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BIO CHEMICAL ANALYSIS OF THE DRUG KADHALIPOO RASAYANAM

Dr. Padmavathi R. and Vijay Vikraman S.

Medical Consultant, Yaadhumaagi Siddha and Yoga Clinic, Thanjavur, Tamil Nadu, India.

***Corresponding Author: Dr. Padmavathi R.**
Medical Consultant, Yaadhumaagi Siddha and Yoga Clinic, Thanjavur, Tamil Nadu, India.

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ABSTRACT

This bio chemical study was designed to assess the acid and basic radicals of the siddha drug Kadhalipoo Rasayanam by using precipitate method.

KEYWORDS: Sodium carbonate, Kadhalipoo rasayanam.

INTRODUCTION

Menorrhagia is one of the most common gynaecological problem in the world menorrhagia is defined as increased menstruation with excessive flow and duration which affects both the physical and mental health of women. Totally 30% of world wide population having heavy menstrual blood loss. And 50% have no organic pathological cause and diagnosed as dysfunctional uterine bleeding. Other common causes are hormonal imbalance bleeding disorders or stress related disorders. Kadhalipoo rasayanam is one of the best medicine for menorrhagia in siddha system. Biochemical analysis obtained the qualitative and quantitative data of kadhalipoo rasayanam.

MATERIALS AND METHODS

Preparation of Sodium Carbonate extract

2 gm of the sample drug is mixed 5 gm of Sodium carbonate and taken in a 100 ml beaker and 20 ml of distilled water is added. The solution is boiled for 10 minutes, cooled and then filtered. The filtrate is called sodium carbonate extract.

S. No	Experiment	Observation	Inference
I	**Test for Acid Radicals**		
1a	**Test for Sulphate** 2 ml of the above prepared extract is taken in a test tube. To this add 2ml of 4% Ammonium oxalate solution.	Absence of White Precipitate	Absent
b	2ml of extract is added with 2ml of dilute hydrochloric acid until the effervescence ceases off. Then 2ml barium chloride solution is added.	Absence of White Precipitate	Absent
2	**Test for Chloride** 2ml of extract is added with dilute nitric acid till the effervescence ceases. Then 2ml of silver nitrate solution is added.	Absence of white precipitate obtained	Absent
3	**Test for Phosphate** 2ml of the extract is treated with 2 ml of Ammonium molybdate solution and 2ml of concentrated nitric acid.	Yellow precipitate obtained	Present
4	**Test for Carbonate** 2ml of the extract is treated with 2ml of magnesium sulphate solution.	Absence of white precipitate	Absent
5	**Test for Sulphide** 1 gm of the substance is treated with 2ml of concentrated Hydrochloric acid.	Rotten egg smelling	Present
6	**Test for Nitrate** 1gm of the substance is heated with copper turnings and concentrated sulphuric acid and viewed the test tube vertically down.	Absence of reddish brown gas.	Absent
7a	**Test for Fluoride and oxalate** 2ml of the extract is added with 2ml of dilute acetic acid and 2ml of calcium chloride solution and heated.	White precipitate	Present

8	**Test for Nitrite** 3 drops of the extract is placed on a filter paper. On that, 2 drops a Acetic Acid and 2 drops of Benzidine solution is placed.	Absence of yellowish red colour	Absent
9	**Test for Borate** 2 pinches of the substance is made into paste by using Sulphuric acid and Alcohol (95%) and introduced into the blue flame.	Absence of Green tinged flame	Absent
II	**Test For Basic Radicals**		
10	**Test for lead** 2 ml of the extract is added with 2 ml of Potassium iodide solution.	Absence of Yellow precipitate	Absent
11a	**Test for Copper** One pinch of substance is made into paste with concentrated Hydrochloric acid in a watch glass and introduced into the non luminous part of the flame.	Absence of Bluish green coloured flame.	Absent
b	2ml of the extract is added with excess of Ammonia solution	Absence of deep blue	Absent
12	**Test for Aluminium** To the 2 ml of extract. Sodium Hydroxide solution is added in drops to excess.	Absence of White Precipitate.	Absent
13a	**Test for Iron** To the 2 ml of extract, 2 ml of Ammonium Thiocyanate solution is added.	Blood red colour	Present
b	To the 2 ml of extract, 2 ml of Ammonium Thiocyanate solution and 2ml of concentrated HNO_3 is added.	Blood red colour obtained	Present
14	**Test for Zinc** To the 2 ml of extract Sodium Hydroxide solution is added in drops to excess.	Absence of White precipitate.	Absent
15	**Test for Calcium** 2 ml of the extract is added with 2 ml of 4% Ammonium Oxalate solution.	Absence of White precipitate.	Absent
16	**Test for Magnesium** 2ml of extract, Sodium Hydroxide solution is added in drops to excess.	Absence of White precipitate.	Absent
17	**Test for Ammonium** 2 ml of extract few ml of Nessler's Reagent and excess of Sodium Hydroxide solution are added.	Absence of Reddish brown precipitate	Absent
18	**Test for Potassium** A pinch of substance is treated with 2 ml of Sodium Nitrite solution and then treated with 2ml of Cobal Nitrate in 30% glacial Acetic acid.	Absence of Yellow precipitate	Absent
19	**Test for Sodium** 2 pinches of the substance is made into paste by using Hydrochloric acid and introduced into the blue flame	Absence of Yellow colour flame	Absent
20	**Test for Mercury** 2 ml of the extract is treated with 2 ml of Sodium Hydroxide solution.	Absence of yellow precipitate	Absent
21	**Test for Arsenic** 2 ml of extract is treated with 2ml of silver Nitrate solution	Absence of Yellow precipitate	Absent
22	**Test for Starch** 2ml of extract is treated with weak iodine solution	Absence of Blue colour	Absent
23	**Test of Reducing Sugar** 5ml of Benedicts qualitative solution is taken in a test tube and allowed to boil for 2 minutes and added 10 drops of the extract and again boiled for 2 minutes. The colour changes are noted.	Green colour	Present
24	**Test of the Alkaloids** 2ml of the extract is treated with 2ml of potassium lodide solution.	Absence of Red colour	Absent
25	**Test of the Proteins** 2ml of the extract is treated with 2ml of 5% NaOH, mix well and add 2 drops of copper sulphate solution.	Absence of Violet colour	Absent

RESULTS

In bio chemical analysis of the drug sample Kadhalipoo Rasayanam contains the acid radicals are Phosphate, Sulpide, Fluoride and oxalate. The basic radicals are Iron and Reducing sugar.

DISCUSSION

The drug Kadhalipoo Rasayanm was analysed by many number of test for acid, basic radicals. The test for the molecules such as Phosphate test produced yellow precipitate, Sulphide test produced rotten egg smelling, Fluoride and oxalate test produced white precipitate, Iron

test for produced blood red colour , Redusing sugar test produced green colour. Other molecules such as Sulphate, Carbonate, Chloride, Nitrate, Nitrite, Borate, Lead, Copper, Aluminium, Calcium, Zinc, Ammonium, Potassium, Sodium, Magnesium, Mercury, Arsonic, Starch, Alkaloids, Proteins were absence.

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