

VISION GROUP ON SCIENCE AND TECHNOLOGY

Department of Information Technology, Biotechnology & Science & Technology Karnataka Government Secretariat, No.702, 7th Floor, 4th Stage, M. S. Building, Dr. Ambedkar Veedhi, Bengaluru-560 001

Email: visiongroup.st@gmail.com Website: www.vgst.in

FINAL PROGRESS REPORT

On

DETECTION OF ARTIFICIALLY RIPENED FRUITS AND QUANTIFICATION OF HAZARDOUS CHEMICAL COMPOUNDS USING SPECTROMETRIC TECHNIQUES

With details

GRD NO : GRD-726

SCHEME: RGS/F

Submitted By

Programme Co-ordinator

Dr. ROOPALAKSHMI. R

Professor



DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING ALVAS INSTITUTE OF ENGINEERING AND TECHNOLOGY

Shobhavana Campus, Mijar, Moodbidri, D.K - 574225

2019-2020

ABSTRACT

Fruits are one of the most nutritious and naturally available foods, which are generally consumed in raw form. However, in the present competitive world, almost 80% of fruits are ripened using hazardous chemicals such as Calcium carbide (CaC₂) by greedy traders which cause serious health issues. According to health statistics reports, the consumption of fruits ripened using Calcium carbide leads to various harmful effects such as vomiting, diarrhea, abdomen ulcers, general weakness, and sometimes permanent eye damage, breathing shortness and also miscarriages.

In India, most of climacteric fruits such as Mango, Banana and Papaya are artificially ripened with industrial grade Calcium carbide, which usually consists of traces of toxic chemicals such as Arsenic and Phosphorus. Specifically, in India Calcium carbide, a carcinogen, is widely used for artificial ripening of fruits such as mangoes, which is illegal and strictly banned as per PFA (Prevention of Food Adulteration) Act (1955). Since, the usage of CaC2 for fruit ripening results in serious health problems, the identification of artificially ripened fruits and the quantification of CaC2 in such fruits is very much essential in order to safeguard the consumers from hazardous health problems. However, finding out the artificially ripened fruits is difficult with human eye observation. On the other hand, in the existing literature, only few efforts are carried out towards the identication of chemically ripened fruits by means of combination of spectrometric and computer vision based techniques. Based on these aspects, in this research project, a new device is developed for detecting the chemically ripened fruits by making use of IR-based spectrometric as well as image processing techniques. It also attempts to display the chemical contaminations of resultant fruit in terms of presence of toxic elements such as Arsenic by comparing their internal compositions with the natural ripened ones.

The proposed device captures the input image of sample fruit and compares the features with the corresponding database fruit features and identifies the artificially ripened ones. Further, with the corresponding database fruit features and identifies the artificially ripened ones. Further, with the corresponding database fruit features are employed to capture the exterior features of the IR sensor- based spectrometric techniques are employed to capture the exterior features of the fruit, in order to display the accurate chemical analysis of the sample fruit. Experimental setup of the proposed framework including IR camera, GFP setup is tested on a real dataset of different types of banana as well as mango images. The experimental results in terms of accuracy and types of banana as well as mango images. The experimental results in terms of accuracy and types of banana as well as mango images.

PART - B AND PART - C (After Procurement)

To be submitted by Grantee Institution to VGST After Procurement

1	Financial Status Proforma	ANNEXURE – 5		
	(to be Authenticated by the Principal & PC)	Attached		
2	Photocopy of Bank pass book	ANNEXURE – 6Attached		
	(to be Authenticated by the Principal & PC)			
1	Utilization Certificate (UC)	ANNEXURE – 7		
	(to be Authenticated by the Local or College Auditors)	Attached		
•	(2 Original copies should be submitted separately to VGST)			
) 4	PART -C			
	Progress Report			
)	(ANNUAL / INTERIM / FINAL)			
•	Two Copies of the report in soft bound form	at		
•	[with signatures of the Head of the institution and Programme Co-ordinator]			
D	to be submitted for the office purpose of the project.			
3				

