

BIO-DATA

1. Name : T. Jeyarani
2. Designation : Senior Technical Officer (3)
3. Qualifications : M.Sc., M.Phil., Ph D.,
3. Address : Dept of Food Safety & Analytical Quality Control Laboratory
CSIR-Central Food Technological Research Institute
Mysore – 570 020

4. Academic Record:

Degree Obtained	Year	University	Class	Subjects
B.Sc.	1986	Madurai Kamaraj University, Madurai	I	Chemistry (Major) Physics & Maths (Ancillary)
M.Sc.	1989	Madurai Kamaraj University, Madurai	I	Chemistry
M.Phil	1990	Madurai Kamaraj University, Madurai	I	Electrochemistry
Ph.D	2005	Mysore University, Mysore	--	Food Science

5. Research experience : 26 years

6. Title of Ph.D thesis: Studies on preparation and physico-chemical characterization of speciality fats.

7. Research Outcomes:

- Papers published: 23 (List enclosed)
- Posters presented in symposia: 16 (List enclosed)
- Patents filed: 3
- Students guided for Bachelor's & Master's degree: 5 (Details enclosed)
- Awards received: 2
- Conference/Workshop organized (AFSTI): 2

8. Teaching Experience:

M.Sc students

Practical classes on Analysis related to oils and fats for I M.Sc Food Tech. students.

AcSIR students

Theory classes on chemistry and properties of oils and fats.

Short-term Course participants

- i) Demonstration of simple analytical techniques to study the quality of fat in foods and confectionery products.
- ii) Lecture on trans fat in snack foods

Assistant Professor under AcSIR

Faculty of Short-term courses on chocolates and sugar confectionery, snack foods.

Life Member of Association of Food Scientists and Technologists (India), Mysore

Reviewer of manuscripts for journals.

Training obtained:

- In-house training by CIFS department on texture & colour measurement.
- Participated in the training program on calibration of glasswares, balances, spectrophotometer on 23.6.09 at CIFS.
- Processing and analytical methodologies of oils and fats at CSIR-IICT, Hyderabad during Dec.2012

Details of Awards Received:

1. BEST POSTER AWARD - First prize in the area of oils and fats at the poster session during IFCON '98.

Title of the paper: Heat resistant cocoa butter extenders from mahua (*Madhuca latifolia*) and kokum (*Garcinia indica*) fats

Authors: T. JEYARANI and S.Yella Reddy

2. CFTRI FOUNDATION DAY AWARD for Best Research Publication (Applied Science) during the Foundation day celebration of CFTRI on 20.10.2004 (for five years period)

Title of the paper: Cocoa butter extender from *Simarouba Glauca Fat* published in Journal of the American Oil Chemist's Society: 78 (2001) 271-276

Authors: T.JEYARANI and S.Yella Reddy

DETAILS OF RESEARCH PAPERS PUBLISHED (23 Nos)

