OPTIMIZATION OF MICROWAVE ASSISTED PROCESS FOR EXTRACTION OF PEPPER MINT ESSENTIAL OIL

By,

E S ANANTHAKRISHNAN

Submitted in partial fulfillment of the Requirement for the degree

Bachelor of Technology In Food Engineering and Technology

Faculty of Food Engineering and Technology



KERALA AGRICULTURAL UNIVERSITY

Department of Processing & Food Engineering

KELAPPAJI COLLEGE OF AGRICULTURAL ENGINEERING

AND TECHNOLOGY TAVANUR – 679573 KERALA, INDIA 2020

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AND TECHNOLOGY TAVANUR – 679573 KERALA, INDIA 2020 **DECLARATION**

I hereby declare that the thesis entitled "OPTIMIZATION OF MICROWAVE ASSISTED

PROCESS FOR EXTRACTION OF PEPPERMINT ESSENTIAL OIL" is a bonafide record of

research work done by me during the course of research and that the thesis has not previously

formed the basis for the award of any degree, diploma, associateship, fellowship or other similar

title of any other University or Society.

Place: Tavanur

E S ANANTHAKRISHNAN (2016-06-002)

Date:

CERTIFICATE

Certified that this project report entitled "OPTIMIZATION OF MICROWAVE ASSISTED PROCESS FOR EXTRACTION OF PEPPERMINT ESSENTIAL OIL" is a record of project done by E S Ananthakrishnan (2016-06-002), under my guidance and supervision and that it has not previously formed the basis for the award of any degree, diploma, associateship, fellowship to them.

Place: Tavanur Mrs. SREEJA R

Date:
Asst. Professor

Dept. of P & FE

K.C.A.E.T, Tavanur

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DEDICATED TO ALL

FOOD ENGINEERS

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LIST OF SYMBOLS AND ABBREVIATIONS

^OC : Degree Celcius

% : Percentage

& : And

/ : Per

D : Diameter

et al. : and others

etc. : Etcetera

GHz : Giga Hertz

G : Gram

 $g.l^{-1}$: gram per litre

g.mg⁻¹.day⁻¹ : gram per milli gram per day

H : Hour

i.e. : that is

IU : International Unit

K.C.A.E.T : Kelappaji College of Agricultural Engineering and Technology

Kcal : kilo calorie

kWh : kilo Watt hour

Mg : Milli gram

Min : Minute (s)

M1 : Milli Litre

Mm : Milli Meter

MT : Metric Tonne

RDA : Recommended Dietary Allowance

S : Second (s)

