

# **“DESIGNAND DEVELOPMENT OF SUSTAINABLE LUNCH BOX”**

Project report submitted in partial fulfilment for the degree of

## **MASTER OF SCIENCE IN HUMAN NUTRITION AND NUTRACEUTICALS**



By

**R.AFROSE BEEMA [2020MSCN01]**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE**

**(AUTONOMOUS)**

**College with Potential for Excellence**

**Affiliated to Madurai Kamaraj University**

**Re-accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - 4)**

**MAY – 2022**

## CERTIFICATE

This is to certify that Thesis entitled “**DESIGN AND DEVELOPMENT OF SUSTAINABLE LUNCH BOX**” submitted in partial fulfillment of the requirements for the award of the degree of “**Master of Science in Human Nutrition and Nutraceuticals**” is a bonafied record of research work carried out by **R. Afrose Beema** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

PLACE: Madurai

DATE: 30.06.2022

  
PROJECT GUIDE

*Dr. Vasanthi Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018.

  
HEAD OF THE DEPARTMENT

  
EXTERNAL EXAMINER 30/6/2022

*Dr. Vasanthi Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018.

## DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of **Mrs. Dr. Vasantha Esther Rani**, Head, Research Centre of Home Science that no part of the thesis has been submitted for the award of any other degree, diploma, fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

PLACE: Madurai

  
R. AFROSE BEEMA

DATE: 30.06.2022

2020MSCN01

**STANDARDIZATION OF VALUE ADDED FOOD PRODUCTS FROM SPROUTED  
PEARL MILLET AND SPROUTED FINGER MILLET FLOUR**

**Project report submitted in partial fulfilment for the degree of**

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**S. AGALYA [2020MSCN02]**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

**College with potential for excellence**

**Affiliated to Madurai Kamaraj University**

**Re-accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - 4)**

**MAY – 2022**

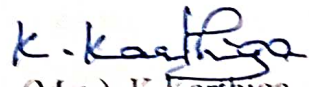


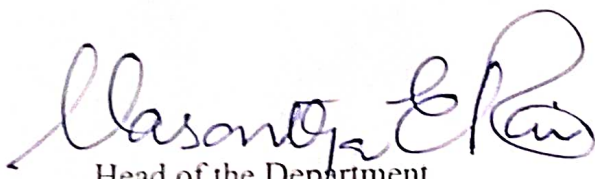
## CERTIFICATE


This is to certify that the thesis entitled "STANDARDIZATION OF VALUE ADDED FOOD PRODUCTS FROM SPROUTED PEARL MILLET AND SPROUTED FINGER MILLET FLOUR" submitted in partial fulfillment of the requirements for the award of the degree of "MASTER OF SCIENCE IN HUMAN NUTRITION AND NUTRACEUTICALS" is a bonafide record of research work carried out by Ms. S.AGALYA under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma or fellowship and that the work has not been published in any part or full in any scientific or popular journal or magazine.


Place: Madurai

Date: 30.06.2022

  
Dr. (Mrs.). K.Karthiga  
Guide

  
Head of the Department

  
External examiner 30/6/2022

  
Dr. Visalakshi E. Rani  
The Research Centre for Human Nutrition  
Food Science and Technology  
Madurai

## DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of Dr. (Mrs.) K.Karthiga Ph.D., Assistant Professor, The Research Centre of Home Science and that no part of the thesis has been submitted for the award of any other degree, diploma or fellowship.

*S. Agalya*  
(S.AGALYA)

Place: Madurai

Date: 30.06.2022

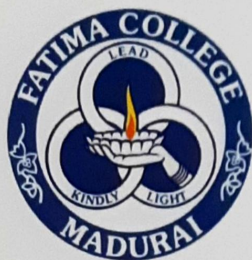
**PREVALENCE OF PCOS AMONG THE COLLEGE GOING GIRLS IN  
MADURAI**

A thesis submitted in partial fulfilment for the degree of

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**M. Akilandeswari (2020MSCN03)**

**RESEARCH CENTRE OF HUMAN NUTRITION &  
NUTRACEUTICALS**

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College with Potential for Excellence

Re-Accredited with 'A++' Grade by NAAC Cycle-4 with CGPA OF 3.61

74th Rank in India Ranking 2020 (NIRF) by MHRD

Affiliated with Madurai Kamaraj University

May2022

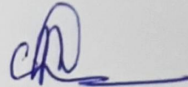


## CERTIFICATE

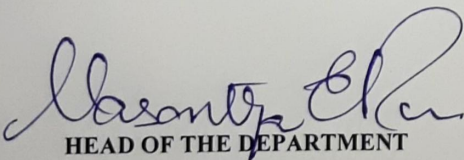
This is to certify that Thesis entitled "Prevalence of PCOS among the college going girls in Madurai" submitted in partial fulfilment of the requirements for the award of the degree of "Master of Science in Human Nutrition and Nutraceuticals" is a bonafide record of research work carried out by **Akilandeswari M** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship.

PLACE: MADURAI

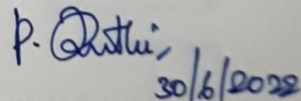
DATE: 30-6-2022



GUIDE



HEAD OF THE DEPARTMENT



30/6/2022

EXTERNAL EXAMINER



### DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of Dr C.Helen, Assistant professor, Research Centre of Home Science that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellow ship.

