IMPROVEMENT OF DIETARY FIBRE CONTENT AND ANTIOXIDANT ACTIVITY IN COOKIES, PROCESSED BY INCORPORATING "BHIM KOL" BANANA (MUSA BALBISIANA) PEEL POWDER

A thesis submitted to the Department of Food Engineering and Technology, Tezpur University in partial fulfilment of the requirements for the award of the degree of

MASTER OF TECHNOLOGY IN FOOD ENGINEERING AND TECHNOLOGY

BY
AVIK PANDA
(FPL12003)

Approved by

Charn lata Mahanla (C. L. Mahanta) SUPERVISOR

EXTERNAL EXAMINER

(M. K. Hazarika) HEAD





DEPARTMENT OF FOOD ENGINEERING AND TECHNOLOGY TEZPUR UNIVERSITY

(A Central University established by an Act of Parliament)
Napam, Tezpur - 784 028, Assam

Dr. M. K. Hazarika Head Email: mkhazarika@tezu.ernet.in

Cell: +919435700993 Tel: +91-3712-275706

Fax: +91-3712-267005, 267006

Certificate of the Head of the Department

This is to certify that Mr Avik Panda, Roll FPL 12003, a student of the Department of Food Engineering and Technology, Tezpur University, Assam, has successfully completed the M. Tech. project work entitled 'Improvement of dietary fibre content and antioxidant activity in cookies, processed by incorporating 'Bhim kol' banana (Musa balbisiana) peel powder' as a partial fulfillment for the award of Master of Technology degree in Food Engineering and Technology under the supervision of Prof (Ms) Charu Lata Mahanta, Professor, Department of Food Engineering and Technology, Tezpur University, Tezpur.

Place: Tezpur Date: 22-05.2014

(M.K. Hazarika)



DEPARTMENT OF FOOD ENGINEERING AND TECHNOLOGY TEZPUR UNIVERSITY NAPAAM, TEZPUR- 784 028

Ph:(03712) 275702

Fax:(03712)-267005/06 Cell: 09435092658

E-mail: charu@tezu.ernet.in

Certificate

This is to certify that the thesis entitled "Improvement of dietary fibre content and antioxidant activity in cookies processed by incorporating "Bhim kol" banana (Musa balbisiana) peel powder" submitted by Mr Avik Panda (FPL12003) to the Department of Food Engineering and Technology, Tezpur University in partial fulfillment of M. Tech. degree is a bona-fide record of the investigation carried out by him under my supervision. To the best of my knowledge the report embodies an account of his findings and is valid for the purpose for which it is submitted.

Charu Lata Mahanta (Charu Lata Mahanta) Supervisor

Place: Tezpur University Date: 30/05/2014

DECLARATION

I hereby declare that the thesis entitled "Improvement of dietary fibre content and antioxidant activity in cookies, processed by incorporating "Bhim kol" banana (Musa balbisiana) peel powder" was carried out by me at the Department of Food Engineering and Technology, Tezpur University, Tezpur under the guidance of Prof. Charu Lata Mahanta, Associate Professor, Department of Food Engineering and Technology, Tezpur University, Tezpur.

This Report is being submitted as a M. Tech. project thesis for the partial fulfillment of M. Tech. degree in Food Engineering Technology by TezpurUniversity, Tezpur.

I further declare that this Project or any part of it has not been submitted elsewhere for any other degree or diploma to any other University/Institute.

Place: Tezfur

Date 30/05/2014

Avik Panda

Roll No- FPL 12003.

Dix lander

ACKNOWLEDGEMENT

At the very outset, I would like to take this opportunity to extend my sincere

gratitude and heartiest thanks to my guide Prof. Charu Lata Mahanta, Associate Professor,

Department of Food Engineering and Technology, Tezpur University, who have constantly

guided and advised me in my entire project work, without whose guidance, support, co-

operation and encouragement, this project would not have been possible.

With great sincerity, I extend my gratitude and thanks to Mr. Dipankar kalita,

Tehnical officer, and Mr. Arup jyoti Das, Lab. Assistant of Department of Food Engineering

and Technology, Tezpur University, who helped me with every support throughout the

study whenever I sought for. I would also like to thank all the professors of the Department

of Food Engineering and Technology, Tezpur University, for their helpful suggestions

throughout the study.

I would also take the opportunity to give my heartiest thanks to Ms. Sangeeta Saikia

and Mr. Him jyoti Dutta, Research scholar, Department of Food Engineering and

Technology, Tezpur University who always lended a helping hand whenever I asked for.

Lastly I would like to thank all my classmates for their constant encouragements.

Avik Panda

Roll No.-FPL 12003