Sl. : Serial

T : Tonne

V : Volt

W : Watt

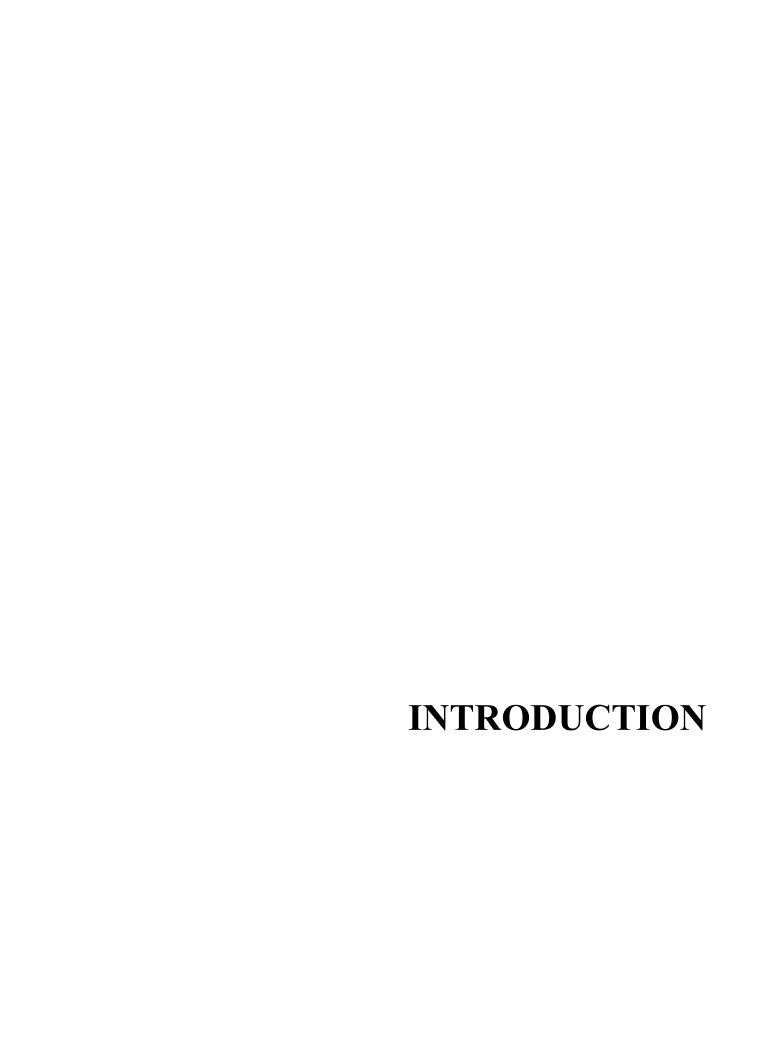
Wb : Wet basis

 $W.g^{-1}$: Watt per gram

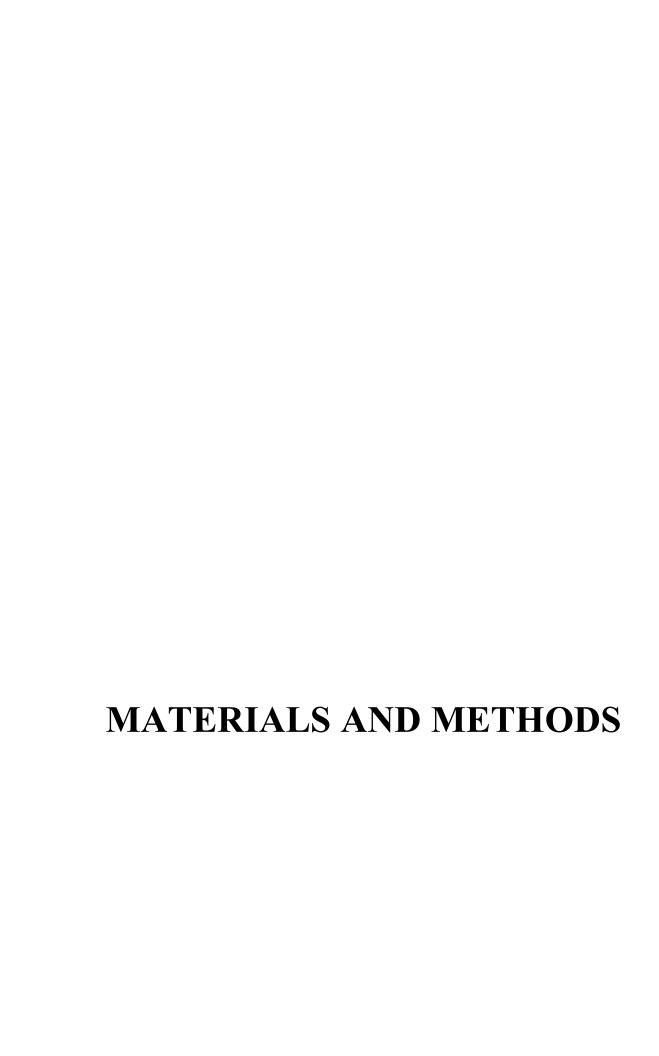
Fig : figure

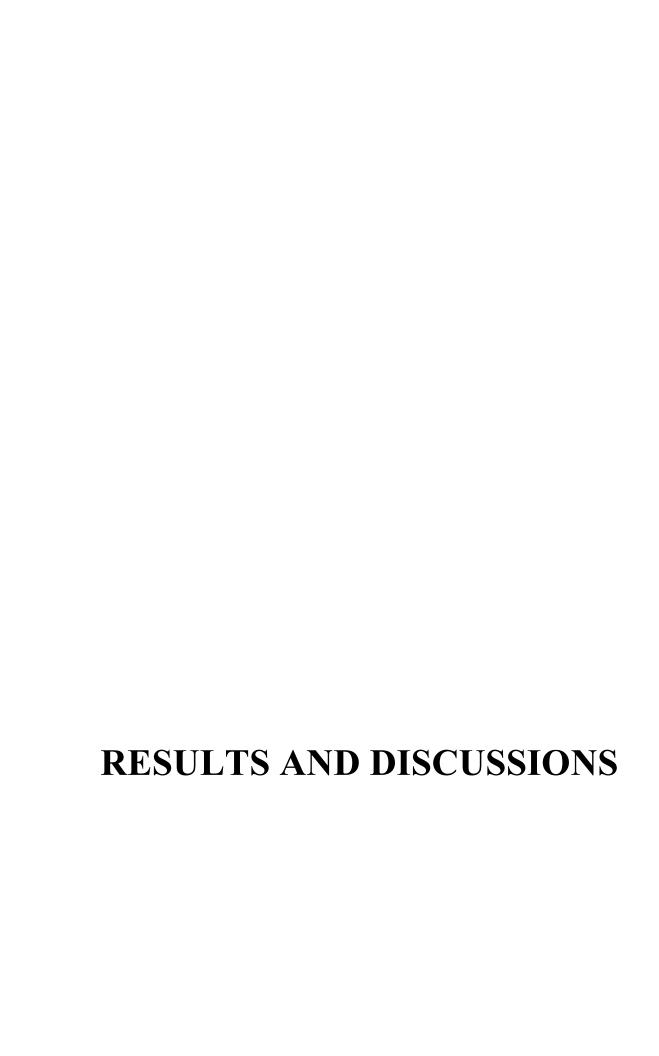
P&FE : Process and Food Engineering

No. : Number













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