PLACE: MADURAI

DATE: 30 - 6 - 2022

*Akilandeswari.M*

Akilandeswari.M

2020MSCN03

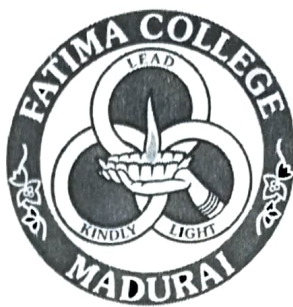
**DETERMINATION OF NUTRITIONAL & HEALTH POTENTIAL OF  
*SAUROPUS ANDROGYNUS* (CHEKKURMANIS LEAVES)**

Project report submitted in partial fulfilment for the degree of

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



By

**D. ARUNA ABIRAMI [2020MSCN04]**

THE RESEARCH CENTRE OF HOME SCIENCE

FATIMA COLLEGE (AUTONOMOUS)

College with Potential for Excellence

Affiliated to Madurai Kamaraj University

Re-accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - 4)

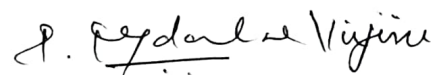
MAY - 2022

# CERTIFICATE

This is to accredit that the study entitled “**DETERMINATION OF NUTRITIONAL & HEALTH POTENTIAL OF CHEKKURMANIS LEAVES (*SAUROPUS ANDROGYNUS*)**” submitted in partial fulfillment of the requirements for the award of the degree of **MASTER OF SCIENCE IN HUMAN NUTRITION & NUTRACEUTICALS** is a bonafide record of research work carried out by **D. ARUNA ABIRAMI** under the supervision and guidance and I endorse that no part of this study has been submitted for the award of any other degree diploma (or) fellowships.

Place: Madurai

Date: 30.6.2022



**Guide**

(Dr. P. Magdalene Virjini)



**Head of the Department**

(Dr. Vasantha Esther Rani)



**External Examiner** 30/6/2022

*Dr. Vasantha Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
(Faculty of Home Science)

## DECLARATION

I hereby proclaim that the work done in this study has been originally accomplished by me, under the guidance and supervision of **Dr. P. Magdalene Virjini**, Assistant Professor, The Research Centre of Home Science, Fatima College, Madurai and no part of the study has been submitted for the award of any other degree, diploma, fellowship or other similar titles or prizes and this work has not been published as part or full research work in any scientific or popular journal or magazine.

Place: Madurai

*D. Aruna Abirami.*  
(D. Aruna Abirami)

Date: 30.06.2022



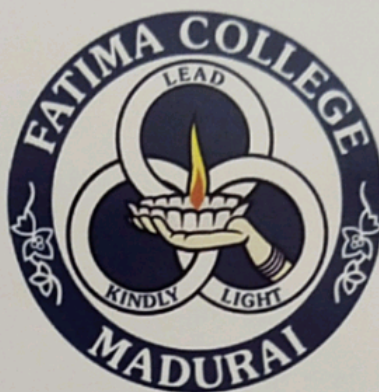
**NUTRITIONAL STATUS OF CHILDREN IN SCHOOL AGE (10-12 YEARS)  
DURING THE COVID – 19 PANDEMIC**

**Project Report Submitted in Partial Fulfilment for the Degree of**

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**C. BUVANESWARI**

**2020MSCN05**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

**College with Potential for Excellence**

**Re-Accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - 4) with CGPA of 3.61**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Affiliated with Madurai Kamaraj University**

**MAY - 2022**

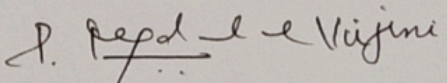


## CERTIFICATE

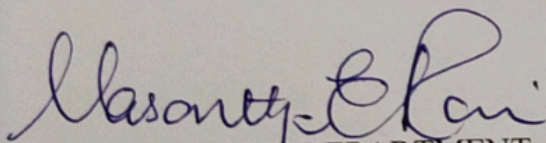
This is to accredit that the study entitled “**Nutritional Status of Children in School Age (10-12 Years) During Covid-19 Pandemic**” submitted in partial fulfillment of the requirements for the award of the degree of “**Master of Science in Human Nutrition and Nutraceuticals**” is a bonafide record of research work carried out by and C. **BUVANESWARI** under the supervision and guidance and I endorse that no part of this study has been submitted for the award of any other degree diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

PLACE: Madurai

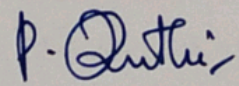
DATE: 30.6.2022

  
PROJECT GUIDE

(Dr. P. Magdalene Virgini)

  
HEAD OF THE DEPARTMENT

(Dr. Vasantha Esther Rani)

  
EXTERNAL EXAMINER  
30/6/2022

**Dr. Vasantha Esther Rani**  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018.



## DECLARATION

I hereby declare that the work embodied in this dissertation has been originally accomplished by us, under the guidance and supervision of **Dr. P. Magdalene Virjini, Assistant Professor, Research Centre of Home Science** and that, no part of the thesis has been submitted for the award of any other degree, diploma, fellowship or other similar titles or prizes and this work has not been published as part or full research work in any scientific or popular journal or magazine.

PLACE: Madurai

DATE: 30.6.2022

C. Buvaneswari  
C. BUVANESWARI

2020MSCN05

**NUTRITIONAL STATUS OF CHILDREN IN SCHOOL AGE (10-12 YEARS)  
DURING THE COVID – 19 PANDEMIC**

**Project Report Submitted in Partial Fulfilment for the Degree of**

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**A. CATHRIN SHEEBA**

**2020MSCN06**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

**College with Potential for Excellence**

**Re-Accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - 4) with CGPA of 3.61**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Affiliated with Madurai Kamaraj University**

**MAY - 2022**

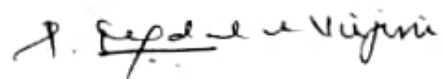


## CERTIFICATE

This is to accredit that the study entitled “**Nutritional Status of Children in School Age (10-12 Years) During Covid-19 Pandemic**” submitted in partial fulfillment of the requirements for the award of the degree of “**Master of Science in Human Nutrition and Nutraceuticals**” is a bonafide record of research work carried out by and **A. CATHRIN SHEEBA** under the supervision and guidance and I endorse that no part of this study has been submitted for the award of any other degree diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

