

## Design And Development of Padiatric Brain Tonic Containing Ficus Religiosa Leaves.

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### ABSTRACT

**Objectives:** The objective behind the present study was to Design and Development of Padiatric Brain Tonic Containing Ficus Religiosa Leaves.

**Materials and methods:** To prepare tonic preparation use of Ficus Relisiosa leaves extract. Also we use Liquorice, Zingiber officinale, Saunf, Honey in these preparation. Tonic promises many advantages which enhanced stability, easy administration of drug herbal tonic prepared for enhance or improve memory. Use of herbal drugs minimizes the side effect which is caused due to synthetic drugs as they absorb from oral mucosa and directly enter in blood circulation. Tonic prepare and evaluate by various evaluation parameters.

**Results:** There are six tonic batches are prepared, in that fifth no batch pass the parameter like viscosity, pH, colour, odour, taste. Tonic do not show any side effect and children can easily administerd. It shows the fast action as compare to the tablet, capsule and pills.

**Conclusion:** These prepared tonic shows memory enhancing activity and boost the memory. These herbal tonic minimize the side effect and fastly circulate in blood.

**Key-words:** Ficus Religiosa leaves extract, Memory booster, Herbal tonic.

### INTRODUCTION

Memory is one of the complex function of brain. It ultimately involve various neuronal pathway and neurological transmitter. Some disorder like Alzimer disease Amnesia, Demensia, memory loss, Parkinson disease, Brain cancer result loss of memory. These tonic use as memory booster. Ficus Religiosa leaves extract use as memory enhancer.<sup>[1]</sup> Zingiber officinale is use as memory improving herb<sup>[44]</sup>.

**Advantages of Brain Tonic:**

- Increasing the functioning of the brain.
- Improve the memory capacity, focus, concentration, calmness, alertness of an individual.
- Memory-boosting herb is a magical remedy for a host of psychotic diseases like epilepsy, dementia, Alzheimer's as it prevents the destruction of neurons and improves cognitive functioning.

**Types of herbal tonics:** <sup>[18]</sup>

- Adaptogens: herbs that increase the body's resistance to stress.
- Alternatives: herbs that support normal bodily functions and processes to alter the course of an illness.
- Aromatics: herbs high in aromatic compounds with a strong aroma.
- Astringents: herbs that cleanse, tighten, and dry out body tissues, including skin.
- Bitters: herbs that support digestive processes in the body.
- Nutritive: herbs that are rich in nutrients, like vitamins and minerals.

**MATERIALS AND METHODS:****Preparation of Extract:**

The leaves were washed with fresh water to remove adhering dirt and foreign particles. They were shade dried, crushed and grinded to get coarse powder. 500g of the coarse powder of the leaves of *Ficus religiosa* in 1.0 litre of 90% ethanolic solution were macerated in a round bottomed flask for 7 days. The menstrum was collected, concentrated by vacuum distillation and then air dried in an evaporating dish till constant weight was obtained Preparation of Extract.

Prepare a powder of herbal drug that if *Ficus religiosa* leaves. Powders of drugs were weighted. Prepare methanolic extract by using Soxhlet apparatus. Collect the extract & air dried in an Evaporating dish. Prepare the liquorice, *Zingiber Officinale*, Saunf extract. Collect these liquid extract & prepare simple syrup. Mix these extract and add simple syrup, honey in it with continue stirring for dissolution. Kept it aside for few Hr's. Then transfer these preparation in air-tight container & label it. Store these preparation at room temperature.

**Table 1-Formulation Table**

<b>Ingredients</b>	<b>F1</b>	<b>F2</b>	<b>F3</b>	<b>F4</b>	<b>F5</b>	<b>F6</b>
Ficus religiosa leaves extract	0.75	0.80	0.85	0.90	0.95	100
Liquorice	0.25	0.75	1	0.25	0.75	1
Zingiber officinale	25	75	50	25	75	50
Saunf	50	50	50	50	50	50
Honey	100	100	100	100	100	100
Simple syrup	Upto 50	Upto 50	Upto 50	Upto 50	Upto 50	Upto 50

**EVALUATION OR CHARACTERISTICS OF TONIC<sup>[44]</sup>:****1)Visual inspection:**

Properties such as homogeneity, colour, transparency and surface of the tonic is evaluated with Other prepared tonic.

**2)Weight variation:**

The weight variation of the tonic was done by average weight was calculated. For the tonic to be accepted.

**3)Viscosity measurements:**

Viscosity is the important parameter of tonic. Viscosity of tonic was measured This is essential As to certain uniforming the Viscosity of the tonic as this is directly related to the accuracy of dose.

**4)pH:**

pH measurement & maintenance of pH is the important for tonic. Measurement of pH is done by in that measurement of pH by pH paper ,it is very simple & cheap method measurement pH & it is compared with pH scale i.e change the colour of paper & in second method there is use digital pH. It is used for Greater accuracy.

**5)Physical stability:**

Tonic must stable that is colour of tonic is must be soluble in other ingredient. Its odour & taste is palatable. Solid material is miscible in liquid.

