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# MUSLIM ARTS COLLEGE

THIRUVITHANCODE-629174, KANYAKUMARI DISTRICT  
TAMILNADU.

National Level Seminar  
on

**NUTRACEUTICALS AND FUNCTIONAL FOODS  
IN HEALTH AND DISEASE PREVENTION**

## Certificate

This is to certify that

Dr./Mr./Mrs./Ms. GI. C. GILBIS TAMIL PRIYA of  
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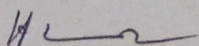
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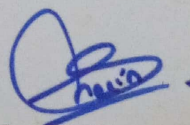
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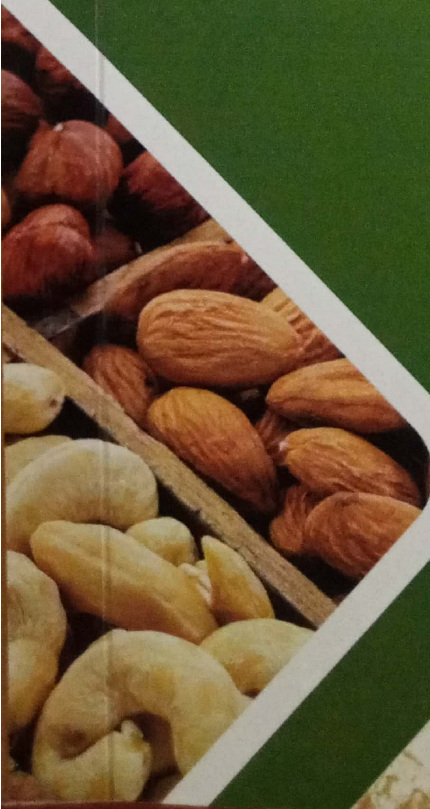
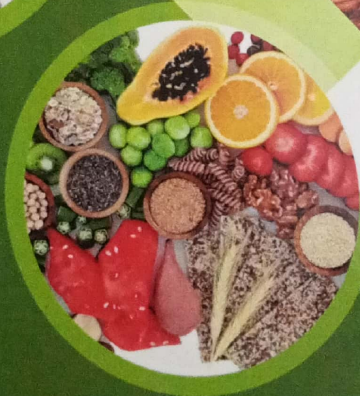
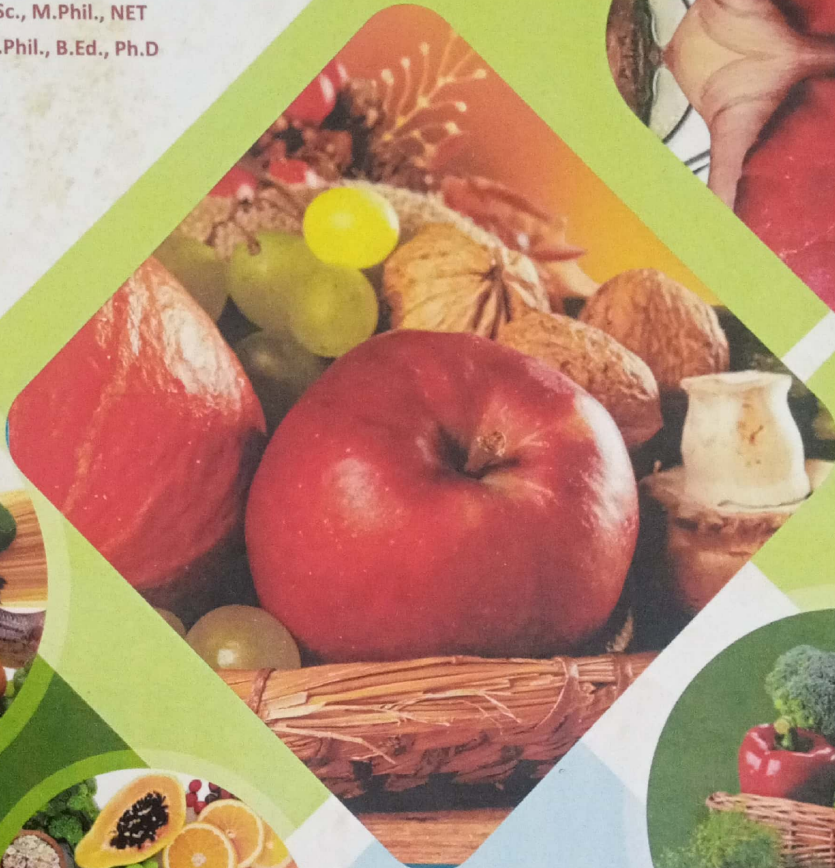
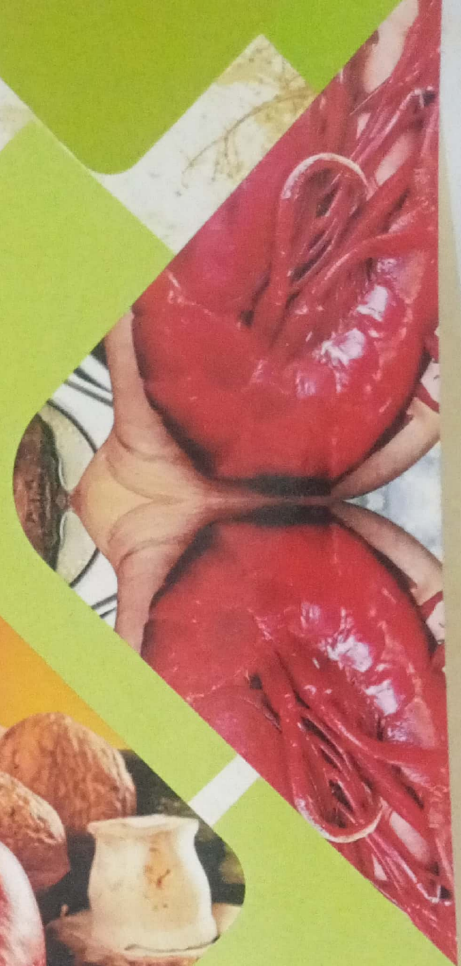
  
