

## BIO-DATA

**A Name and Designation:** Rudrayya .G. Math,  
**Designation:** Senior Principal Scientist

**B Date of Birth** 01-06-1959

**C Institution and Address**

**CSIR**-Central Food Technological Research Institute,  
Resource Centre, Habshiguda  
Hyderabad-500 007.  
Ph.No. 040-27151157(O), 040-27203313(R)  
Mobile: 9392457009  
Fax: 040-27171128(O)  
e-mail: [rgmath2001@hotmail.com](mailto:rgmath2001@hotmail.com), [rchyderabad@cftri.res.in](mailto:rchyderabad@cftri.res.in)

**D Academic qualification**

Degree	Year of Passing	University/Institution
M.E(Production)	April 2000	Osmania University Hyderabad
B.E(Mechanical)	April 1985	Gulbgra University Gulbgra
B.Sc. ( Mathematics )	August 1980	Karnataka University Dharwad

**E Professional career**

Area	Experience	Position held(designation, duration and place of work)
R&D	26 years	Senior Principal Scientist- Sept.1989 till date
Teaching	4 years	Lecturer (1985-1989).

**Area of expertise :** Design and development of Microwave processing of agri-commodities food materials, Pilot trials of food materials, Design and Development of machinery, Food Engineering, Food processing, Techno-economic feasibility report writing, Resource Survey, Consultancy work, Finite element analysis,

**Area of Interest:** Microwave processing Product development, Design and drawing, Finite Element Analysis, Image Analysis, Neural Network,

**Computer Knowledge: Operating system:** DOS, MS Window

**Language Known:** BASIC, FORTAN, C, and VISUALBASIC

**Drawing:** AutoCAD.

**Data simulation and programming:** MATHCAD, MATLAB.

**Finite element analysis:** ANSYS

**Graphics:** HG3,  
**RDMS:** FoxPro

**F Membership of Professional Societies:**

<i>Sl.No.</i>	<b>Name of scientific / professional society</b>	<b>Membership</b>
1	Association of Food Scientists and Technologists, India [AFST(I)]	Life member
2	Oil Technologists Association of India, Southern Zone [OTAI(SZ)]	Life member
3	The Indian Science Congress Association [ISCA]	Life member
4	Nutrition Society of India [NSI]	Life member
5	Society For Educational and Scientific Research [SESR]	Life Member

**G Publications (Numbers only)**

**Books** : Nil  
**Research papers, reports** : 33  
**General Articles** : Nil  
**Patents** : Two

**H a) List of publications**

1	Studies on Microbial Destruction by Continuous Microwave Heating System through Helical coil, R.G.Math, A.Nagender, A Satyanarayana, Sameera Nayani, International Journal on Recent Technologies in Mechanical and Electrical Engineering(IJRMEE), Vol.2, Issue 12 , PP 04-08, December 2015
2	Microwave Heating: A promising alternative for food processing. Sameera Nayani and R. G Math, Beverage & Food world- Vol.42- No.10- October 2015
3	Design and developed of annatto (Bixa Orellana L.) seed separator machine. R G Math, G.Ramesh, A.Nagender, A.Satyanarayana, J Food Sci Technol Published on line 15 <sup>th</sup> September 2015. DOI 10.1007/s13197-015-2019-5
4	Studies on Microbial Destruction and quality characteristics in Beetroot – Jamun Juice by Continuous Microwave Heating system* R.G. Math , S Sarangam, Nagender A, G Ramesh, Sameera Nayani and Satyanarayana A, Pyrex Journal of Food Science and Technology, Vol 1 (1)pp: 001-006 May, 2015
5	"CONTINUOUS MICROWAVE PROCESSING AND PRESERVATION OF ACIDIC AND NON ACIDIC JUICE BLENDS" * <b>R.G. Math</b> , Nagender A, Sameera Nayani and Satyanarayana A, International Journal of Agriculture and Food Science Technology ISSN 2249-3050 Volume 5, Number 2 (2014), pp. 81-90.