**RESULT****Chemical tests:****Table 2: Chemical tests of herbal drugs**

Sr. No	Chemical constituent	Ficus Religiosa	Liquorice	Zingiber officinale	Honey	Saunf
1.	Carbohydrate	+	+	-	+	+
2.	Flavonoids	+	+	-	-	+
3.	Alkaloids	+	-	+	+	+
4.	Glycosides	+	+	+	-	+
5.	Saponin	-	+	-	-	+
6.	Tannin	+	+	-	-	+
7.	Vitamin	+	+	+	+	+
8.	Amino acids	-	+	+	+	+
9.	Steroids	-	+	-	-	-

Table: 3 Viscosity uniformity, Weight uniformity, pH Value

Batch no.	Weight (ml)	Viscosity (cps)	pH
F1	50 ml	800	3.7±0.64
F2	50 ml	700	3.9 ± 0.68
F3	50 ml	1500	4.1 ± 0.21
F4	50 ml	1800	4.3 ± 0.18
F5	50 ml	2000	4.9 ± 0.9
F6	50 ml	1800	4.2 ± 0.22

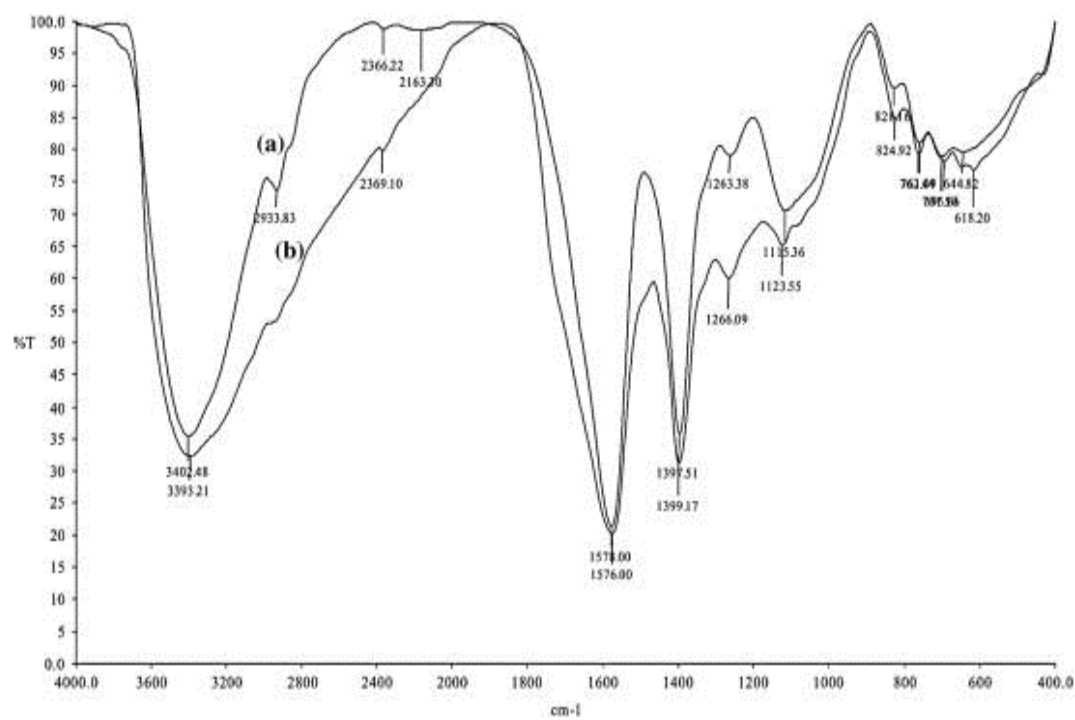


Fig: 1 IR of Ficus religiosa leaves extract

**Summary:**

From the present work, it can be concluded that the improved systemic bioavailability results from by passing first pass effect and better permeability. Also, large surface area of absorption, easy ingestion & swallowing, pain avoidance makes the oral mucosa a very attractive and selective site for systemic drug delivery. Recent developments in the technology have presented viable dosage alternatives from oral route for wide variety of group of patients specially for children to improve memory. Pediatric can easily administer the tonic, it shows the quick action on patient health. Phytogenic agents are traditionally used by herbalists and indigenous healers for the prevention and treatment of loss of memory or to improve memory. Botanical compounds with memory enhancing activity include flavonoid, saponins, tannins, amino acid, vitamin, gums and mucilages in this present study herbal Brain tonic prepared for memory enhancing activity and to boost the memory treatment.

**Conclusion:**

In this present study herbal Brain tonic prepared for memory enhancing activity and to boost the memory treatment. Use of herbal drugs minimizes the side effect which is caused due to synthetic drugs as they absorb from oral mucosa and directly enter in blood circulation. Formulated herbal Brain tonic contain herbal plants extract and powders of *Ficus religiosa*, *Glycyrrhiza glabra*, Saunf, Honey (Madhu). These plants show the memory enhancing activity. The formulations were subjected to physical investigations such as uniformity of weight, pH, stability, viscosity and drug release. These Brain tonics are economic, convenient and do not show any side effects.

**RECOMMENDATIONS:**

Future studies of stability for other dosage form application determination, bioavailability and clinical investigations, medicinal uses of the herbal drugs like *Ficus religiosa* (Peepal) are possible. Further the following work can be recommended with herbal drugs.

- Bioavailability studies (pre-clinical and clinical trials).
- In vivo studies.
- In vivo-In vitro correlation.
- Scale up studies of the optimized formulation.
- Medicinal values study of herbal drugs.
- Pole climbing apparatus.
- Hebb-Willem maze.
- Radial arm maze.

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