as minerals and metals play a vital role in the human metabolism. The process of preparation of the medicinal formulations generally involves, plants and minerals and several alchemical operations like calcinations, sublimation, distillation, fermentation, etc,

in an eco-friendly environment. Standardization of metallic formulation is essential to assess the safety and purity of the drug. The scientific study on Siddha medicines to validate these properties seems to be very minimal.

Dravagam: It is known by various name like *Pugai Neer*, *Dravaga Neer* literally denotes the collection of distillates accompanied by fumes primarily from distillation of salts. Complex distillery products obtained mainly from salts or mineral resources that may be simple or compound formulations with or without adding herbals. The procedures for manufacture are laborious and complicated. The

distillates are mainly used in alchemical practices as a catalytic agent for higher order medicine manufacture, synthetic elemental preparation or as a potent medicine for specific diseases. The term *Pugai Neer* is attributed to the fume emanating by the heating of non-herbal sources that may include salts or higher minerals. In this study, physico-chemical analysis was carried out with a notion of standardising the drug *sanga dravagam* in such a way this would be a further reference for any analytical studies.

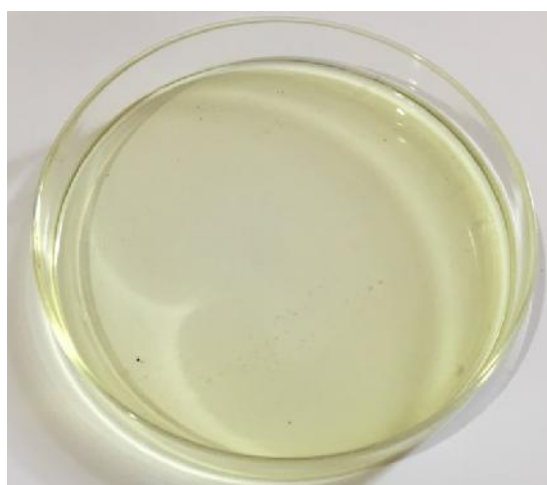
Materials and Methods

Preparation of sanga dravagam:

The Siddha classical medicine *sanga dravagam* was procured from IMCOPS (The Indian Medical Practitioner's Co-operative Pharmacy & Stores Ltd.). The drug was prepared by the method mentioned in the text *Theraiyar karisal -300*.

The ingredients of *Sanga Dravagam* are vediuppu, indhuppu, sotruppu, navacharam, annabedhi, thurusu, padigaaram, pooneeru, vengaram. The above drugs are purified. Powder the drugs separately and mix. Charge in a glazed earthen still and distill. The condensate is acidic and should be collected in porcelain, enameled or glass containers.

Physicochemical evaluation of sanga dravagam:



Determination of specific gravity

Fill the dry sp. gravity bottle with prepared samples in such a manner to prevent entrapment of air bubbles after removing the cap of side arm. Insert the stopper, immerse in water bath at 50°C and hold for 30 min. Carefully wipe off any substance that has come out of the capillary opening. Remove the bottle from the bath, clean and dry it thoroughly. Remove the cap of

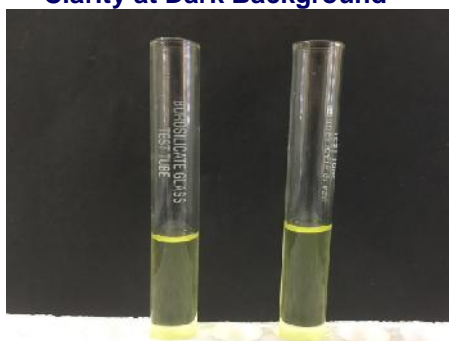
the side and quickly weigh. Calculate the weight difference between the *sanga dravagam* and reference standard.

Determination of pH

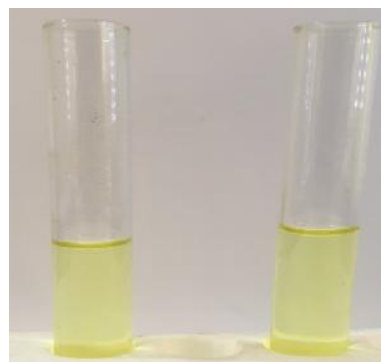
Sanga dravagam being liquid in nature the direct litmus evaluation method was adopted to check the pH of the sample.

Clarity Test

Clarity at Dark Background



Clarity at white Background



Methodology

Clarity testing was carried out to check the particulate matter in the sanga dravagam. In this test transparent

particles or white particles observed against the black background and the black or dark particles observed against the white background.

Results

S.No	Parameter	Sanga Dravagam
1	Specific Gravity	0.8449
2	pH	10

State	Liquid
Appearance	Pale Yellow- Lime
Nature	Less viscous – Free flowing
Odor	Strong Pungent
Clarity	Clear

Clarity test:

From the observation it was found that there are no particulate matters found in the Sanga dravagam and hence it here by described as clear solution with no visible particles.

Conclusion

The present study evaluated the Physico chemical properties of Siddha formulation *sanga dravagam*. The standardization of the siddha formulation were studied. It will be a reference data for global acceptance.

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