

DECLARATION

I, hereby declare that this thesis entitled “**Microencapsulation of ultrasound extracted jamun juice by spray drying**” is a record of research work done by me during the course of research and the thesis has not previously formed the basis for the award to me of any degree, diploma, associate ship, fellowship or other similar title, of any other University or Society.

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Date:

(2022-18-003)

CERTIFICATE

Certified that this thesis entitled “**Microencapsulation of ultrasound extracted jamun juice by spray drying**” is a record of research work done independently by **Er. Sankar M (2022-18-003)** under my guidance and supervision and that it has not previously formed the basis for the award of any degree, diploma, fellowship or associate ship to him.

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SANKAR M

*Dedicated to My
Beloved Family,
Teachers and
Friends*

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ABBREVIATIONS AND SYMBOLS

%	: Per cent
/	: Per
+	: Plus
<	: Less than
=	: Equal to
>	: Greater than
±	: Plus or minus
°C	: Degree Celsius
µm	: Micro meter
°Brix	: Degree brix
Anon	: Anonymous
AC	: Alternative current
a*	: Greenness or redness
AOAC	: Association of official analytical chemists
ANOVA	: Analysis of variance
a _w	: Water activity
ALT	: Alanine aminotransferase
ALP	: Aluminium laminated pouches
AA	: Antioxidant activity
&	: And

b*	: Blueness or yellowness
CFU	: Colony forming units
Cfu/g	: Colony-forming unit per gram
cm	: Centimeter
CAPP	: Custard apple pulp powder
CS	: Corn starch
DNA	: deoxyribonucleic acid
DPPH	: 2,2-diphenyl-1-picrylhydrazyl
DE	: Dextrose equivalent
EWP	: Egg white protein
et al.	: And others
FTIR	: Fourier transform infrared
FDA	: Food and drug administration
FMC	: Fruit machine corporation
FPT	: Flottweg Processing Technology
FRAP	: Fluorescence recovery after photobleaching
Fig	: Figure
GA	: Gum arabic
g	: Gram
g/cm ³	: Gram per centimeter cube
h	: Hours
HIV	: Human immunodeficiency virus
HCT	: Hematocrit

IAT	: Inlet air temperature
JAJP	: Japanese apricot juice powder
kg/cm ³	: kilogram per centimetre cube
kg/h	: kilogram per hour
kg/m ³	: kilogram per cubic metre
kW	: kilo watt
KHz	: Kilo hertz
L	: Litre
L*	: Lightness or darkness
L	: Length
LDPE	: Low density poly ethylene
MHG	: Microwave hydro diffusion gravity
MHz	: Mega hertz
NMD	: Nondigestible maltodextrin
MD	: Maltodextrin
MC	: Moisture content
min	: Minutes
ml	: Milli litre
NFE	: Nitrogen free extracts
PET	: Polyethylene terephthalate
RW	: Refractive window
rpm	: Rotation per minute
RSM	: Response surface methodology

s	: Seconds
SEM	: Scanning electron microscopy
TAC	: Total anthocyanin content
TPC	: Total phenolic content
TSS	: Total soluble solids
Tg	: Glass transition temperature
US	: Ultrasound
USA	:United states of America
UK	:United kingdom
USDA	:United states department of agriculture
UAE	: Ultrasound assisted extraction
UV	: Ultra violet
w.b	: Wet basis
W	: Width
wt	: Weight
WPC	: Whey protein concentrate