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# NUTRACEUTICALS AND FUNCTIONAL FOODS IN HEALTH AND DISEASE PREVENTION

Ms. T. Sherin Mary, M.Sc., M.Phil., NET  
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Department of Nutrition and Dietetics  
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## CONTENTS

S.No	Title of the Paper and Name of the Author	Page No
<b>Invited Lectures</b>		
I.	BIOACTIVE COMPOUNDS IN HEALTH AND DISEASE <i>Dr.Suma Divakar</i>	i
II.	FUNCTIONAL FOODS AND NUTRACEUTICALS AS THERAPEUTIC TOOL FOR PREVENTING DISEASES <i>Dr. R. Sahul Hameed, Ph.D., PDF (Canada)</i>	ii
<b>Contributed Papers</b>		
1.	SEAWEED - PROTEIN SOURCE OF FUTURE <i>M. Jenifer Tamizharasi, J.A.Jesiba and T. Kumaran</i>	1
2.	A COMPARATIVE STUDY ON BALANCED DIET AMONG COLLEGE GIRLS <i>Mrs.S.Kavitha , Ms.A.Amalin, Ms.A. Avudaiachi, Ms.D.Anisha, Ms.M.Esakiammal &amp; Ms.I. Veni</i>	5
3.	FORMULATION AND INCORPORATION OF HERBAL TEA POWDER FOR ALL AGE GROUPS <i>Aruna.D &amp; G.C.Gilbis Tamil Priya</i>	8
4.	DEVELOPMENT AND COMPARISON OF CEREALS MURUKKU WITH FENUGREEK <i>Mrs.Karolin.A</i>	12
5.	HONEY AS A SOURCE OF BIOACTIVE COMPOUND <i>Dr.Devika. I and Dr.Binu John Sam</i>	16
6.	ARTOCARPUS ALTILIS AND ITS HEALTH BENEFITS <i>Athira Mol. P. R, Aysha Askana. S.&amp; Mrs. Sherin Mary. T.</i>	20
7.	FORMULATION AND EVALUTION OF ALOE VERA LEGIAM <i>S. Amutha, A. Afrose Fathima, Mrs.D. Jesus Rosalind</i>	23
8.	FORMULATION AND STANDARDIZATION OF AZIMA TETRACANTHA INCORPORATED BREAKFAST CEREAL. <i>Greeshma .G, Sumitha.B, Fendic Shano.H,and Mrs.Sudha . U. V</i>	26
9.	VALUE ADDED PRODUCTS FROM YAM <i>V.Vijayashree, P. Janaki Ram S.M.Prasad, A. Maria Jerline,</i>	29
10	SUPER FOOD - PRICKLY PEAR – A REVIEW <i>Ajisha Vincent G and Mrs. Sherin Mary. T.</i>	33
11.	DISSEMINATION OF MILLET BASED RECOPIES AMONG THE ADOLESCENCE STUDENTS TO OVERCOME THEIR OBESITY PROBLEM <i>N.Radhika, A.Renuka Devi &amp; P. Devikamatchi</i>	37
12.	AN OVERVIEW ON NUTRITIONAL PROFILE OF HEALTHY SHRIMP MEAL <i>S. Sujithra , G. Sindhu Kumari &amp; T. Kumaran</i>	41