Alva's Institute of Engg. & Technology, Milju. MOODBIDRI - 574 225, D.X

ANNEXURE - 5

FINANCIAL STATUS PROFORMA (FSP)

	CE incoming and Technology
Name of Educational Institution	Alva's Institute of Engineering and Technology
Name of the Department	Information Science & Engineering (ISE)
Name of the Programme Co-ordinator	Dr. Roopalakshmi. R
(PC)	The its and Quantification
	Detection of Artificially Ripened Fruits and Quantification
Project Title	of Hazardous Chemical Compounds Using Spectrometric
	Techniques
VGST Grant Allocation Year	2018 - 2019
Date of Completion of Project Work	
Allocation	5.0 Lakhs
(Rs. in lakh)	

BANK DETAILS

NAME OF THE BANK & ADDRESS	State Bank of India, Main Road, Moodbidri- 574227
NAME OF THE A/C HOLDER	Principal, Alva's Institute of Engineering and Technology
BRANCH & PLACE	Moodbidri Main Road, Moodbidri, Dakshina Kannada District, Karnataka -574227.
ACCOUNT NUMBER	32945900170

EXPENDITURE DETAILS

NON RECURRING	4,01,427.00		
RECURRING .	98,573.00		
TOTAL SPENT	5,00,000.00		
UNSPENT	0.00		
INTEREST EARNED	0.00		
BALANCE	0.00		

Signature / \ Principal/ HOD/ Registrar/ Dean (with seal)

PRINCIPAL

Alea's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K.

Signature Programme Co-ordinator (with seal)

Dr. ROOPALAKSHMI Professor, Dept. or info. Sci. & Engg. (ISE) Alva's Institute of Engg. & Technology Mijar, Moodbidri - 574225

Alva's Institute of Engg. & Technology, Mijur, MOODBIDRI - 574 225, D.K.

Umesha Rao M. B.Com, FCA, DISA (ICAI) **Chartered Accountant**

No. 4-31 V-1, 1st Floor. Arihantha Complex, Main Road, Moodbidri - 574227, Mangalore Tq., D.K.

Ph: 08258 - 238769, +91 9448300325

E-mail: umeshraom@rediffmail.com

<u>UTILIZATION</u> CERTIFICATE

GRD NO: GRD-726 SCHEME: RGS/F

PROJECT TITLE: Ripened Fruits Detection of Artificially Quantification of Hazardous Chemical Compounds Using Spectrometric **Techniques**

Sl. No.	Details	Amount
1	Previous year Balance (Opening Balance (OB),If any)	0.00
2	Grants Received (chq no:006005 chq dt: 18.09.2018)	5,00,000.00
3	Bank Interest (If any)	0.00
4	Total Available Grants(1+2+3)	5,00,000.00
5	Actual Grants Utilized	5,00,000.00
	(Statement of Expenditure Enclosed)	
6	Unspent Balance(4-5)	0.00

Certified that Rs. 5.0 Lakhs of grant-in-aid under (RGS/F) was released by Karnataka Science and Technology Promotion Society (KSTePS) in favour of Principal, Alva's Institute of Engg. & Tech., Moodbidri vide letter No. KSTePS/VGST/RGS/F/2017-18/GRD-726/90/2018-19 as stated above during the year 2018 - 2019. The above grant was sanctioned towards Project Title "Detection of Artificially Ripened Fruits and Quantification of Hazardous Chemical Compounds Using Spectrometric Techniques". Out of sanctioned grants, a sum of Rs. 5,00,000/- has been utilized for the purpose of which it was sanctioned and Rs. 0.00 remained unutilized at end of the financial year 2019-2020, to be carried forward (if the program is continued) or to be refunded (if the program is completed) whichever the case is applicable. Expenditure incurred for the purpose for which the grant was sanctioned is verified with the vouchers produced before me.

