International Journal of Recent Advances in Multidisciplinary Topics
Volume 3, Issue 3, March 2022
https://www.ijramt.com | ISSN (Online): 2582-7839

Biochemical Analysis of Siddha Herbo Mineral Drug Irunelli Karpam

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***Abstract*: Siddha system of medicine is a renowned holistic system of traditional medicine emphasizing curative and preventive measures. The medicines used in siddha are of plant origin, metals, minerals and animal products. It is one of the major Indian systems of Medicine. The people were well in the physical and mental health with the Siddha medicines. Till date, lesser studies have been conducted on such preparation one such Siddha medicines namely Irunelli Karpam has been selected for present study. It is a traditional herbo mineral drug was prepared as per the procedure mentioned in Siddha literature. Thus, the medicine indicates mainly used for skin diseases especially Sori, Sirangu. The aim of the study was to evaluate the biochemical analysis of the trial drug Irunelli Karpam and it indicates the presence of the ferrous iron, tannic acid, aminoacid, reducing sugar. Thus, I conclude, the presences of these chemicals are treatment of various types of skin diseases especially Sori, Sirangu.**

***Keywords*: Siddha medicine, herbo mineral formulation, Irunelli Karpam, skin diseases**

1. Introduction

Siddha system of medicine is one of the oldest one from Dravidian culture. This system is mainly focused on food as medicine. 'Kaya Karpa' medicines find a special place in Traditional Siddha Medicine. Kayakarpam is also called as elixir science is unique and treasure of the siddha system. Kayam means body karpam means stone also known as life span of Brahma according to Hindu mythology. Hence, this medicine is one which makes human body as stone and not affected by any diseases or aging. These kinds of medicines are available from herbal preparation, metals and from animal products also. Many of siddhars such as sage Agathiyar and Bohar are written about in various literature. These medicines are preventive as well as cure the disease. The kayakarpam prevent the aging process as one of the actions is antioxidant property. The Irunelli karpam (INK) is made up of Indian gooseberry (nellikai) and sulfur (nelikkai ghanthakam) in equal quantity and prepared by grinding then drying the finished product.Iru nelli karpam, a herbo-mineral medicine containing Sulphur (Kanthagam) processed with the juice of Phyllanthus emblica (Nellikai) is widely used for treating skin disorders. Nellikai kanthagam and Nellikai are the two ingredients used in this preparation and hence the name, 'Iru Nelli Karpam'. Theriyar compares Kanthagam with a mother nurturing her child. Nellikai, one among the 'Thiripala' is a well-known Karpam. This is one of the kayakarpam medicines used for various types of skin diseases number. Sirangu (Scabies) is one of the important skin diseases being countered in day-to-day clinical practice. Scabies occurs worldwide regardless of age, sex, race, socio-economic status or standards of personal hygiene. Cyclical epidemics occur at intervals of 10 to 15 years. Outbreaks may frequently occur in childcare centres and kindergartens, and are also reported in nursing homes and institutions. Scabies is more likely to spread in situations of overcrowding. The Siddha medicine, 'Iru Nelli Karpam' has been advocated for the treatment of Scabies often with very good results. The preparation of medicine on the basis of narrated in the siddha literature – The Siddha formulary of India part I first edition (English version) page no 6.

Dosage: 200 mg, twice a day.

Vehicle/ adjuvant: Ghee

The literature evident shows the INK medicines used for treat various types of skin diseases especially Sori, Sirangu.

2. Materials and Methods

The siddha drug Irunelli Karpam was selected from a classical Siddha literature.

Table 1
Ingredients of Irunelli Karpam

Drug	Chemical name/botanical name	Quanitity
Purified Gandhagam	Sulphur	1 part
Nellikai Saru	*Phyllanthus Emblica*	2 parts

1) Collection, Identification and Authentification of the drug

The required herbo mineral drugs were purchased from a well reputed Siddha drug store. The drugs are identified and authenticated by Department of Gunapadam, Government

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2) Methods of Purification and Preparations:

Sulphur purified as per the evidence mentioned in the yaagobu vaiththiyam. The preparation of medicine on the basis of narrated in the siddha literature – The Siddha formulary of India part I first edition (English version) page no 6. The trail drug is prepared from the grind Purified Gandhagam with Nellikai saru in small quantities. Dry and powder. Finally, end material store in air tight glass container.

3) Biochemical analysis

Screening the herbo mineral drug Irunelli Karpam to identify the Biochemical properties present in the ingredient.

4) Chemicals and drugs:

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

5) Methodology

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

Table 2
Bio-Chemical Analysis Of Irunelli Karpam

S.No	Experiment	Observation	Inference
01	Test for calcium 2 ml of the above prepared extract is taken in a clean test tube. To this add 2 ml of 4% Ammonium oxalate solution.	No white precipitate is formed	Absence of calcium
02	Test for sulphate 2 ml of the extract is added to 5% Barium chloride solution.	No white precipitate is formed	Absence of sulphate
03	Test for chloride The extract is treated with silver nitrate solution.	No white precipitate is formed	Absence of chloride
04	Test for carbonate The substance is treated with concentrated HCl.	No brisk effervescence is formed	Absence of carbonate
05	Test for starch The extract is added with weak iodine solution.	No Blue color is formed	absence of starch
06	Test for ferric iron The extract is acidified with Glacial acetic acid and potassium ferro cyanide.	No blue color is formed	Absence of ferric iron
07	Test for ferrous iron The extract is treated with concentrated Nitric acid and Ammonium thiocyanate solution.	Blood red color is formed	Indicates the presence of ferrous iron
08	Test for phosphate The extract is treated with Ammonium Molybdate and concentrated nitric acid.	No yellow precipitate is formed	Absence of phosphate
09	Test for albumin The extract is treated with Esbach's reagent.	No yellow precipitate is formed	Absence of albumin
10	Test for tannic acid The extract is treated with ferric chloride.	Blue black precipitate is formed	Indicates the presence of Tannic acid
11	Test for unsaturation Potassium permanganate solution is added to the extract.	It does not get decolorized.	Absence of unsaturated compound
12	Test for the reducing sugar 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.	Color change occurs	Indicates the presence of reducing sugar
13	Test For Amino Acid 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 color is formed	Indicates the presence presence of Amino acid
14	Test for zinc The extract is treated with Potassium Ferro cyanide.	No white precipitate is formed	Absence of zinc

3. Results and Discussion

The Biochemical analysis of the trial drug Irunelli Karpam was tabulated above in Tab- 2. The trial drug IRUNELLI Karpam (INK) reveals the presence of ferrous iron, tannic acid, aminoacid, reducing sugar.

4. Conclusion

Irunelli karpam (INK) is a Siddha drug taken from a Siddha

literature and used in the treatments indicates mainly used for skin diseases especially for especially Sori, Sirangu. The drug is screened for its bio- chemical property. Further, comprehensive pharmacological analysis is needed to evaluate its potency and the drug has its own potency to undergo further research.

Acknowledgement

The Author conveys her thanks to The Principal, Government Siddha Medical College, palayamkottai for granting permission to execute this work in the college premises. I express my sincere thanks to Dr. M.P.Abdul kader jaylani M.D(s), Head of the Department, Department of Nanju Maruthuvam, Department of Biochemistry, Government Siddha Medical College & Hospital, Palayamkottai and I also thank My Department Faculties .

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