*Nutraceuticals and Functional Foods on Health*

# FORMULATION AND INCORPORATION OF HERBAL TEA POWDER FOR ALL AGE GROUPS

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## Abstract

Herbs and spices have been used since ancient times, because of their antimicrobial properties increasing the safety and shelf life of food products by acting against food borne pathogens and spoilage bacteria. Plants have historically been used in traditional medicine as sources of natural antimicrobial substances for the treatment of infectious disease. Therefore, much attention has been paid to medicinal plants as a source of alternative antimicrobial strategies. Moreover, due to the growing demand for preservative-free cosmetics, herbal extracts with antimicrobial activity have recently been used in the cosmetic industry to reduce the risk of allergies connected to the presence of methylparabens. Some species belonging to the genus *Cinnamomum* commonly used as spices, contain many antibacterial compounds.

## Introduction

Many of the human diseases are cured by modern medicines which sometimes produce unfavorable reactions and toxic side effects. Plants, being a reservoir medicinal compounds, help in preventing and curing ailments without serious adverse effects. (Fennell CW, Lindsey KL, et al., 2014). Compounds derived from living organisms, with their significant pharmacological activity, can compete with modern medicines. (Anjana S, Thoppil JE, et al., 2016). Plants produce phytochemical constituents for defense against pathogen owing to their characteristic bioactivities. Therapeutic property of every plant is confined to the bioactive compounds present in it. Hence, the screening of these compounds is necessary for the standardization and validation of herbal drugs formed from it. Alkaloids, flavonoids, phenols, terpenoids, tannins, and quinines etc. are the important classes of secondary metabolites in plants with significant pharmacological activity. Secondary metabolites derived from plants are reported to possess many important pharmacological characteristics such as anti-oxidant, anti-microbial, anti-allergic, hypoglycemic and anti-cancer properties (Borneo R, Leon AE, et al.2009)

Dengue is the most prevalence arthropod – borne viral diseases in terms of morbidity and mortality in the recent decade which has re-emerged and remain endemic in more than 110 countries. Two fifty of the world populations Dengue fever infections 2.1 million cases of Dengue hemorrhagic fever and 200 thousand deaths worldwide are caused by Dengue every year. Despite extremely high rates of Dengue for decades south east Asia region still recorded an increase of 67% from 1985- 1989 to 2002-2006 (Gibbons RV, et al.2010). Dengue appears in two forms, the classic and severe retro-orbital pain, severe headaches, macula-papular rashes, muscle and joint pain. The sever form, Dengue hemorrhagic fever and abdominal bleeding.

and proper management. (Gubler DJ, *et al.*1998). Recently, large numbers of *Carica papaya* leaves supplementary products are hitting the market for increasing the platelet counts among the dengue patients. The thermo liable active compounds of *C. papaya* leaves present in these products can be degraded during the manufacturing process. In this study discuss to analyze nutrient content of the herbal tea powder.

### Materials and methods

#### 2.1 Selection of samples

The fresh samples of nilavamu, vetiver, vilamichai ver, papaya leaf, cinnamon, coriander seed, black pepper, cumin seed, galangal root, sed for the research were collected from the S.P Nathu marutu kadai in marthandam.