Certified that I have satisfied myself that the conditions on which the grant-in-aid was sanctioned have been fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Signature and Address of the Project CoordinataLAKSHMI

Professor Deat of July Sci & Engg (ISE) echnology

Mijar, Mouchical 17:225

Signature of the Head of Institution and Seal PRINCIPAL

> f've's Institute of Engg. & Technology, May, MOODSIDRI - 574 225, D.K.

UMESHA RAO M Chartered Accountant

FRN: 091915 M.NO: 207835

UDIN: 19207835AAAAGF7460

Live's Institute of Engg. & Technolog% Mijar, MOODBIDRI - 574 225, D.K.

Statement of Expenditure for the Project Title "Detection of Artificially Ripened Fruits and Quantification of Hazardous Chemical Compounds Using Spectrometric Techniques"

Sl. No.	Particulars	Total Expenses (Rs.)
1	Total Grants Received (Including Opening Balance &	5,00,000.00
	Bank Interest)	
A		
	sanctioned of Non-Recurring and Recurring Equipment)	Amount
	Non-Recurring (NRE)	90,200.00
NR1	CCD/ CMOS – Camera with NDIR Sensor	38,255.00
NR2	InGaAs – ARRAY/ GAS Detector	
NR3	USB and Trigger cables, Mount Adapters, Connecting	62,035.00
	Boards, Test Target Slider, Mount and Setup	
		00.257.00
NR4	Data Processing Unit- Laptop/ Notebook 2-in-1 with Intel	80,257.00
	i7 core	26.225.00
NR5	Complete Display Panel setup with standard LCD display	36,225.00
		04.455.00
NR6	Software tools for setup and implementation	94,455.00
Α	Total of Non-Recurring Expenditure	4,01,427.00 (
	Recurring (RE)	Amount
RE1	Electrical and Electronics spare parts	8,839.00
RE2	Contigency	23,846.00
RE3	Books and Journal	5,500.00
RE4	Chemicals, Glassware, Plastic Ware and Biological	59,739.00
	Specimen	
RE5	Other charges	649.00
В	Total of Recurring Expenditure	98,573.00
2	Total Expenditure (A +B)	5,00,000.00
3	Unspent Balance (1-2)	0.00

Kind of checks exercised:

- 1. Vouching
- 2. Bank Reconciliation
- 3. Supporting Bills

CERTIFICATE

Certified that we have verified the disbursement of Rs. <u>Five Lakhs</u> (in words) towards statement of Expenditure of GRD-726 as mentioned above.

We have exercised the verification of vouchers and supporting documents to see that the money was actually utilized for the purpose for which it was sanctioned.

Place: Moodbidri Date: 19/12/2019

Signature and Address of OPALAKSHMI (ISE) the Project Coordinator of the Sci & English Technology professor. Dept of the Sci & Technology Miller, Mocabidit. 574225

UMESHA RAO M Chartered Accountant

> FRN: 091915 M.NO: 207835

Niger. MOCDSIDRI - 574 223, D.K

Signature of the Head of Institution and Seal

Abro's Institute of Engg. & Technology, Iniger, MOODBIDRI - 574 225, D.K

ANNEXURE-6

TATEMENT OF ACCOUNT

STATE BANK OF INDIA

MOODBIDRI

POST BAG NO.4, MAIN ROAD,

MOODBIDRI

Branch Code: 5623 Branch Phone: 238481

IFSC:SBIN0005623

PRINCIPAL ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY MICR: 575002021

SHOBHAVANA CAMPUS, MIJAR

Account No.: 32945900170

Product : CA-SURABHI-PUB OTH-ALL-INR

Currency: INR

MOODBIDRI, MANGALORE

574225

Date: 13/12/2019

Time: 14:09:17

E-mail:

Cleared Balance:

0.02Cr

Uncleared Amount:

0.00

+MOD Bal:

0.00

· Limit :

0.00

Drawing Power:

0.00

Int. Rate: 0.00 % p.a.