PLACE: Madurai

DATE: 30.6.2022



PROJECT GUIDE

(Dr. P. Magdalene Virgini)



HEAD OF THE DEPARTMENT

(Dr. Vasantha Esther Rani)



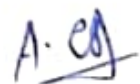
EXTERNAL EXAMINER

## DECLARATION

I hereby declare that the work embodied in this dissertation has been originally accomplished by us, under the guidance and supervision of **Dr. P. Magdalene Virjini, Assistant Professor, Research Centre of Home Science** and that, no part of the thesis has been submitted for the award of any other degree, diploma, fellowship or other similar titles or prizes and this work has not been published as part or full research work in any scientific or popular journal or magazine.

PLACE: Madurai

DATE: 30.6.2022



A. CATHRIN SHEEBA

2020MSCN06

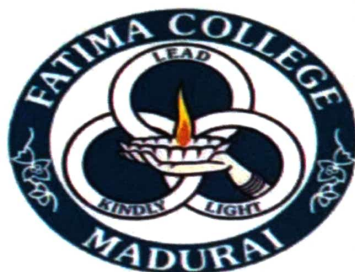
**QUALITY EVALUATION OF BAKERY PRODUCTS ENRICHED WITH SWEET  
POTATO FLOUR AND SAPOTA CONCENTRATE**

A thesis submitted in partial fulfillment for the degree of

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**R.Gopikha Devi**

**2020MSCN07**

**RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

**College with Potential for Excellence**

**Re-Accredited with 'A++' Grade by NAAC Cycle-4 with CGPA OF 3.61**

**74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD**

**Affiliated with Madurai Kamaraj University**

**May2022**

## CERTIFICATE

This is to certify that the thesis entitled “**Quality Evaluation of Bakery Products Enriched with Sweet Potato Flour and Sapota Concentrate**” submitted in partial fulfillment of the requirements for the award of the degree of “**Master of Science in Human Nutrition and Nutraceuticals**” is a bonafide record of research work carried out by **R.Gopikha Devi** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: Madurai

Date: 30.06.2022

  
Guide

  
Head of the Department

*Dr. Vasanthia Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018

  
External Examiner



## **DECLARATION**

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of Dr.C. Helen, Assistant Professor, Research Centre of Home Science that no part of the thesis has been submitted for the award of any other degree, diploma, fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

**Place: Madurai**

**Date: 30.06.2022**

*R. Gopikha Devi*

**R.Gopikha Devi**

**2020MSCN07**

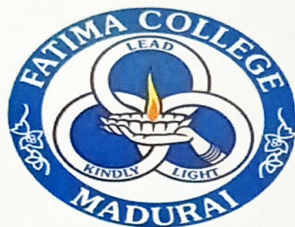
# **FORMULATION OF DATES SEED INCORPORATED WHEAT NOODLES**

Thesis submitted in partial fulfillment for the degree of

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**A. HANEESHA FATHIMA**

**2020MSCN08**

**RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

Re-Accredited with 'A++' Grade by NAAC (Cycle-IV)

Mary Land, Madurai - 625018

May 2022

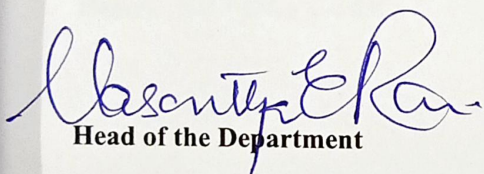
## CERTIFICATE

This is to certify that the thesis entitled “**Formulation of Dates Seed Incorporated Wheat Noodles**” submitted in partial fulfillment of the requirements for the award of the degree of “**Master of Science in Human Nutrition and Nutraceuticals**” is a bonafide record of research work carried out by **A. HANEESHA FATHIMA** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: Madurai

Dates: 30.06.2022

J. Joseph Jesshtha  
Guide

  
Head of the Department

*Dr. Vasantha Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018

P. Dattini  
20/6/2022  
External Examiner

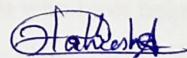


## DECLARATION

We hereby declare that the work embodied in this dissertation has been originally carried out by us, under the guidance and supervision of **Mrs. J. Josephine Jesintha, M.Sc, M.Phil., NET., (Ph.D.) Assistant Professor, Research Centre of Home Science** that no part of the thesis has been submitted for the award of any other degree, diploma, fellow ship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: Madurai

Dates: 30.06.2022



**A. HANEESHA FATHIMA**



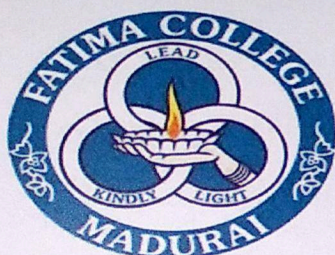
**QUALITY EVALUATION OF BAKERY PRODUCTS ENRICHED WITH SWEET  
POTATO FLOUR AND SAPOTA CONCENTRATE**