6	"Effect of microwave blanching and drying on enzyme inactivation , texture and quality of bitter gourd ( <i>Momordica charantia.L</i> ) * <b>R.G. Math</b> , Nagender A, Sameera Nayani and Satyanarayana A, Submitted to "Food and bio process technology" journal
7	"Microwave heating- A promising alternative for food processing" submitted to Indian Food Industry
8	Effects of Pretreatments and Drying Methods on Dehydration of Mushroom. S. G. Walde, V. Velu, T. Jyothirmayi <b>R. G. Math</b> Accepted for publication in Journal of Food Engineering In January,2005.
9	Effect of frying conditions on moisture, fat, and density of <i>papad</i> <b>by R.G.Math</b> , V.Velu, A.Nagender and D.G.Rao. Journal of Food Engineering, 64(2004),429-434
10	Preservation of Carrots ( <i>Daucus carota</i> , L.) By Dehydration Techniques – A Review S.G. Walde, <b>R.G.Math</b> , A.chakkaravarthi and D.G.Rao Indian Food Packer, Nov-Dec.1992, 37-42.
11	Grinding Characteristics of Carrots ( <i>Daucus carota</i> , L.) A.chakkaravarthi <b>R.G.Math</b> , S.G. Walde, and D.G.Rao Journal of Food Engineering, 20(1993),381-389
12	Drying characteristics and dehydration mechanism of grapes cv.ANAB-E-SHAHI <b>R.G.Math</b> , and D.G.Rao Proceedings of the International Symposium on Recent Advances in Viticulture and Oenology, held from 14- 17 February, 1992 at Hyderabad, India, 407-411
13	Kendhriya Khadya prouddyogik anusandhan samsthan, upvibha Hyderabad ke anusandhan aur vikas karya Sudhir Walde, D.G.Rao and <b>R.G.Math</b> Proceeding of "Vaiginanik sangoshti- Hyderabad kshetra me vaiginanik shodh" organized by DRDL, Hyderabad on 18,Dec.1992, at Hyderabad. 115-119

### Papers presented at conferences ,Symposium Seminars (15 Nos)

1.	"Processing and preservation of acidic and non acidic juice blends by continuous microwave heating system" * <b>R.G. Math</b> , Nagender A, Sameera Nayani and Satyanarayana A, International Congress on Agriculture, Food Engineering and Environmental Sciences, Sustainable approaches"(AFESSA-2014), New Delhi, India ,29 to 30th , March 2014,Selected best poster (oral) presentation
2.	"A novel approach for continuous pasteurization/sterilization of acidic and non acidic fruit and vegetable blend juices by microwave heating system" * <b>R.G. Math</b> , Nagender A, Sameera Nayani and Satyanarayana A. International Conference on "New approaches in food security and value addition : Technological and Genetic options" organized by Raja Balwant singh Engineering Technical campus , Agra, India to be held during 17 to 19, Feb 2014. <b>Selected best poster (oral) presentation.</b>
3.	"Studies on microbial destruction by continuous microwave heating system through helical coils" * <b>R.G. Math</b> , Nagender A, Sameera Nayani and Satyanarayana A. 7th International Food Convention (IFCON) NSuRE – Healthy Foods organized by Association of food scientist and technologists (India), Mysore, India 18 to 21, Dec