Nominee Name:

, Statement From 18/09/2018 to 12/12/2019

Page No.: 1

Post Date	Value Date	Details	Chq.No.	Debit	Credit	Balanc
		BROUGHT FORWARD :		•		11020.420
1/10/18	11/10/18	SWEEP TRF CREDT TRF FR 0036981785177 TERM OF FD 0365D			49787.00	60807.420
/10/18	11/10/18	INT: 78700ROI: CAS PRES CHQ HDF SCALETEC MECHA	333861	50000.00		10807.420
/10/18	30/10/18	HDF SCALETEC MECHA CAS CHQ XFER WD WITHDRAWAL TRANSFER TRF TO 0020007803671 AT 05623 MOODBIDRI	333862	354.15		10453.270
/10/18	30/10/18	SWEEP TRF CREDT SWEEP DEPOSIT BY TRA TRF FR 0036981785177 MATURED ON 01/07/19			1019.00	11472.270
/10/18	30/10/18	INT: 1900ROI: CAS CHQ XFER WD WITHDRAWAL TRANSFER TRF TO 0010513940255 AT 05623 MOODBIDRI	333864	1182.95		10289.320
/10/18	30/10/18	SWEEP TRF CREDT SWEEP DEPOSIT BY TRA TRF FR 0036981785177 MATURED ON 01/07/19			29977.00	40266.320
/10/18	30/10/18	INT: 56100ROI: REMT THRU CHQ NEFT UTR NO: SBIN718 303326660 000000000000 SCALETEC MECHATRONIC	333863	39685.90		580.42C
/10/18	31/10/18	CHQ TRFR FROM	006005		500000.00	500580.42C
/11/18	05/11/18	AT 05623 MOODBIDRI CAS CHQ XFER WD BASAVARAJU B	333866	580.40		500000.020
/02/19	16/02/19	TRF TO 0020007803671 AT 05623 MOODBIDRI CAS PRES CHQ CARRIED FORWARD :	333865	3767.00		496233.02C 4,96,233.02Cr

r. Count 6

Cr. Count 4

Alva's Institute of Engly 27 dachaology. (Aljar, MOODBIDRI - 574 225, D.K

5,80,783.00

STATEMENT OF ACCOUNT

STATE BANK OF INDIA MOODBIDRI POST BAG NO.4, MAIN ROAD, MOODBIDRI

Branch Code: 5623 Branch Phone: 238481 IFSC:SBIN0005623

PRINCIPAL ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY MICR: 575002021) SHOBHAVANA CAMPUS, MIJAR

Account No.: 32945900170

Product: CA-SURABHI-PUB OTH-ALL-INR

Currency: INR

MOODBIDRI, MANGALORE

574225

Date: 13/12/2019

Time: 14:09:17

E-mall:

Cleared Balance:

0.02Cr

Uncleared Amount:

0.00

MOD Bal:

0.00

Limit:

0.00

Drawing Power:

0.00

Int. Rate: 0.00 % p.a.

Nominee Name:

Page No.: 2

Statement From 18/09/2018 to 12/12/2019

Post Date	Value Date	Details	Chq.No.	Debit	Credit Balan
	-4-	BROUGHT FORWARD :			496233.02
		KBL OFFICE ACCOUNT			
2/03/19	12/03/19	AC KEEPING FEES		649.00	495584.020
6/05/19	06/05/19	CAS PRES CHQ KBL OFFICE ACCOUNT	333867	21062.00	474522.026
0/05/19	30/05/19	CAS PRES CHQ VJB YASHAS COMPUTE	333868	80257.00	394265.026
9/06/19	19/06/19	CAS PRES CHQ KBL 1	333869	40768.00	353497.020
6/07/19	26/07/19	CAS PRES CHQ COB AKSHATHA ELECT	333870	90200.00	263297.020
9/07/19 2/10/19	29/07/19 02/10/19	CAS PRES CHQ PRE LCPC, OBTAIN AOF	333871	38255.00	225042.026
5/10/19	05/10/19	CAS PRES CHQ COB AKSHATHA ELECT	333872	46473.00	178569.020
7/10/19	07/10/19	CAS PRES CHQ VJB YASHAS COMPUTE	333873	82605.00	95964.020
4/12/19		CAS PRES CHQ COB AKSHATHA ELECT	333876	59739.00	36225.020
6/12/19		CAS PRES CHQ VJB YASHAS COMPUTE	333874	36225.00	0.020

(ISE)

PRINCIPAL

PRINCIPAL

Alva's Institute of Engg. & Technology, Mijur, MOODSIDRI - 574 225, D.K

CLOSING BALANCE :

Alve's Institute of Engg. & Technology, Mijer, MOQDBIDRI - 574 225, D.K

0.02Cr

atement Summary Count 16

Cr. Count 4

5,91,803.40

5,80,783.00

PART - C

Progress Report

(ANNUAL / INTERIM / FINAL)

(Two Copies of the report in soft bound format and CD of the soft copy in PDF format [with signatures of the Head of the institution and Programme Co-ordinator] to be submitted for the office purpose of the project.)

SL	PARTICULARS	DETAILS
1	GRD - NO	726
2	Scheme (Please tick)	CESEM/ CISEE/ K-FIST-L1/ K-FIST-L2/ RGSF
3	Name of the Programme Coordinator	Dr. Roopalakshmi. R
4	 Name and Address of the Institution. Name of the Department 	Alva's Institute of Engineering and Technology, Moodbidri Information Science & Engineering (ISE)
5	Instalment Received (tick)	于 / H / H / RGSF
6	Total Amount Released for the Project to date.	Rs. 5.0 Lakhs
7	Details of collaborating Institution (if any) Please furnish the Details	-Nil-
8	Time schedule of the VGST	1 st Year
*_ =	Programme	2 nd Year
		3 rd Year –

2 Alva's Institute of Engg. & Technology, 1,574, 6000000001 - 574 225, D.K.

9	A Brief summary of the project sanctioned under VGST scheme
	(Annual /Interim/Final) experimental setup, methodology, results
	and applications /IPR if any, of the project? Scope for the further
	work.
	Final Project Report is attached
10	Research Publication in connection for the Project. (enclosures)
	Enclosed in Appendix Part of Project Report
11	Related Photographs related to the experimental set-up, analysis
	resultsPhotographs are enclosed at the end of Project Report

Signature of the

Programme co-ordinator

with Seal and date

Dr. ROOPALAKSHMI Professor, Dept. of Info. Sci. & Engg. (ISE) Alva's Institute of Engg. & Technology Wijar, Mcocbidn - 574225 Signature of Head of

the Institution

with Seal and date

Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, U.K

Clyc's Institute of Engg. & Technology, MOODBIDRI - 574 225, D.R.



ಕರ್ನಾಟಕ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಪ್ರೋತ್ಸಾಹಕ ಸೊಸೈಟ

ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನ, ಬೈವಿಕ ತಂತ್ರಜ್ಞಾನ ಹಾಗೂ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಇಲಾಖೆ, ಕರ್ನಾಟಕ ಸರ್ಕಾರ ವಿಜ್ಞಾನ ಭವನ' ನಂ: 24/2, ರಿನೇ ಮಪಡಿ, 2ಟೀ ಮುಖ್ಯ ರಸ್ತ, ಬನಶಂಕರಿ 2ಸೇ ಸಂತ, ಲೆಂಗಳೂರು-೨೮೦ ೦७೦ ದೂರವಾಗಿ/ಫ್ಯಾಕ್ಟ್: 080-26711166 /26711160 ಇ–ಮೇಲ್: kstops.dst@gmail.com

ಡಾ. ಹೆಬ್. ಹೊನ್ನೇಗೌಡ ವ್ಯವಸ್ಥಾಪಕ ಸಿರ್ದೇಶಕರು. ಕಸ್ಟೆಪ್ಸ್

ನಂ. KSTePS/VGST/RGS/F/2017-18/GRD-726/90/2018-19

ದಿನಾಂಶ: 18.09.2018

ಮಾನ್ಯರೇ.

