

# Biochemical Analysis of Siddha Polyherbal Drug Parangi Kasayam

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**Abstract:** Osteo arthritis is a form of arthritis that features the breakdown and eventual loss of the cartilage of one or more joints. Eventually, cartilage begins to degenerate by flaking or forming tiny crevasse. Osteoarthritis usually affects the weight bearing joint (i.e. knee joint, hip joint). The most common symptoms of Osteo arthritis in pain in the joint after repetitive use along with loss of range of motion and function. In Kumbamuni Vatha Nithanam-800 text, Parangi kasayam are indicated for Vatha disease. Aim of the study is to record the biochemical analysis of the trial drug Parangi kasayam. This study reveals presence of biochemical substances present in Parangi kasayam which will be effective in treating Osteoarthritis.

**Keywords:** biochemical analysis, osteoarthritis, parangi kasayam.

## 1. Introduction

OA is the second most common rheumatologic problem and it is most frequent joint disease with a prevalence of 22% to 39% in India. OA is more common in women than men but the prevalence increases dramatically with age nearly 45% of women over the age of 65 years have symptoms found radiological evidence is in 70% of those over 65 years. OA of the knee is a major cause of mobility impairment, particularly among female. OA was estimated to be the 10th leading cause of fatal burden

In Kumbamuni Vatha Nithanam-800 text, Parangi kasayam is indicated for Vatha disease. So, Parangi kasayam is taken into study for the research in Osteoarthritis

### 1) Source of Drug Ingredients

The required raw drug for preparations of Parangi kasayam are purchased from a well reputed country shop. The purchased drug is authenticated by Expert members of Gunapadam department at GSMCH-Palayamkottai.

### 2) Methods of Purification and Preparations

All the ingredients have been completely purified as per the Siddha literature in the presence and knowledge of Guide / Faculty members. Then the trail drug is prepared from the

ingredient.

### 3) Biochemical analysis

Screening the drug Parangi kasayam to identify the Biochemical properties present in the ingredient.

### 4) Chemicals and drugs

The chemicals used in this study were of analytical grade

obtain from Department of Biochemistry, Government Siddha Medical College & Hospital, Palayamkottai.

## B. Methodology

5 grams of the drug was weighed accurately and placed in a 250ml clean beaker. Then 50ml of distilled water added to it and dissolved well. Then it was boiled well for about 10 minutes. It was cooled and filtered in a 100ml volumetric flask and then it is made upto 100ml with distilled water. This fluid was taken for analysis.

## 2. Results and Discussion

The Bio chemical analysis of the trial drug Parangi kasayam was tabulated above in table.

The trial drug, Parangi kasayam contains,

- 1) Calcium
- 2) Sulphate
- 3) Chloride
- 4) Starch
- 5) Unsaturated compound
- 6) Amino acid

Table 1  
Drug present in Parangi Kashayam

S.No.	Drug	Botanical Name	Family	Part Used	Quantity
1.	Parangipattai	Smilax china	Liliaceae	Bark	360 gram
2.	Chukku	Zingiber officinale	Zingiberaceae	Rhizome	240 gram
3.	Nila aavarai	Cassia senna	Caesalpiniaceae	Leaf	300 gram
4.	Water	-	-	-	-

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Table 2  
Qualitative analysis

S.No.	Experiment	Observation	Inference
01	<b>TEST FOR CALCIUM</b> 2 ml of the above prepared extract is taken in a clean test tube. To this add 2 ml of 4% Ammonium oxalate solution.	A white precipitate is formed	Indicates the presence of calcium
02	<b>TEST FOR SULPHATE</b> 2 ml of the extract is added to 5% Barium chloride solution.	A white precipitate is formed	Indicates the presence of sulphate
03	<b>TEST FOR CHLORIDE</b> The extract is treated with silver nitrate solution.	A white precipitate is formed	Indicates the presence of chloride
04	<b>TEST FOR CARBONATE</b> The substance is treated with concentrated HCl.	No brisk effervescence is formed	Indicates the absence of carbonate
05	<b>TEST FOR STARCH</b> The extract is added with weak iodine solution.	Blue colour develops	Indicates the presence of Starch
06	<b>TEST FOR FERRIC IRON</b> The extract is acidified with Glacial acetic acid and potassium ferro cyanide.	No blue is formed	Indicates the absence of ferric iron
07	<b>TEST FOR FERROUS IRON</b> The extract is treated with concentrated Nitric acid and Ammonium thiocyanate solution.	No Blood red colour is formed	Indicates the absence of ferrous iron
08	<b>TEST FOR PHOSPHATE</b> The extract is treated with Ammonium Molybdate and concentrated nitric acid.	No yellow precipitate is formed	Indicates the absence of Phosphate
09	<b>TEST FOR ALBUMIN</b> The extract is treated with Esbach's reagent.	No yellow precipitate is formed	Indicates the absence of albumin
10	<b>TEST FOR TANNIC ACID</b> The extract is treated with ferric chloride.	No blue-black precipitate is formed	Indicates the absence of tannic acid
11	<b>TEST FOR UNSATURATION</b> Potassium permanganate solution is added to the extract.	It gets decolourised	Indicates the presence of unsaturated compound
12	<b>TEST FOR THE REDUCING SUGAR</b> 5 ml 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 2 minutes.	No colour change	Indicates the 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 is formed	Indicates the presence of Amino acid
14	<b>TEST FOR ZINC</b> The extract is treated with Potassium Ferro cyanide.	No white precipitate is formed	Indicates the absence of zinc

### 3. Conclusion

Parangi kasayam is a Siddha Drug taken from a Kumbamuni Vatha nithanam 800 used in the treatment of Vatha disease. The drug is screened for its biochemical properties. Further, pharmacological analysis is needed to evaluate its potency which leads to pay way for further research.

### References

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