



## Preliminary Bio-Chemical analysis of Karappan Kudineer Chooranam – Polyherbal formulae in Siddha

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### ABSTRACT

Siddha medicine is an ancient system of medicine prevalent in South India. The human body consists of the five primordial elements - earth, water, fire, air and space, the three humours- vatha, pitta and kapha and seven physical constituents. Siddhars classified the diseases into 4448 types. Skin diseases are also included in these types. Classical siddha text *balavagadam* that classifies *karappan* into 18 types, describes *porikarappan* as skin manifestation as wheals, papules, pustules, itching, burning sensation and oozing. These descriptions are probably similar to urticaria. Urticaria is a problem in which red, itchy, and swollen areas show up on the skin. It can happen as an allergic reaction from eating certain foods or taking certain medicines. Though, sometimes the cause may be unknown. *Karappan kudineer chooranam* is a polyherbal formula in siddha used to treat *porikarappan*. This paper describes the qualitative analysis of *karappan kudineer chooranam*.

### Keywords:

*Porikarappan*, Urticaria, *Karappan kudineer chooranam*, Bio-chemical analysis

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## INTRODUCTION

Today's children are the future citizens of a nation. To have a better nation, healthy citizens can contribute a lot. "Porikarappan" is popularly known as "Urticaria." has been a challenge to the medical world. In Siddha literature *karappan* is classified into 18 types. Lifetime prevalence for urticaria is reported as 7.8–22.3%, with point prevalence being 0.5–1.0%. Approximately 4–33% of cases are reported to be physical urticaria and 1–7% of cases are cholinergic urticaria. The exact prevalence in India is not known. Urticaria affects 20% of individual at some point of their lives. Episodes of urticaria that continue for <6week are considered acute, and those that persist for >6 weeks are designated chronic. The drug from Siddha literature ( Pillai pini maruthuvam part – II) *karappan kudineer chooranam* is analysed for the bio-chemical composition.

## MATERIALS AND METHODS

### Collection, Identification and Authentication of the Drug:

The required raw drugs were purchased from a well reputed country shop. They were authenticated by Botanist of Government Siddha Medical College, Palayamkottai.

### Purification of the Drug:

All the ingredients of this herbal formulation were purified according to the methods described in Siddha Classical Literature.

### Preparation of the drug:

All the drugs are individually purified and made into fine powder and then mixed together and bottled up.

**Table.1 (Ingredients of *karappan kudineer chooranam*)**

S.NO	NAME	BOTANICAL NAME
1.	<i>Kadukkai</i>	<i>Terminalia chebula</i>
2.	<i>Nellikai</i>	<i>Phyllanthus emblica</i>
3.	<i>Thantrikkai</i>	<i>Terminalia bellirica</i>
4.	<i>Seenthil thandu</i>	<i>Tinospora cardifolia</i>
5.	<i>Valuthalai ver</i>	<i>Solanum melongena</i>
6.	<i>Muthakaasu</i>	<i>Cyperus rotundus</i>
7.	<i>Karivembilai</i>	<i>Murraya koenigii</i>
8.	<i>Nilavembu</i>	<i>Andrographis paniculata</i>

### Bio-chemical analysis:

Screening the drug *karappan kudineer chooranam* to identify the bio-chemical properties present in the ingredient.

### Chemicals and drugs:

The chemicals used in this study were of analytical grade obtained from the Department of Biochemistry, Government Siddha Medical College, Palayamkottai.

### METHODOLOGY:

5 grams of the drug is weighed accurately and placed in a 250ml clean beaker. Then 50ml of distilled water is added to it 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 made upto 100ml with distilled water. This fluid is taken for analysis.

S.NO	EXPERIMENT	OBSERVATION	INFERENCE
1.	<b><u>TEST FOR CALCIUM</u></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	Indicates the presence of calcium
2.	<b><u>TEST FOR SULPHATE</u></b> 2ml of the extract is added to 5% Barium chloride solution.	A white precipitate is formed	Indicates the presence of sulphate
3.	<b><u>TEST FOR CHLORIDE</u></b> The extract is treated with Silver nitrate solution.	No white precipitate is formed	Absence of chloride
4.	<b><u>TEST FOR CARBONATE</u></b> The substance is treated with concentrated Hcl.	No brisk effervescence is formed	Absence of carbonate
5.	<b><u>TEST FOR STARCH</u></b> The extract is added with weak iodine solution.	Blue colour is formed	Indicates the presence of starch

Table .2 QUALITATIVE ANALYSIS OF KARAPPAN KUDINEER CHOORANAM

S.NO	EXPERIMENT	OBSERVATION	INFERENCE
6.	<b>TEST FOR FERRIC IRON</b> The extract is acidified with Glacial acetic acid and Potassium ferrocyanide.	No blue colour is formed	Absence of ferric iron
7.	<b>TEST FOR FERROUS IRON</b> The extract is treated with Concentrated Nitric acid and Ammonium thiocyanate solution.	No red blood colour is formed	Absence of ferrous iron
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 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	Indicates the presence of tannic acid
11.	<b>TEST FOR UNSATURATION</b> Baeyer's Test- Potassium permanganate solution is added to the extract.	Its gets decolourised	Indicates the presence of unsaturated
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 minutes and add 8-10 drops of the extract and again boil it for	Colour change occur	Indicates the presence of reducing sugar
13.	<b>TEST FOR ZINC</b> The extract is treated with Potassium Ferrocyanide.	No white precipitate is formed	Absence of zinc

## RESULTS AND DISCUSSION

The bio-chemical analysis of the trial drug *karappan kudineer chooranam* was tabulated above in table 2.

The trial drug *karappan kudineer chooranam* contains.

1. Calcium
2. Sulphate
3. Starch
4. Tannic acid
5. Unsaturated compound
6. Reducing sugar

The mode of action of the trial drug *karappan kudineer chooranam* is bringing about change in size of papules and itching, which may be due to the presence of sulphate, starch, tannic acid in it.

## DISCUSSION

*Karappan kudineer chooranam* the siddha drug taken from a Siddha literature is used in the treatment of *porikarappan*. The drug is screened for its bio-chemical properties. Further, comprehensive pharmacological analysis is needed to evaluate its potency and the drug has its own potency to undergo further research.

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**CONFLICT OF INTEREST :** None declared

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