A thesis submitted in partial fulfillment for the degree of

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



Submitted by

**M. Ishwaryalakshmi**

**2020MSCN09**

**RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

College with Potential for Excellence

Re-Accredited with 'A++' Grade by NAAC Cycle-4 with CGPA OF 3.61

74<sup>th</sup> Rank in India Ranking 2020 (NIRF) by MHRD

Affiliated with Madurai Kamaraj University

May2022

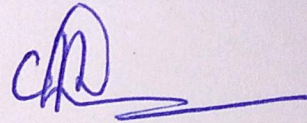


## CERTIFICATE

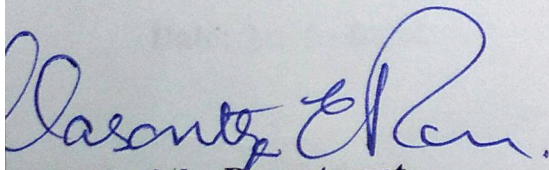
This is to certify that the thesis entitled “**Quality Evaluation of Bakery Products Enriched with Sweet Potato Flour and Sapota Concentrate**” submitted in partial fulfillment of the requirements for the award of the degree of “**Master of Science in Human Nutrition and Nutraceuticals**” is a bonafide record of research work carried out by **M. Ishwaryalakshmi** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: Madurai

Date: 30.6.2022



Guide



Head of the Department

*Dr. Vasantha Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018

*P. Duthi*, 30/6/2022  
External Examiner



## DECLARATION

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Place: Madurai

Date: 30.5.2022

M. Ishwaryalakshmi  
M. Ishwaryalakshmi

2020MSCN09



**FORMULATION AND NUTRIENT ANALYSIS OF *AEGLE MARMELLOS*  
(BAEL) LEAF TEA**

Thesis submitted in partial fulfillment for the degree of

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**W. JAYANTHI SELVA SUNDARI**

**2020MSCN10**

**RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

Re-Accredited with 'A++' Grade by NAAC (Cycle- IV)

Mary land, Madurai - 625018

May 2022

## CERTIFICATE

This is to certify that the thesis entitled “**Formulation and Nutrient Analysis of *Aegle marmelos* (bael) Leaf Tea**” submitted in partial fulfillment of the requirements for the award of the degree of “**Master of Science in Human Nutrition and Nutraceuticals**” is a bonafide record of research work carried out by **W. JAYANTHI SELVA SUNDARI** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: Madurai

Date: 30-06-2022

*J. Josephi Jerntha*  
Guide

*Vasanthi E. Rani*  
Head of the Department

*Dr. Vasantha Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018

*P. Quithi*, 30/6/2022  
External Examiner



## DECLARATION

We hereby declare that the work embodied in this dissertation has been originally carried out by us, under the guidance and supervision of **Mrs. J. Josephine Jesintha, M.Sc, M.Phil., NET., (Ph.D), Assistant Professor, The Research Centre of Home Science** that no part of the thesis has been submitted for the award of any other degree, diploma, fellow ship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

**Place: Madurai**

**Date: 30.06.2022**



**W. JAYANTHI SELVA SUNDARI**

**STANDARDIZATION AND NUTRIENT ANALYSIS OF ASHOKA BARK POWDER  
INCORPORATED FOOD PRODUCTS FOR REPRODUCTIVE HEALTH OF  
WOMEN**

Thesis submitted in partial fulfilment for the degree of

**MASTER OF SCIENCE  
IN  
HUMAN NUTRITION AND NUTRACEUTICALS**



Submitted by

**K. ATCHAYA**

**2020MSCN11**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

**College with potential for Excellence**

**Re-Accredited with 'A++' Grade by NAAC (4th Cycle)**

**Affiliated to Madurai Kamaraj University**

**MAY 2022**

## CERTIFICATE

This is to certify that the thesis entitled "**STANDARDIZATION AND NUTRIENT ANALYSIS OF ASHOKA BARK POWDER INCORPORATED FOOD PRODUCTS FOR REPRODUCTIVE HEALTH OF WOMEN**" submitted in partial fulfillment of the requirements for the award of the degree of "**Master of Science in Human Nutrition and Nutraceuticals**" is a bonafide record of research work carried out by **K. ATCHAYA** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: *Madurai*

Date: *30/06/2022*

*D. Mouna*  
Mrs. D. Mouna

Guide

*Vasanthi E. Rani*  
Head of the Department

*Dr. Vasanthia Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018

*P. Dethi*  
30/6/2022  
External Examiner



## DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of **Mrs. D. Mouna, M.Sc., M.Phil., NET, (Ph.D) Assistant Professor, The Research Centre of Home Science** that no part of the thesis has been submitted for the award of any other degree, diploma, fellow ship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

**Place: Madurai**

**Date: 30/6/2022**



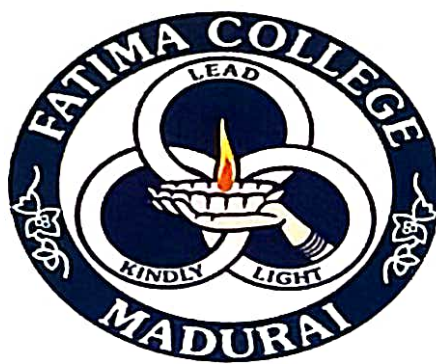
**K. ATCHAYA**

**2020MSCN11**

**STANDARDIZATION AND NUTRIENT ANALYSIS OF ASHOKA BARK POWDER  
INCORPORATED FOOD PRODUCTS FOR REPRODUCTIVE HEALTH OF  
WOMEN**

Thesis submitted in partial fulfilment for the degree of

**MASTER OF SCIENCE  
IN  
HUMAN NUTRITION AND NUTRACEUTICALS**



Submitted by

**K. SOWMIYA DEVI**

**2020MSCN12**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

**College with potential for Excellence**

**Re-Accredited with 'A++' Grade by NAAC (4th Cycle)**

**Affiliated to Madurai Kamaraj University**

**MAY 2022**

## CERTIFICATE

This is to certify that the thesis entitled "STANDARDIZATION AND NUTRIENT ANALYSIS OF ASHOKA BARK POWDER INCORPORATED FOOD PRODUCTS FOR REPRODUCTIVE HEALTH OF WOMEN" submitted in partial fulfillment of the requirements for the award of the degree of "Master of Science in Human Nutrition and Nutraceuticals" is a bonafide record of research work carried out by K. SOWMIYA DEVI under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: Madurai

