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Biochemical Analysis of Siddha Monoherbal Drug Sadamanjil Choornam

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***Abstract*: Siddha system is an ancient system of medicine practiced mainly in southern part of the India. Siddhars were the premiere scholars of the system in ancient times. Siddhars mainly hailing from Tamil Nadu laid the foundation of Siddha system of Medicine. Insomnia is an emerging problem seen now a days. Insomnia is present among people of all age group. Classical Siddha Literatures indicates the trial drug Sadamanjil choornam for Thookaminmai (Insomnia). Aim of the study is to record the biochemical analysis of the trial drug Sadamanjil choornam. This study reveals presence of biochemical substances present in sadamanjil choornam which will be effective in treating Insomnia.**

***Keywords*: Insomnia, Biochemical Analysis, Thookaminmai, Sadamanjil Choornam.**

1. Introduction

Insomnia is also known as the Disorder of Initiation and/or Maintenance of Sleep (DIMS). Insomnia means one or more of the following:

1. Difficulty in initiating sleep (going-off to sleep).
2. Difficulty in maintaining sleep (remaining asleep).

This can include both:

a) Frequent awakenings during the night, and
b) Early morning awakening.

Non-restorative sleep where despite an adequate duration of sleep, there is a feeling of not having rested fully (poor quality sleep). Insomnia is very common, with nearly 15-30% of general population complaining of a period of insomnia per year requiring treatment. It is required for diagnosis that sleep disturbance occurs at least three times a week for at least 1 month, and that it causes either marked distress or interferes with social and occupational functioning.

In Siddha Pharmacopoeia of India text, Sadamanjil Choornam is indicated for Thookaminmai (Insomnia). So, Sadamanjil Choornam is taken into study for the research in Insomnia.

1) Source Of Drug Ingredients

The required raw drug for preparations of Sadamanjil Choornam 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.

1) Biochemical analysis

Screening the drug Sadamanjil Choornam to identify the Biochemical properties present in the ingredient.

2) Chemicals and drugs

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

3) 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.

3. Results and Discussion

The Bio chemical analysis of the trial drug Sadamanjil Chooranam was tabulated above in table.

The trial drug, Sadamanjil Choornam contains,

1. Sulphate
2. Ferrous iron

Sl. No	Drugs	Botanical Name	Part used	Quantity
1	Sadamanjil	*Nardostachys jatamansi*	Dried rhizome	1 PART

3. Unsaturated compound
4. Amino acid

Mode of action of the trial drug Sadamanjil Choornam which promotes sleep activity in body may be due to the presence of Sulphate, Ferrous iron and Amino acid in it.

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Table 1
Qualitative Analysis

S.no	Experiment	Observation	Inference
01	Test for calcium 2ml of the above prepared extract is taken in a clean test tube. To this add 2ml of 4% Ammonium oxalate solution	No white precipitate is formed	Absence of calcium
02	Test for sulphate 2ml of the extract is added to 5% Barium chloride solution.	A white precipitate is formed	Indicates the presence 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 colour is formed	Absence of starch
06	Test for ferric iron The extract is acidified with Glacial acetic acid and potassium ferro cyanide.	No blue colour 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 colour 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.	No blue-black precipitate is formed	Absence of Tannic acid
11	Test for unsaturation Potassium permanganate solution is added to the extract	It gets decolourised	Indicates the presence of unsaturated compound
12	Test for the reducing sugar 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 2 minutes.	No colour change occurs	Absence 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 colour is formed	Indicates the presence of Amino acid
14	Test for zinc The extract is treated with Potassium Ferro cyanide.	No white precipitate is formed	Absence of zinc

4. Conclusion

Sadamanjil Choornam is a Siddha Drug taken from a Siddha literature used in the treatment of Insomnia. The drug is screened for its bio chemical properties. Further, comprehensive pharmacological analysis are needed to evaluate its potency and the drug has its own potency to undergo further research

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