1. **T. Jeyarani**, S.Yella Reddy & J.V.Prabhakar. Physico-chemical characteristics of starches separated from Bombay halwa, a traditional Indian confection. *Journal of Food Science and Technology*. 33(2) (1996)116-120
2. **T. Jeyarani**, K. Shurpalekar & B.Mahadevaiah. Studies on packaging and storage of cereal pulse based sweetbars. *Journal of Food Science and Technology*, 34(3) (1997) 245-247
3. **T. Jeyarani** and S. Yella Reddy. Heat resistant cocoa butter extenders from mahua (*Madhuca latifolia*) and kokum (*Garcinia indica*) fats. *Journal of the American Oil Chemist's Society*, 76 (1999)1431-1436
4. **T. Jeyarani** and S. Yella Reddy. Cocoa butter extender from *Simarouba glauca* fat.. *Journal of the American Oil Chemist's Society*, 78 (2001)271-276
5. S. Yella Reddy and **T. Jeyarani**. *Trans* free bakery shortenings from mango kernel and mahua fats by fractionation and blending. *Journal of the American Oil Chemist's Society*, 78 (2001)635-640
6. A.Malik, **T.Jeyarani** and B.Raghavan. A comparison of artificial sweeteners stability in a lime-lemon flavoured carbonated beverage. *Journal of Food Quality*, 25(2002)75-82
7. **T. Jeyarani** and S. Yella Reddy. Preparation of plastic fats with zero *trans* fatty acids from palm oil. *Journal of the American Oil Chemist's Society*, 80 (2003) 1107-1113
8. **T. Jeyarani** and S. Yella Reddy. Physico-chemical evaluation of vanaspati marketed in India. *Journal of Food Lipids*, 12(2005) 232-242
9. Nasirullah, R.Baby Latha, J. Hemavathy and **T.Jeyarani**. Development of health oil blends and their stability against heat deterioration during frying. *Journal of Lipid Science and Technology*, 38(2006) 59-65.
10. Nasirullah, **T.Jeyarani** and Rakshitha Devakie. Isolation and antioxidant effect of nutraceutical concentrates from sesame and flax seed oils. *Journal of Food Science and Technology*, 46(1)(2009) 66-69
11. **T.Jeyarani**, Imtiyaj Khan Mohd. and Sakina Khatoun. *Trans* free plastic shortenings from coconut stearin and palm stearin blends. *Food Chemistry*, 114 (2009) 270-275
12. M.Sowmya, **T.Jeyarani**, R.Jyotsna and D.Indrani. Effect of replacement of fat with sesame oil and additives on rheological, micro structural, quality characteristics and fatty acid profile of cakes. *Food Hydrocolloids*, 23(2009)1827-1836
13. **T. Jeyarani** and S. Yella Reddy. Effect of enzymatic interesterification on physico-chemical properties of mahua oil and kokum fat blend. *Food Chemistry*, 123(2) (2010)249-253
14. Nirmala Metwal, R.Jyotsna, **T.Jeyarani** and G.Venkateswara Rao. Influence of debittered, defatted fenugreek seed powder and flaxseed powder on the rheological characteristics of dough and quality of cookies. *International Journal of Food Sciences and Nutrition* ,(2011)62(4)336-344
15. Rashmi Kumari, **T.Jeyarani**, C.Soumya, and D.Indrani. Use of oils, emulsifiers and hydrocolloids on rheological, fatty acid profile and quality characteristics of cakes. *Journal of Texture studies*, 42 (5) (2011) 377-386
16. S.Shakuntala, J.Pura Naik, **T.Jeyarani**, M.Madhava Naidu and P.Srinivas. Characterisation of germinated fenugreek (*Trigonella foenum-graecum L.*) seed fractions. *International Journal of Food Science and Technology*, 2011, 46, 2337-2343.
17. Sakina Khatoun, Mohammad I. Khan and Thangaraj **Jeyarani**. Enzymatic interesterification of palm and coconut stearin blends. *International Journal of Food Science and Technology*, 47 (2012), 2259-2265

18. **T.Jeyarani**, T.Banerjee, R.Ravi & A.G. Gopala Krishna. Omega-3 fatty acids enriched chocolate spreads using soybean and coconut oils. Journal of Food Science & Technology : DOI 10.1007/s13197-013-1053-4
19. Tejaswi Kumar, H.C., **Jeyarani, T** and Indrani, D. Effect of Fats and Oils on Rheological, Fatty Acid Profile and Quality Characteristics of South Indian Parotta. Journal of American Oil Chemist's Society: DOI 10.1007/s11746-013-2301-5
20. Chaitali Sen Gupta, Milind, T. **Jeyarani** and Jyotsna Rajiv. Rheology, Fatty Acid Profile and Quality Characteristics of nutrient enriched pizza base. Journal of Food Science and Technology. DOI 10.1007/s13197-014-1338-2
21. **T.Jeyarani**, Suraj Subramanian, R.Sneha, M.L.Sudha and P.S.Negi. (2015). Characterisation of mango kernel fat and preparation of trans-free margarine for use in muffins. Journal of Nutrition and Food sciences 5:357.
22. Walde S.G, **Jeyarani T** and Misra A.K. Fatty acid profile of water chestnut (*trapa bispinosa*) and effect on dough rheology. International Journal of Applied and Pure Science and Agriculture. Volume-1, Issue-9 Sept' 2015, pages 31-41
23. Abhay Kumar N, Prasada Rao UJS, **Jeyarani T** & Indrani D. Effect of ingredients on rheological, physico-sensory, and nutritional characteristics of omega-3-fatty acid enriched eggless cake. Journal of Texture Studies. 2017:1-11. doi:[10.1111/jtxs.12247](https://doi.org/10.1111/jtxs.12247)

DETAILS OF POSTES PRESENTED IN SYMPOSIA (16 Nos)