Date: 30/06/2022

  
Mrs. D. Mouna

Guide

  
Head of the Department

*Dr. Vasanthia Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018

  
External Examiner 30/6/2022



## DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of Mrs. D. Mouna, M.Sc., M.Phil., NET, (Ph.D) Assistant Professor, The Research Centre of Home Science that no part of the thesis has been submitted for the award of any other degree, diploma, fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: Madurai

Date: 30/06/2022



K. SOWMIYA DEVI

2020MSCN12

**FORMULATION OF SHATAVARI POWDER (*Asparagus racemosus*)  
INCORPORATED FOOD PRODUCTS FOR WOMEN'S  
REPRODUCTIVE HEALTH**

**Project report submitted in partial fulfilment for the degree of  
MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**M.MAHALAKSHMI [2020MSCN13]**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

**College with potential for excellence Affiliated to**

**Madurai Kamaraj University**

**Re-accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - 4)**

**MAY-2022**

## CERTIFICATE

This is to certify that the thesis entitled “**FORMULATION OF SHATAVARI POWDER (*Asparagus racemosus*) INCORPORATED FOOD PRODUCTS FOR WOMEN’S REPRODUCTIVE HEALTH**” submitted in partial fulfillment of the requirements for the award of the degree of “**MASTER OF SCIENCE IN HUMAN NUTRITION AND NUTRACEUTICALS**” is a bonafide record of research work carried out by **Ms.M. MAHALAKSHMI** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma or fellowship and that the work has not been published in any part or full in any scientific or popular journal or magazine.

**Place:** Madurai

**Date:** 30.6.2022



Dr.(Mrs.).K.Karthiga

**Guide**



Head of the Department

*Dr. Vasantha Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018



External examiner 30/6/2022



## DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of **Dr. (Mrs.)K. Karthiga Ph.D., Assistant Professor, The Research Centre of Home Science** and that no part of the thesis has been submitted for the award of any other degree, diploma or fellowship.

**Place:**Madurai

(M.MAHALAKSHMI)

M. Mahalakshmi

**Date:** 30.06.2022

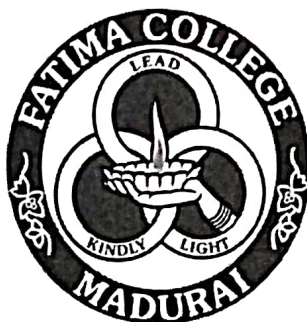
**DETERMINATION OF NUTRITIONAL & HEALTH POTENTIAL OF  
*SAUROPLUS ANDROGYNUS* (CHEKKURMANIS LEAVES)**

Project report submitted in partial fulfilment for the degree of

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



By

**R. MAHALAKSHMI [2020MSCN14]**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

College with Potential for Excellence

Affiliated to Madurai Kamaraj University

Re-accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - 4)

MAY - 2022



## CERTIFICATE

This is to accredit that the study entitled "DETERMINATION OF NUTRITIONAL & HEALTH POTENTIAL OF CHEKKURMANIS LEAVES (*SAUROPUS ANDROGYNUS*)" submitted in partial fulfillment of the requirements for the award of the degree of MASTER OF SCIENCE IN HUMAN NUTRITION & NUTRACEUTICALS is a bonafide record of research work carried out by R. MAHALAKSHMI under the supervision and guidance and I endorse that no part of this study has been submitted for the award of any other degree diploma (or) fellowships.

Place: Madurai

Date: 30.6.2022

*P. Magdalene Virjini*  
Guide

(Dr. P. Magdalene Virjini)

*Vasanthi Esther Rani*  
Head of the Department

(Dr. Vasantha Esther Rani)

*P. Quithi*  
30/6/2022  
External Examiner

*Dr. Vasantha Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018.

## DECLARATION

I hereby proclaim that the work done in this study has been originally accomplished by me, under the guidance and supervision of **Dr. P. Magdalene Virjini**, Assistant Professor, The Research Centre of Home Science, Fatima College, Madurai and no part of the study has been submitted for the award of any other degree, diploma, fellowship or other similar titles or prizes and this work has not been published as part or full research work in any scientific or popular journal or magazine.

**Place: Madurai**

**Date: 30.06.2022**

*R. Mahalakshmi*  
(R. Mahalakshmi)

**INCORPORATION OF TAMARIND SEED POWDER/PULP IN FOOD PRODUCTS  
FOR PROTEIN ENERGY MALNUTRITION**

Thesis submitted in partial fulfilment for the degree of  
**MASTER OF SCIENCE**  
**IN**  
**HUMAN NUTRITION AND NUTRACEUTICALS**



Submitted by

**R. NIRAIMATHI**

**2020MSCN16**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

**College with potential for Excellence**

**Re-Accredited with 'A++' Grade by NAAC (4th Cycle)**

**Affiliated to Madurai Kamaraj University**

**May 2022**

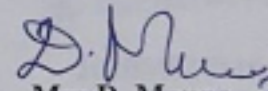


## CERTIFICATE

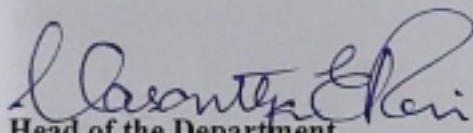
This is to certify that the thesis entitled "INCORPORATION OF TAMARIND SEED POWDER/ PULP IN FOOD PRODUCTS FOR PROTEIN ENERGY MALNUTRITION " submitted in partial fulfilment of the requirements for the award of the degree of "Master of Science in Human Nutrition and Nutraceuticals" is a bonafide record of research work carried out by **R.NIRAIMATHI** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: MADURAI

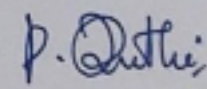
Date: 30/06/2022

  
Mrs.D. Mouna 30/6/22

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Fatima College (Autonomous)  
Madurai - 625 018

  
External Examiner 30/6/2022

## DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of **Mrs.D.Mouna, Assistant Professor, The Research Centre of Home Science** that no part of the thesis has been submitted for the award of any other degree, diploma, fellow ship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

*R. Niraimathi*

Place: Madurai

2020MSCN16

Date: 30/06/2022.