ವಿಷಯ: 2017–18ನೇ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹದ RGS/F ಯೋಜನೆಯಡಿಯಲ್ಲ ಅನುದಾನ ಚಡುಗಡೆ ಮಾಡುವುದರ ಬಗ್ಗೆ.

ಉಲ್ಲೇಖ: 1) ಸರ್ಕಾರಿ ಆದೇಶ ಸಂಖ್ಯೇ ವಿಯಇ 154 ವಿತ್ರಮ 2018(ಭಾಗ–2), ದಿ: 18.08.2018 2)ಕಛೇರಿ ಪತ್ರ ಸಂಖ್ಯೇ No. KSTePS/VGST-RGS/F/GRD No.726/2017-18/157, Date: 27.08.2018

ಮೇಲ್ಕಂಡ ವಿಷಯ ಮತ್ತು ಉಲ್ಲೇಖಗಳಗೆ ಸಂಖಂಥಿಸಿದಂತೆ. 2017–18ನೇ ಸಾಅನಲ್ಲ ತಮ್ಮ ಸಂಸ್ಥೆಯಿಂದ ಸಲ್ಲಸಿದ ಪ್ರಸ್ತಾವನೆಯಾದ "Detection of Artificially Ripened Fruits and Quantification of Hazardous Chemical Compounds Using Spectrometric Techniques"ನ್ನು ವಿತಂದಾಸದ ಪ್ರಮುಖ ಕಾರ್ಯಕ್ರಮವಾದ <u>Research Grant for Scientiest/Facalties (RGS/F)</u> ನ ಯೋಜನೆಯಡಿಯಲ್ಲ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ದಾರ್ಶನಿಕ ಸಮೂಹವು ಆಯ್ಕೆ ಮಾಡಿದ್ದು, ಅದರಂತೆ ಆದೇಶ ನೀಡಿರುವುದು ಸರಿಯಪ್ಪೆ.

ಈ ಸಂಬಂಧ, ವಿತಂದಾಸದ RGS/F ಯೋಜನೆಯಡಿ ಆಯ್ಕೆಯಾದ ತಮ್ಮ ಸಂಸ್ಥೆಗೆ ರೂ. 5.00 ಲಕ್ಷಗಳೆ ಅನುದಾನವನ್ನು ಚಡುಗಡೆ ಮಾಡಲು ದಿನಾಂಕ: 18.09.2018 ರಂದು Principal, Alva's Institute of Engineering & Technology, Moodbidri ಹೆಸರಿನಲ್ಲ ಚೆಕ್ (ಸಂ. ೦೦६೦೦5) ಬರೆದು. ಸದರಿ ಚಿಕ್ಕನ್ನು ಈ ಪತ್ರದೊಂದಿಗೆ ಲಗತ್ತಿಸಿ ಕಳುಹಿಸಿಕೊಡಲಾಗಿದೆ. ಮುಂದುವರಿದು. ಚೆಕ್ ಪ್ರೀಕರಿಸಿದ ನಂತರ ಸ್ಟೀಕೃತಿ ರಶೀದಿ (Acknowledgement) ಯನ್ನು ಕಸ್ಟೆಪ್ಸ್ ಗೆ ಕಳುಹಿಸುವುದು ಹಾಗೂ ಸದರಿ ಅನುದಾನವನ್ನು ಯಾವುದಾದರು ರಾಷ್ಟ್ರೀಕೃತ ಬ್ಯಾಂಕ್ ಗಳಲ್ಲ ಉಳತಾಯ ಖಾತೆಯಲ್ಲಬ್ಬ (Saving Bank Account) ಅಗತ್ಯಕ್ಕನುಗಣವಾಗಿ ಅನುದಾನವನ್ನು ಬಕಸುವಂತೆ ಕೋರಲಾಗಿದೆ.

