

# BIO - CHEMICAL ANALYSIS OF PADIKAPOONKAVI CHENDOOREM

<sup>1</sup>Dr. Anusha T P, <sup>2</sup>Dr. E. Naveen, <sup>3</sup>Dr. M. P. Abdul Kader Jeylani

<sup>1,2</sup>PG Scholar, <sup>3</sup>Professor.  
Department of Nanju Maruthuvam  
Government Siddha Medical College  
Palayamkottai, Tamilnadu.

## Abstract:

**INTRODUCTION:** Ancient science Siddha its own principles and treatment modalities Herbs, minerals, metals and animals are used in medicine preparation. Padikapoonkavi chendoorem is a mineral based Siddha preparation indicated to Menorrhagia. Biochemical analysis helps to determine the elements in that drug there by gives idea about the actions of that particular medicine. **MATERIALS AND METHODS :** Purified Padikarem and kavikal taken in a vessel and heated it gently to attain a semisolid consistency and allowed to cool . then grinded it well up to it reach fine powder form .This medicine was undergo varieties of tests of biochemical analysis. **RESULT:** Indicates presence of Calcium, Sulphate and Iron **DISCUSSION:** The presence of Calcium, Sulphate and Iron proves that the medicine Padikapoonkavi chendoorem has positive effect on uterus reveals that association with the indication Menorrhagia. **CONCLUSION:** This study concludes that Padikapoonkavi chendoorem contains Calcium, Sulphate and Iron and discloses the significance in the uterus.

## INTRODUCTION:

An ancient science Siddha which is flourished in southern peninsula of India and evolved in to well documented medical science by way of keen observations and experimentation. It has its own fundamental principles and treatment modalities. Herbs, metals and minerals, and animals are used in medicine preparation.[2] Padikapoonkavi chendoorem is a mineral based Siddha preparation and it is used for the treatment of PERUMBADU (Menorrhagia).Chendoorem is nothing but processed by calcination process. So after preparation there are many changes taken place and analysis are needed as a tool to interpret the drug qualification and safety.

Biochemical analysis is a quantitative analysis incudes variety of tests and aid to determine the elements in a drug. So this study helps to find out the elements there by contribute to assess the actions of drug superficially.

## MATERIALS AND METHODS:

### METHOD OF PREPARATION OF PADIKA POONKAVI CHENDOOREM

#### Ingredients:

- a) Purified Padikarem (Potasium Aluminium Sulphate) - 1/5 part
- b) Purified kavikal (Aluminium silicates and oxides of iron) - 1/3 part

#### Purification of raw drugs.[3]

- a) KAVIKAL-Grinded kavikal is taken in a vessel .Add water and allow to sediment. Remve the water and dried in sunlight.
- b) PADIKAREM-Required quantity of Padikarem taken in a mud vessel and heat it. Take exsiccated padikarem taken in another vessel.

#### Preparation:

- It is an araippu chedoorem.
- Take the purified drugs as per above ratio and heated .then grind it well in a Kalvam.

**Adjuvant:** *Palm jaggery.*

**Indication:** *Menorrhagia-Perumbadu.[4]*

## BIOCHEMICAL ANALYSIS

### Preparation of the Extract:

100 mg of the chendoorem was weighed accurately and placed in a 250 ml clean beaker and added the few drops of conc. Hydrochloric acid and evaporated it well. After evaporation cooled the content and added the few drops of conc. Nitric acid and evaporated it well. After cooling the content add 20ml of distilled water and dissolved it well. Then it is transferred to 100ml volumetric flask and made up to 100ml with distilled water mix well. Filter it. Then it is taken for analysis.

#### 1.TEST FOR CALCIUM:

2ml of the prepared extract was taken in a clean test tube. To this add 2ml of 4% ammonium oxalate solution and appearance of white precipitate was checked.

#### 2.TEST FOR SULPHATE:

2ml of the extract was added to 5% barium chloride solution in a test tube and appearance of white precipitate was checked.

#### 3.TEST FOR CHLORIDE:

The extract was treated with silver nitrate solution and appearance of white precipitate was checked.

#### 4.TEST FOR CARBONATE:

The substance was treated with concentrated HCL and formation of effervescence of white precipitate was checked.

#### 5.TEST FOR STARCH:

The extract was added with weak iodine solution and appearance of blue was checked.

#### 6.TEST FOR FERRIC IRON:

The extract was acidified with glacial acetic acid and potassium Ferro cyanide. Then appearance of blue colour was checked.

#### 7.TEST FOR FERROUS IRON:

The extract was treated with concentrated nitric acid and Ammonium Thiocyanide solution .Appearance of blood red colour was checked.

#### 8.TEST FOR PHOSPHATE:

The extract was treated with ammonium molybdate and concentrated nitric acid. Appearance of yellow precipitate was checked.

#### 9.TEST FOR ALBUMIN:

The extract was treated with Esbach's reagent and appearance of yellow precipitate was checked.

#### 10.TEST FOR TANNIC ACID:

The extract was treated with ferric chloride and appearance of black precipitate was checked.

#### 11.TEST FOR UNSATURATION:

Potassium permanganate solution was added to the extract and discolouration was checked.

#### 12.TEST FOR THE REDUCING SUGAR:

5ml of Benedict's qualitative solution was taken in a test tube and allowed to boil for 2 minutes and add 8 to10 drops of the extract and again boil it for 2 minutes. Colour change was checked.

#### 13.TEST FOR AMINO ACID:

One or two drops of the extract was placed on a filter paper and dried well. After drying, 1% Ninhydrin is sprayed over the same and dried it well. Appearance of Violet Colour was checked.

#### 14.TEST FOR ZINC:

The extract was treated with potassium ferro cyanide and appearance of white precipitate was checked

#### RESULT:

S.NO	EXPERIMENT	RESULT
1.	TEST FOR CALCIUM	+
2.	TEST FOR SULPHATE	+
3.	TEST FOR CHLORIDE	-
4.	TEST FOR CARBONATE	-
5.	TEST FOR STARCH	-
6.	TEST FOR FERRIC IRON	-
7.	TEST FOR FERROUS IRON	+
8.	TEST FOR PHOSPHATE	-
9.	TEST FOR ALBUMIN	-
10.	TEST FOR TANNIC ACID	-
11.	TEST FOR UNSATURATION	-
12.	TEST FOR THE REDUCING SUGAR	-
13.	TEST FOR AMINO ACID	-
14.	TEST FOR ZINC	-

#### DISCUSSION:

Biochemical analysis of Padikapoonkvai chendoorem gives the idea about the elements in that drug. Elements like Calcium,Sulphate, Ferrous ion are present. Physiological level of calcium is known to provide optimal contractility to normal myometrium .calcium could have positive effect on menstrual regularity and ovulation[5].Sulphate is required for the proper cell growth and development of organism and has number of roles in reproductive system especially in maintaining uterus function[6].Iron is essential for cell respiration and metabolism .Iron is mostly absorbed from duodenum and proximal part of jejunum depends heavily in the physiological state of iron atom .normally The iron present in ferric state due to the acidic PH of stomach and for the absorption iron must be in ferrous state that present in Padikapoonkavi chendoorem. So anaemia due to menorrhagia can be avertable[1].

#### CONCLUSION:

Padikapoonkvai chendoorem is a medicine which indicated to Perumbadu (Menorrhagia).By using Biochemical analysis it is revealed that the drug contain Calcium, Sulphate and Iron and the detailed study determines the elements have positive effect on uterus and also have significant role in curing menorrhagia.

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