R. NIRAIMATHI

# **“DESIGN AND DEVELOPMENT OF SUSTAINABLE LUNCH BOX”**

Project report submitted in partial fulfilment for the degree of

## **MASTER OF SCIENCE IN HUMAN NUTRITION AND NUTRACEUTICALS**



By

**A. NITHYA [2020MSCN17]**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE**

**(AUTONOMOUS)**

**College with Potential for Excellence**

**Affiliated to Madurai Kamaraj University**

**Re-accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - 4)**

**MAY – 2022**



## CERTIFICATE

This is to certify that Thesis entitled "Design and development of sustainable lunch box" submitted in partial fulfillment of the requirements for the award of the degree of "Master of Science in Human Nutrition and Nutraceuticals" is a bonafied record of research work carried out by A. Nithya under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

PLACE: Madurai

DATE: 30.06.2022

GUIDE

  
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*Dr. Vasanthi Esther Ravi*  
Associate Professor & Head  
The Research Centre of Human Sciences  
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Madurai - 625 018

  
HEAD OF THE DEPARTMENT  
EXAMINER

*P. Qutbi, 30/6/2022*  
EXTERNAL

*Dr. Vasanthi Esther Ravi*  
Associate Professor & Head  
The Research Centre of Human Sciences  
Futura College (Autonomous)  
Madurai - 625 018

## DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of **Mrs. Dr. Vasantha Esther Rani**, Head, Research Centre of Home Science that no part of the thesis has been submitted for the award of any other degree, diploma, fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

PLACE: Madurai

DATE: 30.06.2022

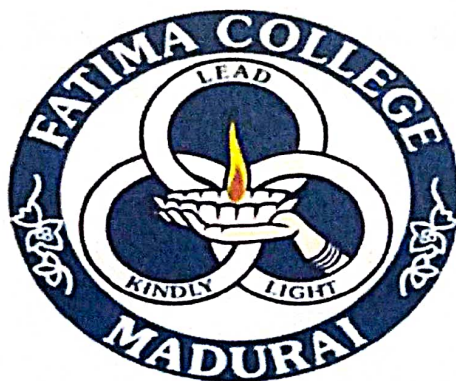
*A. Nithya*

A. NITHYA

2020MSCN17

**INCORPORATION OF TAMARIND SEED POWDER/PULP IN FOOD PRODUCTS  
FOR PROTEIN ENERGY MALNUTRITION**

Thesis submitted in partial fulfilment for the degree of  
**MASTER OF SCIENCE**  
**IN**  
**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**G. PAVITHRA**

**2020MSCN19**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

**College with potential for Excellence**

**Re-Accredited with 'A++' Grade by NAAC (4th Cycle)**

**Affiliated to Madurai Kamaraj University**

**May 2022**

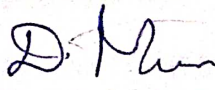


## CERTIFICATE

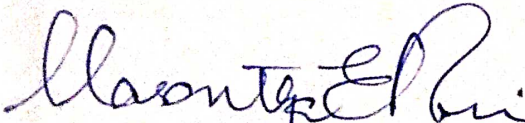
This is to certify that the thesis entitled **“INCORPORATION OF TAMARIND SEED POWDER/ PULP IN FOOD PRODUCTS FOR PROTEIN ENERGY MALNUTRITION ”** submitted in partial fulfilment of the requirements for the award of the degree of **“Master of Science in Human Nutrition and Nutraceuticals”** is a bonafide record of research work carried out by **G. PAVITHRA** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: Madurai


Date: 30/6/2022

  
Mrs.D. Mouna 30/6/22

Guide

  
Head of the Department

*Dr. Vasanthia Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018

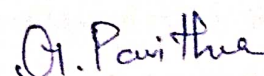
  
External Examiner 30/6/2022

## DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of **Mrs.D.Mouna, Assistant Professor, The Research Centre of Home Science** that no part of the thesis has been submitted for the award of any other degree, diploma, fellow ship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: Madurai

Date: 30/6/2022



2020MSCN19

G. PAVITHRA

# **FORMULATION OF DATES SEED INCORPORATED WHEAT NOODLES**

Thesis submitted in partial fulfillment for the degree of

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**A. RUFINA**

**2020MSCN20**

**RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

Re-Accredited with 'A++' Grade by NAAC (Cycle-IV)

Mary Land, Madurai - 625018

May 2022



## CERTIFICATE

This is to certify that the thesis entitled “**Formulation of Dates Seed Incorporated Wheat Noodles**” submitted in partial fulfillment of the requirements for the award of the degree of “**Master of Science in Human Nutrition and Nutraceuticals**” is a bonafide record of research work carried out by **A. RUFINA** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: Madurai

Dates: 30.06.2022

J. Joseph Jemtha  
Guide

  
Head of the Department

*Dr. Vasantha Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018

P. Duthi  
External Examiner 30/6/2022

## DECLARATION

We hereby declare that the work embodied in this dissertation has been originally carried out by us, under the guidance and supervision of **Mrs. J. Josephine Jesintha, M.Sc, M.Phil., NET., (Ph.D.) Assistant Professor, Research Centre of Home Science** that no part of the thesis has been submitted for the award of any other degree, diploma, fellow ship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