2013. <b>Awarded first prize for best poster (oral) presentation</b>
4. "Evaluation of continuous flow microwave pasteurization/ sterilization system for fruit and vegetable juices" * <b>R.G. Math</b> , Nagender A, Sameera Nayani and Satyanarayana A. National seminar on food processing for sustainable food security and safety, organized by Association of food scientist and technologists (India), Hyderabad Chapter, Hyderabad, India 24 to 25, Oct 2013. <b>Awarded first prize for best poster paper.</b>
5. "Studies on the preservation of blend fruit juices & evaluation of enzymatic activity and microbial destruction in continuous-flow of microwave heating". * <b>R.G. Math</b> , N. Nagender, G. Ramesh, Sameera Nayani & A. Satyanarayana. International conference of Biotechnology, Bioinformatics and Bioengineering 2013 at Tirupathi, Andhra Pradesh.      27th and 28th June 2013
6. "Studies on effect of Micro oven heating of acidic and non-acidic fruit and vegetable juices".* <b>R.G. Math</b> , N. Nagender, G. Ramesh, Sasikanth Sarangam & A. Satyanarayana .Indo –European food for health conference 2013, IEHFC -2013 at IIT madras, Chennai Feb'10th to 12th -2013
7. "Evaluation of a continuous flow microwave heating system through different applicators for pomegranate and carrot juice". * <b>R.G. Math</b> , N. Nagender, G. Ramesh, Sasikanth Sarangam & A. Satyanarayana      International conference of Food technology 3rd infotech-2013 at Thanjavur, Tamil Nadu.4th and 5th Jan 2013.
8. Effect of microwave heating on extractability of steviosides from <i>Stevia rebaudiana L.</i> leaf * R.G. Math, A. Nagender K. Balaswamy P.G. Prabhakar Rao, G. Narsing Rao and A. Satyanarayana. XXI ICFOST National seminar by AFST(I), Mysore at Pune .Jan,20-21 , 2012      Awarded first prize for best poster paper.
9. Effect of microwave heating on total polyphenols and pectin in raw papaya ( <i>Carica Ppapaya L.</i> ) G. Narsing Rao, A. Nagender, A. Satyanarayana, * <b>R.G. Math</b> 42nd National Conference of 'Nutrition Society of India' by Nutrition Society of India (Mumbai) Chapter Hotel renaissance Mumbai Nov. 19-20, 2010.
10. Effect of microwave heating on preservation of pomegranate ( <i>Punica granatum</i> ), jamun ( <i>syzygium cumini</i> ) and bottle gourd ( <i>lagenaria siceraria</i> ) juices Nagender A, Narsing Rao G , Satyanarayana A And * <b>R.G. Math</b>
11. P.G. Prabhakara Rao, K. Balaswamy, K. Satiyamala and R.G. Math. "Methods of dehydration to make sprinkling powders of spices and vegetables for application in fried snack foods" <b>IFCON-2008,Mysore, 15-19 Dec 2008.</b>
12. Drying Characteristics of Carrots ( <i>Daucus carota, L.</i> ) Of Various cross sections by <b>R.G.Math</b> , A. Chakkaravarthi, S.G. Walde, and D.G.Rao. Indian Chemical Engineering Congress 1991 and 44 <sup>th</sup> Annual session of Indian Institute of Chemical Engineers. During Dec. 18-21, 1991.
13. Effect of centrifugal forces on dehydration by <b>Math. R.G</b> , Chakkravarti .A, & Rao. D.G. Abstract Sent for Poster presentation At IFCON-98, At CFTRI, Mysore during 24-27 Nov.1998
14. Fresh Fruit Processing of Grapes & Pomegranate and products By <b>R.G.Math</b> at

Seminar On " Cultivation of Grapes and Pomegranate Under Drought Affected Area". Organized by Grapes and Pomegranate Growers Tikota, Bijapur(Karnatka).During 22 <sup>nd</sup> September, 2001.
15. Edible Wrappers For Packaging of processed Foods By <b>R.G.Math</b> and D.G.Rao. Presented for Poster session at International Symposium on "Biodegradable Polymers and Packaging Materials" at IICT, Hyderabad. Organized by The Indo German Nachkontakt Association(IGNA) Hyderabad and Indian Institute of Chemical Technology(IICT), Hyderabad during Nov.17 &18, 2001

### **Paper Presented at Workshop (4 Nos)**

1. Jowar based traditional foods of North Karnatka By <b>R.G.Math &amp; A. Chakkaravarthi</b> Paper Presented at Regional <u>Workshop</u> on "Traditional Foods" at <b>CFTRI, RC Hyderabad during 19-20 Sept.1996</b>
2. Design procedure for Mango cutting Machine for Pickle making" by <b>R.G.Math</b> and D.G.Rao Paper Presented at Regional <u>Workshop</u> on "Traditional Foods" at <b>CFTRI, RC Hyderabad during 19-20 Sept.1996</b>
3. A Sopularizat design procedure for process equipment's in Traditional foods ( With special reference to poothre kulu) By <b>R.G.Math</b> and D.G.Rao Paper Presented at Regional <u>Workshop</u> on "Traditional Foods" at <b>CFTRI, RC Hyderabad during 19-20 Sept.1996</b>
4. Instant mix for preparation of <i>pesarattu</i> a traditional food of Andhra Pradesh by S.G.Walde, A.Chakkarvarthi, T.Jyothirmayi, <b>R.G.Math</b> & D.G.Rao Paper Presented at Regional <u>Workshop</u> on "Traditional Foods" at <b>CFTRI, RC Hyderabad during 19-20 Sept.1996</b>

