



## Biochemical analysis of Siddha drug Elathy Mathirai

\*Jeevitha Vasudevan<sup>1</sup>

<sup>1\*</sup> MD Siddha, Government Siddha Medical college, Palayamkottai, The Tamilnadu Dr. MGR Medical University, Chennai.

### ABSTRACT

Herbal medicine contains various biochemical compounds that are useful in treating various diseases. The objective of this study is to find the biochemical constituents of the siddha drug Elathi mathirai, a poly herbal tablet taken from the siddha literature.

### Keywords:

Siddha medicine, herbal drug, *Elathi mathirai*

### Address for correspondence:

Dr. Jeevitha Vasudevan  
MD Siddha

CODEN : IJRPHR

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: [publisher@ijrphr.com](mailto:publisher@ijrphr.com)

### To access this article online

Website : <http://www.ijrphr.com/>

DOI : 10.121/ijrphr/05.0102.525

### Quick response code



## INTRODUCTION

Siddha system is the indigenous system of India approved by the government of India. The siddhars says that the universe is the composition of mann, neer neruppu, kaatru and aakayam. The human body, pathology of disease, medicine for treatment, and food substances all are have this composition of five elements ie, mann, neer, neruppu, kaatru and Aakayam. Uyir thathukkal I. e vadham, pitham, kabam are present in a ratio. Imbalance between uyir thathukkal produce the disease. So the treatment of the disease is based on the correction of vitiated mukkutram. This research aims to do the biochemical analysis of the trial drug elathi mathirai to indicate the presence of calcium, sulphate, chloride starch, ferrous iron, tannic acid, unsaturated compound and amino acids.

## MATERIALS AND METHODS

### Ingredients

Elettaria cardamomum

Quercus infectoria

Piper longum

Fel bovinum purifactum

Costus speciosus

Nardostachys grandiflora

Cuminum cyminum

Nigella sativa

Anacyclus pyrethrum

### Preparation of the test Drug:

1 gram of **Elathy Mathirai** was suspended in 10ml of Hot Water as suspending agent. This 1 ml contained 100mg of the test drug.

### Preparation of the extract:

5gms of the drug (powder without oil) was weighed accurately and placed in a 250ml clean beaker. Then 50ml of distilled water is added and dissolved well. Then it is boiled well for about 10 minutes. It is cooled and filtered in a 100ml volumetric flask and then it is make up to 100ml with distilled water. This fluid is taken for analysis.

**Table 1. Qualitative Analysis of Elathy mathirai**

S.NO	EXPERIMENT	OBSERVATION	INFERENCE
1.	<b>TEST FOR CALCIUM</b>  2ml of the above prepared extract is taken in a clean test tube. To this add 2ml of 4% Ammonium oxalate solution	A white precipitate is formed	<b>Indicates the presence of calcium</b>
2.	<b>TEST FOR SULPHATE</b>  2ml of the extract is added to 5% Barium chloride	A white precipitate is formed	<b>Indicates the presence of</b>

	solution.		<b>sulphate</b>
3.	<b>TEST FOR CHLORIDE</b> The extract is treated with silver nitrate solution	A white precipitate is formed	<b>Indicates the presence of chloride</b>
4.	<b>TEST FOR CARBONATE</b> The substance is treated with concentrated Hcl.	No Brisk effervescence is formed	Absence of carbonate
5.	<b>TEST FOR STARCH</b> The extract is added with weak iodine solution	Blue colour is formed	<b>Indicates the presence of starch</b>
6.	<b>TEST FOR FERRIC IRON</b> The extract is acidified with Glacial acetic acid and potassium ferro cyanide.	No blue colour is formed	Absence of ferric iron
7.	<b>TEST OF FERROUS IRON</b> The extract is treated with concentrated Nitric acid and Ammonium thio cyanate solution	Blood red colour is formed	<b>Indicates the presence of ferrous iron</b>
8.	<b>TEST FOR PHOSPHATE</b> The extract is treated with Ammonium Molybdate and concentrated nitric acid	No yellow precipitate is formed	Absence of phosphate
9.	<b>TEST FOR ALBUMIN</b> The extract is treated with Esbach's reagent	No Yellow precipitate is formed	Absence of Albumin
10.	<b>TEST FOR TANNIC ACID</b> The extract is treated with ferric chloride.	Blue black precipitate is formed	<b>Indicates the presence of tannic acid</b>
11.	<b>TEST FOR UNSATURATION</b> Potassium permanganate solution is added to the extract	It gets decolourised.	<b>Indicates the presence of unsaturated</b>

			compound
12.	<b>TEST FOR THE REDUCING SUGAR</b>  5ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 mts and add 8-10 drops of the extract and again boil it for 2 mts.	No colour change occurs.	Absence of Reducing sugar
13.	<b>TEST FOR AMINO ACID</b>  One or two drops of the extract is placed on a filter paper and dried well. After drying, 1% Ninhydrin is sprayed over the same and dried it well.	Violet colour is formed	Indicates the presence of Amino acid
	<b>TEST FOR ZINC</b>  The extract is treated with Potassium Ferrocyanide.	No white precipitate is formed	Absence of Zinc

## RESULTS AND DISCUSSION

The above analysis indicates the presence of calcium, sulphate, chloride starch, ferrous iron, tannic acid, unsaturated compound and amino acids.

## REFERENCES

- Balavagadam - Dr.Pon Guru Chironmani
- Pillaipini Maruthuvam - Dr. Sundararajan BIM
- T.v. Sambasivam Pillai Tamil - English Dictionary
- Noi Nadal Noi Muthal Nadal Thriattu - Dr. M. Shanmugavelu
- Siddha Mruthuvam (pothu) - Dr. Kuppaswamy Mudaliar.
- Siddha Maruthuvanga Surukkam - Dr. K.S. uthamarayan.
- Sarabendhirar Vaidhya Muraigal - Suraroga Chigisahai.
- Yugu Vaidhya Chinthamani - R. Thiyagarajan.
- Pararasasekaram - Suraroganithanam
- Pararasasekaram - Balaroganithanam
- Mathalai Noi Thokuthi - I & II
- Seeva Rakshamirtham - Arumugam Pillai
- Indian Medicinal Plants - Kirthikar and Basu
- The Wealth of India
- Indian Materia Medica - Dr. K. N. Nadkarni
- Gunapadam Mooligai Vaguppu - K.S. Muruges Mudaliyar
- Gunapadam Thathu Jeeva Vaguppu - Dr. R. Thiyagarajan
- Gray's Anatomy
- Text Book of Human Physiology By Guyton
- Achar's Text book of Pediatrics
- Nelson text book of pediatrics
- Essential pediatrics - O.P.Ghai
- Differential Diagnosis in Pediatrics - Suraj Gupte

24. Hutchinson's Clinical Methods
25. Practical Paediatric Problems - James H. Hutchison
26. Boyd's Text Book of Pathology 9<sup>th</sup> Edition (Vol - I)