**Place: Madurai**

**Dates: 30.06.2022**



**A. RUFINA**

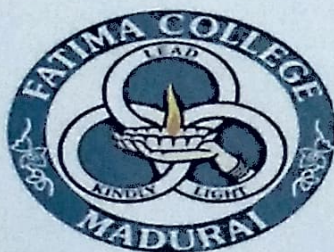
**FORMULATION AND NUTRIENT ANALYSIS OF *AEGLE MARMELLOS*  
(BAEL) LEAF TEA**

Thesis submitted in partial fulfillment for the degree of

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



Submitted by

**P. SIVA RANJINI**

**2020MSCN21**

**RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

Re-Accredited with 'A++' Grade by NAAC (Cycle- IV)

Mary land, Madurai - 625018

May 2022



## CERTIFICATE

This is to certify that the thesis entitled “**Formulation and Nutrient Analysis of *Aegle marmelos* (bael) Leaf Tea**” submitted in partial fulfillment of the requirements for the award of the degree of “**Master of Science in Human Nutrition and Nutraceuticals**” is a bonafide record of research work carried out by **P. SIVA RANJINI** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

Place: Madurai

Date: 30.06.2022

*J. Joseph Jeremiah*

Guide

*Vasanthi Rani*

Head of the Department

*Dr. Vasantha Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018

*P. Prithvi*, 30/6/2022

External Examiner



## DECLARATION

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**Place: Madurai**

**Date: 30. 06. 2022**

*P. Siva Ranjini*

**P. SIVA RANJINI**



**STANDARDIZATION OF VALUE ADDED FOOD PRODUCTS FROM SPROUTED  
PEARL MILLET AND SPROUTED FINGER MILLET FLOUR**

**Project report submitted in partial fulfilment for the degree of**

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**J.SORNALATHA [2020MSCN22]**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

**College with potential for excellence**

**Affiliated to Madurai Kamaraj University**

**Re-accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - 4)**

**MAY - 2022**



## CERTIFICATE

This is to certify that the thesis entitled "STANDARDIZATION OF VALUE ADDED FOOD PRODUCTS FROM SPROUTED PEARL MILLET AND SPROUTED FINGER MILLET FLOUR" submitted in partial fulfillment of the requirements for the award of the degree of "MASTER OF SCIENCE IN HUMAN NUTRITION AND NUTRACEUTICALS" is a bonafide record of research work carried out by Ms. J.SORNALATHA under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma or fellowship and that the work has not been published in any part or full in any scientific or popular journal or magazine.

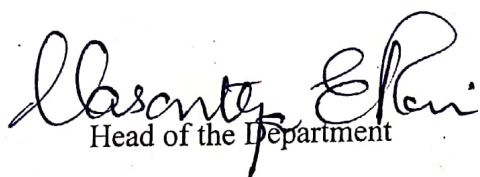
Place: Madurai

Date: 30.06.2022



Dr. (Mrs.) K. Karthiga

Guide



**Dr. Vasantha Esther Rani**  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018



External examiner

30/6/2022

## DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of **Dr. (Mrs.) K.Karthiga Ph.D., Assistant Professor, The Research Centre of Home Science** and that no part of the thesis has been submitted for the award of any other degree, diploma or fellowship.

Place: Madurai

(J.SORNALATHA)

J. Sorna Latha

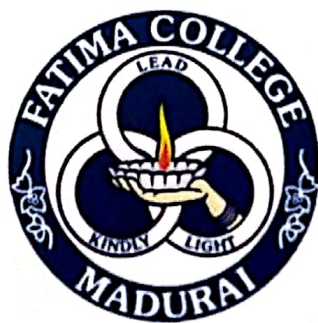
Date: 30.06.2022



# **“DESIGN AND DEVELOPMENT OF SUSTAINABLE LUNCH BOX”**

Project report submitted in partial fulfilment for the degree of

**MASTER OF SCIENCE  
IN  
HUMAN NUTRITION AND NUTRACEUTICALS**



By

**S. P. SWETHA [2020MSCN26]**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE**

**(AUTONOMOUS)**

**College with Potential for Excellence**

**Affiliated to Madurai Kamaraj University**

**Re-accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - 4)**

**MAY – 2022**



## CERTIFICATE

This is to certify that Thesis entitled "DESIGN AND DEVELOPMENT OF SUSTAINABLE LUNCH BOX" submitted in partial fulfillment of the requirements for the award of the degree of "Master of Science in Human Nutrition and Nutraceuticals" is a bonafied record of research work carried out by S.P. Swetha under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

PLACE: Madurai

DATE: 30.06.2022

  
PROJECT GUIDE

*Dr. Vasanthi Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018.

  
HEAD OF THE DEPARTMENT

*Dr. Vasanthi Esther Rani*  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018.