### **b). Conferences, Seminars/Symposium and Workshop organised/ attended Within or outside the country.**

#### **Conferences Symposium/ Seminar Attended.(16Nos)**

1.	International Congress on Agriculture, Food Engineering and Environmental Sciences, Sustainable approaches"(AFEESSA-2014), New Delhi, India ,29 to 30th , March 2014
2.	International Conference on "New approaches in food security and value addition : Technological and Genetic options" organized by Raja Balwant singh Engineering Technical campus , Agra, India to be held during 17 to 19, Feb 2014
3.	7th International Food Convention (IFCON) NSuRE – Healthy Foods organized by Association of food scientist and technologists (India), Mysore, India 18 to 21, Dec 2013.
4.	National seminar on food processing for sustainable food security and safety, organized by Association of food scientist and technologists (India), Hyderabad Chapter, Hyderabad, India 24 to 25, Oct 2013
5.	International conference of Biotechnology, Bioinformatics and Bioengineering 2013 at Tirupathi, Andhra Pradesh. 27th and 28th june'2013
6.	Indo –European food for health conference 2013, IEHFC -2013 at IIT madras,

	ChennaiFeb'10th to 12th -2013
7.	International conference of Food technology 3rd infotech-2013 at Thanjavur, Tamil Nadu.4th and 5th jan 2013.
8.	XXI ICFOST National seminar by AFST(I), Mysore at Pune .Jan,20-21 , 2012
9.	42nd National Conference of 'Nutrition Society of India' by Nutrition Society of India (Mumbai) Chapter Hotel renaissance Mumbai Nov. 19-20, 2010.
10.	XX Indian Convention of Food Scientists and Technologist" IFCOST-2009" at Bangalore during 21-23 December 2009
11.	IFCON-2008,Mysore, 15-19 Dec 2008.
12.	International symposium on Recent Advanceces in Viticulture and Oenology' <b>Which was conducted in Feb.1992, at Hyderabad, India.</b>
13.	'Vaiginanik sangoshti- Hyderabad kshetra me vaiginanik Shodha" . <b>Organized by DRDL, Hyderabad, during 18<sup>th</sup> Dec.1992 at Hyderabad</b>
14.	IFCOST-95 Seminar at CFTRI, Mysore, India. <b>Organized By AFST(I) Mysore During 7-9 Sept.1995.</b>
15.	Seminar On " Cultivation of Grapes and Pomegranate Under Drought Affected Area". <b>Organized by Grapes and Pomegranate Growers, Tikota, Bijapur(Karnatka). During 22<sup>nd</sup> Sept.2001</b>
16.	International Symposium on "Biodegradable Polymers and Packaging Materials" at IICT, Hyderabad. <b>Organized by The Indo – German Nachkontakt Association(IGNA) Hyderabad and Indian Institute of Chemical Technology(IICT), Hyderbad during Nov.17 &amp;18, 2001.</b>

### Workshop Organized

1. Organized Two **days Regional Workshop on "Traditional Foods" at CFTRI, RC Hyderabad during 19-20 Sept.1996**

#### c). Patents filed and sealed:

1. Patent No. 952/dec/94 " A process for making improved decoction of coffee". By S.G.Walde, A.Chakkarvarthi, **R.G.Math**, and D.G.Rao.
2. **R.G. Math**, A. Chakkaravarthy, S.G.Walde and D.G.Rao "Edible rice sheets for wrapping convenience foods/fatty foods".**(No.1354/DEL/95).**

