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## The Standardisation and Characterisation of Thalaga karuppu by Perkin Elmer Optima 5300 DV ICP-OES

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### Abstract

Siddha system of medicine is earliest traditional medicine system followed in South India. It deals with mind, body and spirituality. Thalaga karuppu is one of the fleshy mineral formulation medicine for lung disease noted in Thathu jeevam. Peoples take this medicine with little scary because of arsenic. This paper proves the safer level of arsenic with scientific evidence.

**Keywords:** Thalaga karuppu, ICP-OES, Siddha, Kaasam.

### Introduction

The Siddha flourished in the period of Indus valley civilization. Palm leaf manuscripts says that Siddha system was described by Lord Shiva to Lord Murugan. He Taught all these knowledge to his disciple sage Agasthya. Agasthya taught 18 Siddhars and they spread this knowledge to human beings. The word Siddha comes from the word Siddhi which means an object to be attained perfection or heavenly bliss. In

our system treating the disease with 32 types of internal medicines and 32 types of external therapies. Along with it deals with varmam and yoga. Thalaga karuppu is best medicine for respiratory disorders. It consist arsenic and flesh of snail. These type of drugs are not using frequently because the fear of toxicity. Siddha literature discuss about the purification of drugs. So whether it convert toxic into non toxic product or arsenic in a controlled level.

### Materials and Methods

Table1: Ingredients of thalaga karuppu

S.no	Ingredients	Chemical / zoological name
1	Thalagam	Arsenic disulphide
2	Snail	Gastropod molluscs

## Collection of drugs

The raw drug of Thalagam is purchased from country medicalshop and snail is collected from Nagercoil.

## Purification of drugs

### Arsenic

Thalagam karsunnambu kaludhaineer thalithu eduthal

### Snail

It is boiled and cleaned the shell.

## ICP-OES Study of Thalaga karuppu:

### Sample preparation:

Inductively coupled plasma spectroscopy techniques are the so-called "wet" sampling methods where by samples are induced in liquid form for analysis. 100mg sample was added in a clean dry test tube. To this, 3 ml of nitric acid was added and mixed well and above mixture allowed for few minutes until the reaction were complete. And then, 25 ml of refined water was added to prepare digested solution. The digested sample solution was shifted into plastic containers and labelled properly.

## Results

Table 2: Elemental Analysis

S.No	Elements	Level
1	Al 396.152	BDL
2	As 188.979	02.214 mg/L
3	Cd 228.802	BDL
4	Cu 327.393	BDL
5	Ca 315.807	02.180mg/L
6	Fe 238.204	01.306 mg/L
7	Hg 253.652	BDL
8	K 766.491	03.821 mg/L
9	Ni 231.604	BDL
10	Pb 220.353	BDL
11	Mg 285.213	01.104 mg/L
12	Na 589.592	14.320 mg/L
13	P 213.617	86.341 mg/L
14	S 180.731	491.214 mg/L

## Discussion

The ICP-OES study demonstrates the level of 14 heavy metals in our sample in this paper results show the safety level of heavy metals and minerals of As, Ca, Fe, K, Mg, Na, P, S in thalaga karuppu and results BDL of Al, Cd, Cu, Hg, Ni, Pb.

## Conclusion

From the study of Perkin Elmer Optima 5300 DV ICP-OES. It shows the drug thalaga karuppu contains below the recommended level of arsenic and other metals like Aluminium, Copper, Cadmium, Mercury, Nickel, Lead. This results show the safety of the drug. It gives the consciousness to the people about arsenic and arsenic containing drugs.

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