*P. Dattini* 30/6/2022  
EXTERNAL EXAMINER

### DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of **Mrs. Dr. Vasantha Esther Rani**, Head, Research Centre of Home Science that no part of the thesis has been submitted for the award of any other degree, diploma, fellow ship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

PLACE: Madurai

DATE: 30.06.2022

*S.P. Swetha.*  
S.P SWETHA

2020MSCN26

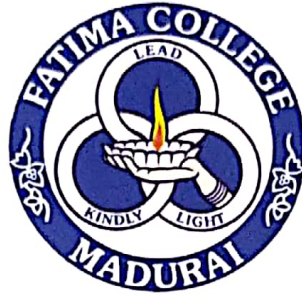
**PREVALENCE OF PCOS AMONG THE COLLEGE GOING GIRLS IN  
MADURAI**

A thesis submitted in partial fulfilment for the degree of

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**J.S.Thilothama (2020MSCN27)**

**RESEARCH CENTRE OF HUMAN NUTRITION &  
NUTRACEUTICALS**

**FATIMA COLLEGE (AUTONOMOUS)**

**College with Potential for Excellence**

**Re-Accredited with 'A++' Grade by NAAC Cycle-4 with CGPA OF 3.61**

**74th Rank in India Ranking 2020 (NIRF) by MHRD**

**Affiliated with Madurai Kamaraj University**

**May2022**



## CERTIFICATE

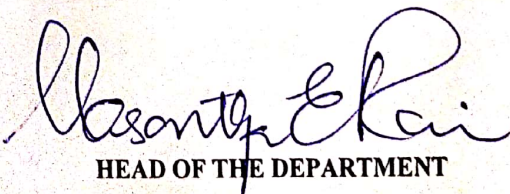
This is to certify that Thesis entitled "Prevalence of PCOS among the college going girls in Madurai" submitted in partial fulfilment of the requirements for the award of the degree of "Master of Science in Human Nutrition and Nutraceuticals" is a bonafide record of research work carried out by **Thilothama J.S** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship.

PLACE: MADURAI

DATE: 30-6-2022




GUIDE



HEAD OF THE DEPARTMENT

**Dr. Vasanthia Esther Rani**  
Associate Professor & Head  
The Research Centre of Home Science  
Fatima College (Autonomous)  
Madurai - 625 018



EXTERNAL EXAMINER

## DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of Dr C.Helen, Assistant professor, Research Centre of Home Science that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellow ship.

PLACE: MADURAI

DATE: 30-6-2022

J.S.Thilothama .

Thilothama J.S

2020MSCN27

**INCORPORATION OF POWDERED  
JACKFRUIT (*Artocarpus heterophyllus* Lam) SEED IN SNACKS  
FOR JUVENILE DIABETES**

Thesis submitted in partial fulfillment for degree of

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



Submitted by

**S. VASANTHI**

**2020MSCN28**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

College with potential for Excellence

Re-Accredited with 'A++' Grade by NAAC (4<sup>th</sup> Cycle)

Affiliated to Madurai Kamaraj University

May 2022



## CERTIFICATE

This is to certify that the Thesis entitled "**Incorporation of Powdered Jackfruit (*Artocarpus heterophyllus* Lam) seed in Snacks for Juvenile Diabetics**" submitted in partial fulfillment of the requirements for the award of the degree of "**Master of Science in Human Nutrition and Nutraceuticals**" is a bonafide record of research work carried out by **S. Vasanthi** under my supervision and guidance and that no part of the thesis has been submitted for the award of any other degree, diploma (or) fellowship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

PLACE: Madurai

DATE: 30.06.2022




PROJECT GUIDE



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30/6/2022  
EXTERNAL EXAMINER

### DECLARATION

I hereby declare that the work embodied in this dissertation has been originally carried out by me, under the guidance and supervision of Dr. Vasantha Esther Rani, Head and Associate Professor, The Research Centre of Home Science that no part of the thesis has been submitted for the award of any other degree, diploma, fellow ship or other similar titles or prizes and that the work has not been published in any part or full in any scientific or popular journal or magazine.

PLACE: Madurai

DATE: 30.06.2022

*S. Vasanthi*

S. VASANTHI

2020MSCN28

**FORMULATION OF SHATAVARI POWDER (*Asparagus racemosus*)  
INCORPORATED FOOD PRODUCTS FOR WOMEN'S  
REPRODUCTIVE HEALTH**

**Project report submitted in partial fulfilment for the degree of  
MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**R.YAMI [2020MSCN29]**

**THE RESEARCH CENTRE OF HOME SCIENCE**

**FATIMA COLLEGE (AUTONOMOUS)**

**College with potential for excellence Affiliated to**

**Madurai Kamaraj University**

**Re-accredited with 'A++' (CGPA 3.61) by NAAC (Cycle - 4)**

**MAY-2022**



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Dr.(Mrs.).K.Karthiga

**Date:** 30.06.2022

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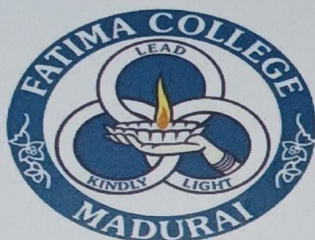
**INCORPORATION OF POWDERED  
JACKFRUIT (*Artocarpus heterophyllus* Lam) SEED IN SNACKS  
FOR JUVENILE DIABETES**

Thesis submitted in partial fulfillment for degree of

**MASTER OF SCIENCE**

**IN**

**HUMAN NUTRITION AND NUTRACEUTICALS**



**Submitted by**

**S. YAMUNA VALLI**

**2020MSCN30**

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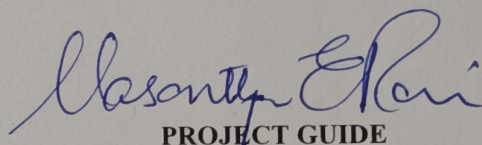


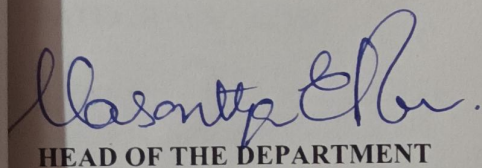
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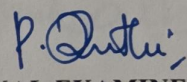
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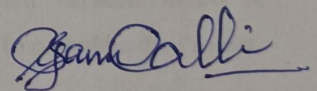
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S. YAMUNA VALLI

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