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**Research Article**



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**Inorganic compounds analysis of purified *Palagarai* in  
the aspect of siddha system of medicine.  
(*Palagarai – Cypraea moneta* Linn.)**

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**Abstract**

Siddha system of medicine is one of ancient traditional system of medicine. According to siddha pharmaceutical principals siddhars used the herbo minerals and marine products like *Palagarai* (*Cypraea moneta*). Purification is inceptive process of medicinal preparation. This method of purification espousal from siddha text. After the purification the medicinal value of the raw drug should attain good standard. The presence of Inorganic compounds in Purified *Palagarai* (*Cypraea moneta*) analyzed by ICP OES method. The efficacy of drug will be increased after the purification which is initial step for medicine preparation. The Aim of this study vouch that presence inorganic compounds after purification of *palagarai*.

**Keywords:** Siddha medicine, *Palagarai* (*Cypraea moneta*), Inorganic compounds.

**1.0 Introduction**

The word siddha comes from the word siddhi which means an object to attain perfection or heaven. The siddha system has its entire literature in Tamil language. The system of medicine was developed by the 18 ancient saints who were known by their name siddhars whose life goal was to attain the salvation. The siddha system of medicine uses a fascinating combination of herbs, minerals and metals and to promote good health and longevity<sup>(1)</sup>. According to siddha system, the universe originally consisted of atoms which contributed to the basic elements, viz., Earth, Water, Fire, air and the sky which correspond to the organs of the human body and they were the fundamentals of all the corporeal things in the world.

The history of siddha medicine is to present a faithful, clear, and vivid picture of this system in all its manifestations and ramifications with all its inherent problems and relevancy to the present age from its very beginning down the ages, as an integral component of the patterns of culture through which this system passed in different ages and in different areas, so that, this age can get to know of its uniqueness in several aspects. Its very clear and evident from long history of usage of herbomineral and metallic preparations in Ayurveda and Siddha medical system that properly processed herbomineral preparation can contribute significantly to the health care of the society. To understand the science involved in the purification processes a simple method was selected and studied.

Siddha medical system that properly processed herbo mineral preparation can contribute significantly to the health care of the society. To understand the science involved in the purification processes a simple preparation method of Palagarai was selected and studied. Palagarai is identified as the external shell of sea animal *Cypraea moneta* Linn<sup>(2)</sup>. It occurs in the coastal areas of the sea. *Cypraea moneta*, commonly known as the money cowry, because the shells were historically widely used in many Pacific and Indian Ocean countries as a form of exchange<sup>(3)</sup>.

## 2.0 Materials and Methods

### 2.1 General description

*Palagarai (Cypraea moneta)* belongs to the cowrie family. The familiar cowries one of the most variable of all seashells, and therefore hard to describe comprehensively. Its thick, somewhat flattened, and angular<sup>(4)</sup>. Margins may be heavily callused, particularly at top, but may be lightly callused and less angular. Aperture is narrow; few strong, short teeth. Ground colour yellowish; margins, base, and teeth white, often tinged yellow, shell size 10-45mm<sup>(5)</sup>



Image 1- *Cypraea moneta*

Literatures say its taste is bitter in nature and potency is hot. It has action like sedative, expectorant, anti-pyretic, rubefacient (external application)<sup>(6)</sup>.

A number of names and distinguish subspecies and races have been introduced for the money cowrie and its generally recognized as highly valuable species<sup>(7)</sup>.

*Palagarai* were procured from authentic source of Raw Drug market at Chennai. Lemon was purchased from Local market for the preparation of Lemon juice.

*Palagarai* - 100 gm. (30 No.)  
Lemon Juice - 250 ml  
Duration - 24 hrs.

### 2.2 Purification Process

Take the above mentioned quantity of *Palagarai* kept immersed in juice of lemon up to 24 hours<sup>(4)</sup>. Then wash those *Palagarai* with pure water and then dried in sun light and make it fine power and stored in air tight container and then analyzed through ICP-OES method.

Table 1: Observation made before and after purification of *Palagarai* Process with lemon Juice

Sample	Colour	Weight (gm)
Purified drug	Grayish white	89



Image 2-Purified *Palagarai*

### 2.3 Uses of Purified *Palagarai* in Medicinal preparation

1. *Palagarai Parpam*
2. *Palagarai Chunnam*
3. *Palagarai Chendooram*

Those preparations were used treating many chronic diseases along with different types of Adjuvants<sup>(4)</sup>. Reports shows that 10% all cowries investigated in detail for bio active agents<sup>(8)</sup>

### 2.4 Inorganic compounds Analysis

The fine powdered purified *Palagarai* processed by lemon juice was taken for chemical analysis and



Image 3-Purified *Palagarai* powder

Table 2: Inorganic constituents

Sl. No	Name of the Parameter	Purified drug
1	Total Phosphorus (%)	0.003
2	Total Potassium (%)	0.05
3	Total Sodium (%)	0.43
4	Total Calcium (%)	20.92
5	Total Magnesium (%)	0.01
6	Total Sulphur (%)	BLQ*
7	Total Zinc (ppm)	4.45
8	Total Copper (ppm)	8.52
9	Total Iron (ppm)	1850

\* BLQ – Below limit of Quantification

Method of testing BVCPSCH/INS/SOP-053 By ICP OES

### Discussion

*Palagarai* is a mineral drug of animal origin used in Siddha therapeutics in many diseases. In the present work standard after purification of *Palagarai* was made and studied scientifically. Chemical analysis of the

validate the inorganic constituents present in the purified drug.

### 3.0 Results

Organoleptic features of fine powdered Purified *Palagarai*

Colour: Dull white

Odour: Odourless

Taste: Tasteless

purified drug were reported in Table no. 2. There was many important trace elements like Calcium, Iron and Zinc was observed in purified sample. Generally the herbal juices using for purification of drugs takes part in removing the toxicity and increasing the drug efficacy.

#### 4.0 Conclusion

*Palagarai* plays important role in medicinal practice. The purification method according to mentioned in siddha text. The results could be used for future reference in standardization of *palagarai*. The organoleptic character reveals that purification process done in appropriate manner. Nature of the coordination complex can be determined only after carrying out some more chemical analysis done before and after purification of *Palagarai*. This study clearly reveals that major portion of this purified drug having calcium and iron. This sample needs more studies to standardize the drug and purification technique.

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