### I **List of projects completed indicating briefly title, sponsoring agency, duration and out come of the projects:**

#### **R&D Projects: (13Nos)**

1.	<b>GAP-0391</b> Studies on the preservation of vegetable juices and non-acidic fruit
----	--

	juices by Microwave Heating and development of prototype model of continuous microwave pasteurization/sterilization system, September 2014. Sponsored by MoFPI New Delhi
2.	<b>Major Lab project 0118:</b> Title: Nutrient improvement and shelf life extension of selected traditional foods and value addition to under-utilized/minor produce of fruits and vegetables of Andhra Pradesh. Period : April-2012-March-2014.
3.	<b>GAP-0372:</b> Design and Fabrication of Prototype model of Annatto seed Separator, July 2012. Sponsored by MoFPI New Delhi
4.	Development & Popularization of viable post- harvest preservation and processing methods for mushroom. Sponsored by APNL-BTU, IPE, Hyderabad. Duration: Sept.2001 to April 2003.
5.	Novel Peroxidases and their applications in food processing. In house R & D. Duration: June-2001 to March-2003.
6.	<b>MLP-001:</b> Processing and value added products (including dehydration aspects) of fruits of tropical origin: Tamarind and figs.
7.	<b>MLP-033:</b> Development of novel packing solutions for transportation of specific high value vegetables, and value added products from vegetables and sour grapes.
8.	Design and Fabrication of Mango cutting Machine – for pickle making. In house R&D. May 1991 to June 1993
9.	Fabrication of low cost Dryer. In house R&D. Feb.1992 to June 1993
10.	Processing and utilization of Gum Karaya. In house R&D. Apr.1992 to June 1993
11.	Studies on optimally Dehydrated products from Carrots. In house R&D. Apr.1991 to June 1992
12.	Design and Fabrication of oven for making AP Traditional Food – Poothrekulu. In house R&D. Nov.1990 to Oct.1992

### Sponsored Projects: Grant in projects completed( 19 Nos)

1.	Application of Gum Karaya in Food Industry. Sponsored by TRIFED, New Delhi. Jan.1992 to Sept.1992
2.	Demonstration of sesame dehulling. Sponsored by Technology Mission for oil seeds and pulses(TMOP) Govt. of India, New Delhi. 1996 to 1997
3.	Demonstration of pulse milling. Sponsored by Technology Mission for oil seeds and pulses (TMOP) Govt. of India, New Delhi. 1996 to 1999
4.	Distribution and monitoring of Mini dhal mill Project. Sponsored by UNDP/TMOP. 1997-1999.
5.	Augumenting analytical Quality control facilities at Rc, Hyderabad. Sponsored by Ministry for Food processing industry, Govt. of India, New Delhi. 1996-1999.
6.	Development & Popularization of viable post- harvest preservation and processing methods for mushroom. Sponsored by Andhra Pradesh Nether Land – Bio Technology Unit, IPE, Hyderabad. 1999-2001.
7.	<b>GAP-0212:</b> Application of annatto dye (A natural colourant)

	in foods (Sponsored by MFPI, New Delhi)
<b>8.</b>	<b>GAP-0133:</b> Development and popularization of viable post harvest processing and preservation of mushrooms (Sponsored by AP-NL, Biotechnology Unit, Hyd)
<b>9.</b>	<b>GAP-0090:</b> Small scale pulse milling machine (UNDP)
<b>10.</b>	<b>GAP-0130:</b> Distribution of Mini dhal mill under DFPI
<b>11.</b>	<b>GAP-0168:</b> Gota separator
<b>12.</b>	<b>GAP-0311:</b> Studies on preparation and characterization of oil and protein from fish egg (roes) and their application in food processing.
<b>13.</b>	<b>GAP- 0347:</b> Setting up of Single line Food Processing and Training Centre at Nizamabad
<b>14.</b>	<b>GAP- 0348:</b> Setting up of Single line Food Processing and Training Centre at Ananthapur
<b>15.</b>	<b>GAP-0363:</b> Preparation of tailor made annatto dye formulations for traditional and industrial processed foods
<b>16.</b>	<b>GAP-0372:</b> Design and Fabrication of Prototype model of Annatto seed Separator
<b>17.</b>	<b>GAP-0391</b> Studies on the preservation of vegetable juices and non-acidic fruit juices by Microwave Heating and development of prototype model of countineous microwave pasteurization/sterilization system

#### Consultancy Projects:

1	Resources Survey of Maharashtra State for food and allied industries. Sponsored by Govt. Of Maharashtra. (March 1990 to September 1990).
2	Study of resources and potential for decentralized processing & Marketing of wheat product and Techno-economic feasibility of such production system. Sponsored by NABARD, New Delhi. July 1990 to Sept.1990.
3	Food Processing consultation activities at Hyderabad. Sponsored by SIDBI, Hyderabad. Funded by SIDBI Hyderabad. 1995 to 1999
4	Food Processing consultation activities at Hyderabad. Sponsored by NABARD, Hyderabad. 1999-2000.
5	Techno-economic Feasibility report of Chotanagpur Area (Bihar). Sponsored by RIDA Ranchi, Bihar 2000.