ಸದರಿ ಅನುಥಾನವನ್ನು ಉದ್ದೇಶಿತ್ರಯೋಜನೆಗೆ ಮಾತ್ರ ಬಳಸಿಕೊಳ್ಳುವುದು ಹಾಗೂ ಎಲ್ಲಾ ವೆಚ್ಚಗಳನ್ನು ಕರ್ನಾಟಕ ಸಾರ್ವಜನಿಕ ಸಂಗ್ರಹಣೆಯಲ್ಲ ಪಾರದರ್ಶಕತೆ ಅಧಿನಿಯಮ. 1999ರ (Karnataka Transparency in Public Procurements Act, 1999 - http://finance.kar.nic.in/index.htm) ಅನುಸಾರ ಹಾಗೂ ದಾರ್ಶನಿಕ ಸಮೂಹ ಅನುಮೋದಿಸಿರುವ ವಿವಿಧ ಶೀರ್ಷಿಕೆಗಳಗೆ ಅನುಗುಣವಾಗಿ ಯೋಜನೆಯನ್ನು ಅನುಷ್ಠಾನಗೊಳಸುವುದು.

PRINCIPAL
Alva's Institute of Engg. & Technology,
Liljur. MOODBIDRI - 574 225, D.K

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Karnataka Science and Technology Promotion Society

Dept. of Information Technology, Bio Technology and Science & Technology, GoK "Vijnana Bhavan", 3rd Floor, #24/2, 21st Main Road, Banashankari 2nd Stage, Bangalore-70 Ph/fax: 080-26711166, E-mail: ksteps.dst@gmail.com

Dr. H. Honne Gowda
Special Director (Technical),
Dept. of IT, BT and S&T/ Managing director, KSTePS

No. KSTePS/VGST-RGS/F/GRD No.726/2017-18

Dear Sir/Madam,

Sub: Intimation of selection of RGS/F Project under the VGST scheme -reg.

Greetings from KSTePS, Dept. of Information Technology, Biotechnology and Science and Technology!!

We are pleased to inform you that the RGS/F Engineering program titled "Detection of Artificially Ripened Fruits and Quantification of Hazardous Chemical Compounds Using Spectrometric Techniques" submitted under the VGST scheme for the Financial Year 2017-18 has been approved by the Government based on the recommendations of Vision Group on Science and Technology under the Chairmanship of Prof. CNR Rap, Honorary President, JNCASR. You may kindly initiate necessary action for organization of the program at the earliest.

Please provide the cheque in favour address of your Institution, for releasing the sanctioned grants.

I want to personally thank you for being selected as one of the VGST program members and we wish you a great success in organization of the program.

Thanking You,

Yours sincerely,

Date: 27.08.2018

Managing Director

To,

The Principal

Alva's Institute of Engineering and Technology

Shobhavana Campus, Mijar

Mangaluru, DK District

Moodbidri - 574225

CC: 1. Dr. Roopalakshmi R., Dept. of ISE, Alva's Institute of Engineering and Technology, Shobhavana Campus, Mijar, Mangaluru, DK District, Moodbidri – 574 225 - RGS/F Grantee.

2. Consultant, Vision Group on Science and Technology, KSTePS, Dept. of IT, BT and S&T Karnataka Government Secretariat, Room No. 702, 7th Floor, 4th Gate, M. S. Building Dr. Ambedkar Veedhi, Bangalore- 560 001.

Alva's institute of Engg. & Technology, Migs. MOODSHIRI - 674 925, D.K