Pharmacognostical study of *Seenthil chooranam*: A siddha formulation

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Abstract

Siddha system is an intuitive system of medicine borne out of wisdom; therefore, nature is seeding this system. Global recognition to the Siddha system of medicine standardization of Siddha formulation by modern techniques is fundamental requirement. The development of standards for identity, quality, purity and strength of the Siddha drugs and its formulations Traditional remedies is advantageous, it does suffer some limitations. The main limitation is the lack of standardisation of raw materials, of processing methods and of the final products, pharmacognostical standardization of the drug brings the validation to be used as a medicine by subjecting the drug into many analysis and determining its quality and effectiveness. In this study covered the qualitative standard of the Siddha formulation *Seenthil chooranam* in a pharmacognostical view.

Keywords: Siddha, Pharmacognosy, standardization, *Seenthil chooranam*

Introduction

Siddha system is an intuitive system of medicine borne out of wisdom; therefore, nature is seeding this system. Siddha system of medicine has as a distinctive move toward to care specific ailments and also to restore the body power of the slain person. Most of the preparations are based on plants and plants products along with metal, minerals as well as animals origin. World Health Organization (WHO) and National Center for Complementary and Alternative Medicine (NCCAM) accentuates the need to ensure quality and safety of herbal medicine by modern techniques and applying suitable Standards and has proposed guidelines for development of standard herbal medicine.

To bring global recognition to the Siddha system of medicine standardization of Siddha formulation by modern techniques are fundamental requirement. The development of standards for identity, quality, purity and strength of the Siddha drugs and formulations through which study their potential usefulness including evaluation, safety and efficacy with and quality of drugs in order to ensure safety to the public.

The test drug *Seenthil chooranam* (*Chooranam* = one of the 32 types of internal medicine), mentioned in classical siddha text *Agasthiyar paripuranam* – 400, has been used for *Megam* (Diabetic mellitus), *Eelai* (Tuberculosis), *Kasam* (Cough), *Elaipu* (Bronchial asthma), *Eranda vayu* (Scrotal swelling). The ingredients of this formulation are

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
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<tr>
<td><em>Seenthil</em> (<em>Tinospora cordifolia</em>)</td>
<td>10 palam (350gm)</td>
</tr>
<tr>
<td><em>Karisalai</em> (<em>Eclipta Alba</em>)</td>
<td>10 palam (350gm)</td>
</tr>
<tr>
<td><em>Earthworm</em> (<em>Eudrilus eugeniae</em>)</td>
<td>3 palam (105mg)</td>
</tr>
</tbody>
</table>

Aim

To find out the macroscopic, microscopic, and physicochemical characteristic features of the sample drug *Seenthil chooranam*.

SOP for preparation of *Seenthil chooranam*

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Materials and Methods

Procurement of raw drugs

The plant materials were collected from Tambaram sanatorium and Earth worm was collected at Thiruthani Agriculture farm Tamil Nadu.

Identification and authentication of raw drugs

The Herbs were Identified and authenticated by competent authority department of Gunapadam, National Institute Of Siddha and the Earth worm was identified & authenticated by Head, P.G. & Research Department of Zoology Govt. Arts College, C. Mutlur, Chidambaram.

Purification process

1. **Seenthil**: Peel off the outer skin of the stem and powdered, then washed it for 21 times in pure water and dried then sprinkled cow's milk allow drying it
2. **Karisalai**: Wash the whole plant and dry it in sunshade & powdered
3. **Poonagam**: Soaked Earth worm Butter milk for a while to spit out mud then sprinkled lime water over it to kill then dry and powdered

Method of preparation

The above purified three ingredients were powdered individually and mixed together and stored & preserved in an air tight container.

2 Analytical studies

Analitical studies of Seenthil chooranam by ayush guidelines

Standardization of the drug brings the validation to be used as a medicine by subjecting the drug into many analysis and determining its quality and effectiveness. Standardization includes many studies such as its organoleptic character, physico chemical characteristics studies and determination of phytochemical properties in order to assess the active principles and elements present in the drug. Thus standardization brings the efficacy and potency of the drug in this study which only focusing the pharmcognosy of particular trial drug

Standardization of the drug includes:

- Pharmacognostic studies

4.2.1 Pharmacognostic studies of Seenthil chooranam

The pharmacognostical study was done at Captain Srinivasamurti Reseach Institute for Ayurveda and Siddha Drug Development, Arumbakkam, Chennai-106. Many studies have been carried out to bring the efficacy and potency of the drug *Seenthil Chooranam*. This study includes, organoleptic character, and pharmacological study. The drug *Seenthil Chooranam* has been selected from the text "Agathiyar Paripuranam 400".

4.2.1.1 Organoleptic characterization - (The results expressed in Table – 01)

**Colour:** The *Seenthil chooranam* was taken into watch glasses and placed against white back ground in white tube light. It was observed for its colour by naked eye.

**Odour:** The *Seenthil chooranam* was smelled individually. The time interval among two smelling was kept 2 minutes to nullify the effect of previous smelling.

**Taste:** Small amount of *Seenthil chooranam* was kept over the tip of the tongue

<table>
<thead>
<tr>
<th>Colour</th>
<th>Yellowish Brown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
<td>Aromatic with rotten</td>
</tr>
<tr>
<td>Taste</td>
<td>Bitter</td>
</tr>
<tr>
<td>Texture</td>
<td>Fine powder</td>
</tr>
<tr>
<td>Particle size</td>
<td>Completely pass through sieve no 80</td>
</tr>
</tbody>
</table>

Pharmacognostical study

Powder Microscopy of Seenthil Chooranam

Fig 1: Starch grains and prismatic crystals of calcium oxalate

Fig 2: Sclereid
Fig 3: Fragment of parenchyma cells

Fig 4: Prismatic crystals of calcium oxalate under polarizer light

Fig 5: Stone cells embedded with prismatic crystals of calcium oxalate under polarizer light

Fig 6: Fragment of parenchyma and annular vessel cells

Fig 7: Fragment of fibre

Fig 8: Fragment of reticulate vessel

Fig 9: Fragment of spiral vessel

Fig 10: Fragment of cork cells in surface view
Fig 11: Seta

Fig 12: Pollen grain

Fig 13: Fragment of bordered pitted vessel and stone cells

Fig 14: Striking trichome

Fig 15: Striking trichome

Fig 16: Fragment of reticulate and spiral vessel

Fig 17: Fragment of anomocytic and anisocytic stomata with subsidiary cells

Fig 18: Fragment of anomocytic and anisocytic stomata with subsidiary cells
Powder microscopy
Under microscope shows numerous fragments of stone cells embedded with prismatic crystals of calcium oxalate; fragments of thick walled polygonal cork cells in surface view; fragments of bordered pitted vessels; numerous simple, irregularly ovoid or elliptical shaped starch grains with concentric striations having hilum in centre and sometimes compound with 2-4 components measuring 12.2 to 51.8µ in diameter, numerous unicellular, uniseriate, warty, tubercles, pointed with basal in different sizes of trichomes; a few fragments of epidermis with anomocytic, anisocytic stomata and cicatrix; a few fragments of parenchyma cells; a few spherical shaped pollen grains with spines or warty surface; a few fragments of lignified spiral and reticulate vessels; a few fragments of non-lignified septate fibers; a few fragment of thick walled sclereid with narrow lumen and pits; a few fragments of parenchyma and annular vessels; a very few fragments of lamina with veins and vein- islets in surface view and a few entire seta.

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