The papaya leaf should be washed thoroughly in running water at 2-3 times, and the other ingredients were cleaned to remove the foreign particles. Then it should be dried by sun, and all the ingredients should be powdered using a standard mixer, it becomes a fine powder. A careful attention should be given for papaya leaf. The sample were packed in polyethylene bags and stored in refrigerator for further analysis.

#### 2.2 Formulation of the product.

The powdered herbal tea powder ingredients were also used for the various herbal products.

#### Selection of the components for herbal tea powder

S.NO	FORMULA	COMPOSITION	TOTAL
1	Black pepper	15	
2	Coriander seed	12	
3	Cumin seed	8	48g
4	Cinnamon	13	
5	Galangal root	5	
6	Viamichai ver	10	
7	Nilavambu	5	32g
8	Vettiver	12	20g
9	Papaya leaf	20	
	TOTAL	100	100g

#### 2.3 Proportion Based Formulated Product

The preparation of Herbal Tea Powder are mixed using various proportion such as 2%, 4%, 6%, 8%, of incorporation compared with standard were shown in table :2

S.NO	INGREDIENTS USED	STANDARD	AMOUNT 2%	(g)4%	6%	8%
1	Black pepper	20	20	20	20	18
2	Coriander seed	20	20	20	10	10
3	Cumin seed	20	12	10	10	10
4	Cinnamon	20	20	14	10	10
5	Galangal root	20	20	20	16	10
6	Vilamichai ver	-	2	4	6	8
7	Vetiver	-	2	4	6	8
8	Nilavambu	-	2	4	6	8
9	Papaya leaf	-	2	4	6	8

## 2.4 Formulation of herbal tea powder

Herbal tea powder based tea powder consists of materials like milvannam, vettiver, vilamichai ver, papaya leaf, black pepper, coriander seed, cumin seed, cinnamon, galanagal root,. They are rich in high calcium, high phosphorus, high iron protein, all the age group can taken this herbal tea powder.

## 2.5 Sensory evaluation for the herbal tea powder

Sensory assessments were evaluated based on the quality description in appearance, colour, flavour, taste, and over all acceptability. This evaluation is a valuable tool in solving problems involving food acceptability. Products were evaluated by a panel of 10 semi-trained judges from the department of nutrition and dietetics, Muslim Arts College, Thiruvithancode, Kanyakumari, District.

## 2.6 Nutrient calculated of developed herbal tea powder

The nutrients such as Energy, protein, fat, calcium, phosphorus, iron of the formulated herbal tea powder were analyzed.

## 2.7 Shelf life of the selected herbal tea powder

Keeping quality of each and every sample was done for the selected products. The samples were taken in two separate containers and they were stored at different temperatures like room temperature and refrigerator storage. To ascertain the storage behavior the products were kept as such for three months. These containers were checked once in fifteen days for the development of any off flavor and discoloration of the herbal tea powder.

## Result and Discussion

The formulated product contain 100gm of Herbal tea powder, the different proportions of samples are HTPS( Standard), HTP1(2%), HTP2 (4%), HTP3 (6%), and HTP4 (8%), respectively

The formulated product are evaluated by 20 trained panel members. They are evaluated both the positive and negative aspects of the products such as appearance, taste, flavor, texture, color, and over all acceptability.

The overall acceptable of 100gm of formulated herbal tea powder, and the different proportion of samples are contains HTPS (standard), HTP1 (2%), HTP2 (4%), HTP3 (6%), and HTP4 (8%) respectively. The formulated product has Mean  $\pm$  S.D scored  $4.15 \pm 0.356$  in HTPS,  $4.8 \pm 0.509$  in HTP1,  $4.9 \pm 0.435$  in HTP2,  $3.85 \pm 0.356$  in HTP3, and finally  $3.55 \pm 0.650$  in HTP4 respectively. The formulated product has standard mean error has scored 0.079 in HTPS respectively. 0.113 in HTP1, 0.097 in HTP2, 0.079 in HTP3, and finally 0.145 in HTP4.

## Conclusion

It is concluded from the present study that the formulated product contains various health benefits. The product was rich in various nutrient. It help to cure different types of diseases. It has scored maximum marks and well consumable for all age groups. The acceptability of the formulated product was well good.

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