### Student projects completed

Sl.No	Name and Address	Practical	No. of students	Date
1	Mr.Arpan Dutta, Mr. Pannala Ranu, and Mr.Srinivasa Rao Chandra, From Joginpally B R Engineering college Jawaharlal Nehru Technological University Hyderabad-28	Microwave drying of carrot, onion and Grapes	3	Dec-06 to Mar-07
2	Miss.B.Shanti and Miss Divay Reddy From Joginpally B R Engineering college Jawaharlal Nehru Technological University Hyderabad-28	Microwave vacuum drying of Spinach and raw Banana	2	Jan-07 to Mar-08
3	Miss.Somayajula Deepti, Miss. Bhavani Gante, Miss. Shaikha Yasmen Miss. Zahoor Novman From Al-Ameer College of Engineering and Information Technology, Gudilova, Visakapatnam, Andhra Pradesh	Comparative study on Microwave and Traditional deep-fat-frying of potato slice & fryums	4	Feb-09 to Mar-09
4	Ms. Sowjanya A. Thesis Guided M.Tech(Biotechnology) submitted to SNIT Hyderabad	"Studies of Microwave Heating of non- acidic vegetable juices".	1	Jan2011- Jan12
5	Sri, SASIKANTH SARANGAM submitted to Department of Food Processing Engineering, Karunya university in partial fulfillment for the award of the degree of Master of Technology in Food Processing Engineering	<b>"Studies on effect of continuous flow microwave (MW) heating system for blend juices (pomegranate (<i>Punica granatum L.</i>) and carrot (<i>Daucus carota L.</i>), jamun (<i>Syzygium cumini L.</i>) and Beetroot (<i>Beta vulgari L.</i>)"</b>	1	Nov 2012 to April 2013
6	<b>Sri. NAWGHARE GAJENDRA KM.Tech(FP)</b> Master of Technology in Food Processing Engineering submitted to Department of Food Processing Engineering, Karunya university, Coimbatore,	<b>Studies on the effect of Microwave heating on Guava (<i>Psidium guajava L.</i>)"</b>	1	Nov 2013- April14
7	Sri. PATIL AMITKUMAR S Master of Technology in Food Processing Engineering Submitted to Department of Food Processing Engineering, Karunya university in partial fulfillment for the award of the degree of	<b>Studies on the effect of microwave (MW) heating on BitterGourd (<i>Momordicacharantia</i>)"</b>		Nov 2013- April14

## **Award/Prize/Certificate etc. won by the investigator.**

- 1. "Kejriwal Award for Best Article of Interest to industry"** article entitle "**Microwave heating a promising alternative for food processing**" for the year 2016, published in the Sept-Oct 2015, journal "**Indian Food Packer**". on the 15<sup>th</sup> Day of December 2016 at the 72<sup>st</sup> Annual Conference of AIFPA held at NEW Delhi.
- 2. "Nagaraja Rao R. Jagdale Memorial Award" Awarded by All India Food Processors' Association (AIFPA)** for one of the most prestigious Award carries **Gold Medal and a Citation** , for the **year 2014** for outstanding contribution to the development of Food Processing Industries in the Country and presented by Smt. Harsimrat Kaur Badal, Hon'ble Minister of Food Processing Industries Govt Of. India on the 17<sup>th</sup> Day of December 2015 at the 71<sup>st</sup> Annual Conference of AIFPA held at NEW Delhi.
- 3. Awarded "Special Recognition Award for the project"** sponsored by Society for Educational and Scientific Research (SESR) during International conference on Biosciences: State of the advancements, Kumarakom, Kerala during 11-12 Sep, 2014.
- 4. Invited for technical session as best oral presentation of paper entitled "CONTINUOUS MICROWAVE PROCESSING AND PRESERVATION OF ACIDIC AND NON ACIDIC JUICE BLENDS"** by R.G. Math , Nagender A, Sameera Nayani and Satyanarayana A at International Congress on Agriculture, Food Engineering and Environmental Sciences, Sustainable approaches"(AFEESSA-2014), New Delhi, during 29-30 March , 2014.
- 5. Awarded as best oral presentation paper entitled "A NOVEL APPROACH FOR CONTINUOUS PASTEURIZATION/STERILIZATION OF ACIDIC AND NON ACIDIC FRUIT & VEGETABLES BLEND JUICES BY MICROWAVE HEATING SYSTEM"** by R.G. Math , Nagender A, Sameera Nayani and Satyanarayana A at International Conference on "New approaches in food security and value addition : Technological and Genetic options" during 17 to 19, Feb 2014 organized by Raja Balwant singh Engineering Technical campus , Agra, India.
- 6. Cash prize awarded Rs 1500 for best poster paper entitled "STUDIES ON MICROBIAL DESTRUCTION BY CONTINUOUS MICROWAVE HEATING SYSTEM THROUGH HELICAL COILS"** by **R.G. Math** , Nagender A, Sameera Nayani and Satyanarayana A at 7<sup>th</sup> International Food Convention (IFCON) NSuRE – Healthy Foods during 18 to 21, Dec 2013 organized by Association of food scientist and technologists (India), Mysore, India.
- 7. Cash prize awarded Rs 1500 for best poster paper entitled "EVALUATION OF CONTINUOUS FLOW MICROWAVE PASTEURIZATION/ STERILIZATION SYSTEM FOR FRUIT AND VEGETABLE JUICES "** by **R.G. Math** , Nagender A, Sameera Nayani and Satyanarayana A at National seminar on food processing for sustainable food security and safety during 24 to 25, Oct 2013 organized by Association of food scientist and technologists (India), Hyderabad Chapter, Hyderabad, India.

8. Poster was awarded **First prize** at the XXI ICFOST on Innovation in food science and technology to fuel the growth of the Indian food industry organized during 20-21 Jan, 2012 at Pune, India. Poster paper "Effect of microwave heating on extractability of steviosides from Stevia rebaudiana L. leaf" by **Math RG\***, Nagender A, Balaswamy K, Prabhakara Rao PG Narsing Rao G and Satyanarayana A " was presented at ICFOCT XXI, Pune during 20-21 Jan, 2012.
9. Societal Contribution for its role in EDPs CFTRI Annual Awards 2008 Resource Centre Hyderabad
10. Master of Engineering in production awarded first with distinction during April, 2000 by Osmania University Hyderabad.

### List of Project on-going with Investigators

1	<b>Title:</b> Identification, evaluation and value addition of nutrient and micronutrient dense millets and development of shelf stable intermediate moisture vegetable pastes. <b>Project No.:</b> MLP-0157 <b>Duration:</b> April-2014-March-2016
2	<b>Title:</b> Development of viable processing methodologies to arrest the post-harvest losses in selected fruits, vegetables and tubers grown in AP including the development of novel products in combination with minor cereals, millets and pulses <b>Project No.:</b> BSC-105 <b>Duration:</b> April-2012-March-2017

### Contribution to indigenous technology / component / product / device / engineering systems design & development

1. Designed and developed an annatto seed separator proto type of 200 kg/hr capacity
2. Design and developed microwave pasteurization/sterilization system @of fruit juices @30l/hr capacity

### Committee member:

Organization	Status
1. Directorate of Sorghum Research, Rajenranagar, Hyderabad-30	<b>Selection committee Member</b> of DSR Rajendranagar, Hyderabad
2. OU Technology, OU Campus HYderabad	<b>Member of Faculty of Technology</b> , OU, Hyderabad
3. University college of Technology, OU Campus Hyderabad	<b>Member of Board of studies</b> , Food Tech, University college of Technology, OU Campus, Hyd
4. University college of Technology, OU Campus Hyderabad	<b>Member of Board of studies</b> , Chemical engineering and Textile Technology, University college of Technology, OU Campus, Hyd
5. Enerzi Microwave Systems Pvt.Ltd "Creintors Compound", Plot No.99/107, Survey No.343/335, Udyambag, BELGAUM-590 008	<b>Advisory Board Member</b>