1. **T.Jeyarani** and S.Yella Reddy. Functionality of starches separated from Bombay halwa. IFCON 1993 at CFTRI, Mysore.
2. **T.Jeyarani** and S.Yella Reddy. Heat resistant cocoa butter extenders from mahua (*Madhuca latifolia*) and kokum (*Garcinia indica*) fats. IFCON 1998 at CFTRI, Mysore.
3. **T.Jeyarani**, R.Chetana and S.Yella Reddy. Development of hard boiled confectionery with added nutraceuticals. IFCON 2003 at CFTRI, Mysore.
4. **T.Jeyarani** and S.Yella Reddy. Utilization of non-traditional oils and fats for preparation of ghee-like product. ICFOST 2004 at DFRL, Mysore.
5. Nasirullah, J.Hemavathy, R.Baby Latha and **T. Jeyarani**. Development of health oil blends and their stability against heat deterioration during frying. ICFOST 2005 at NIMHANS, Bangalore.
6. Nasirullah, **T.Jeyarani** and Rakshitha Devakie. Flax seed concentrate, a rich source of lignan molecules for fortification of vegetable oils. Building leadership skills in Food and Nutrition essential for National Development' at CFTRI, Mysore during 23-25 June, 2006.
7. **T. Jeyarani** and S.Yella Reddy. Sugar Tablets: The best confection for incorporating polyphenols. Building leadership skills in Food and Nutrition essential for National Development' at CFTRI, Mysore during 23-25 June, 2006.
8. **T.Jeyarani**, Imtiyaj Khan Mohd. and Sakina Khatoon. Speciality fats from coconut oil by fractionation and blending. ICFOST, 16-17 Nov, 2006 at Hyderabad
9. T.Jeyarani and Nasirullah. Isolation and characterization of bioactives from sesame and flaxseed cakes. Novel approaches for food and nutritional security (NASI) at CFTRI, Mysore, Dec 6-8, 2007

10. A. Usha devi, **T.Jeyarani** and Revathy Baskaran. Wood apple - A nutritious underutilized fruit for the future. NUTRIFE[A]ST 2008, Nov 20-22, 2008 at Chennai.
11. **T. Jeyarani**, M. Shivaswamy and S.Yella Reddy . Detection and quantification of trans fat in few selected snack foods and confectionery products. IFCON 2008, Dec 15-19, 2008 at CFTRI, Mysore.
12. **T.Jeyarani**, Tanaya Banerjee, R.Ravi and A.G. Gopala Krishna. Essential fatty acids enriched chocolate spreads. ICFOST, Jan 20-21, 2012 at Pune
13. Tejaswi Kumar, H.C., **Jeyarani, T** Milind and Indrani, D . Effect of fats and oils on rheological, fatty Acid Profile and quality characteristics of South Indian *Parotta*. ICFoST 2012, at CFTRI, Mysore.
14. S.G.Walde and **T. Jeyarani**. Fatty acid profile of water chestnut (*trapa bispinosa*) and effect on dough rheology. Poster presented in the National conference, ICFOST-XXIII held during 13-14 Dec '14 at NIFTEM campus, Kundali, Haryana.
15. R.Sneha and **T.Jeyarani**. Medium chain fatty acids enriched mango kernel fat by lipase catalyzed acidolysis using capric acid” was presented during 103rd Indian Science Congress held at the University of Mysore, Mysuru during 3 to 6 Jan 2016.
16. R.Shailaja and **T.Jeyarani** Characteristics of sticky material interfering the kokum fruit processing machinery - presented during 85th SBC Annual Meeting held at CFTRI, Mysuru during 21st to 24th November 2016 on 23.11.16.

STUDENTS GUIDED

- i) Ms. Tanaya Banerjee, an M.Sc Food Technology student from Allahabad University, UP. A project work on the title entitled, “Application of soybean oil margarines in the preparation of novel functional spreads” was planned for the period Feb - June 2011 and completed.
- ii) Ms. R.Monisha, an M.Tech Industrial Bio Technology (Integrated) student from the SASTRA University, Tanjore, TN. A project work on the title entitled, “Evaluation of ready-to-eat cocoa based functional spreads” was planned for the period Dec ‘11- Apr ‘12 and completed.
- iii) Ms. R.Suraj subranian , an M.Tech (Food and Nutrition) student from the SRM University, Chennai as a part of Master’s degree. A project work on the title entitled, “Studies on the characteristics of mango kernel fat’ was planned for the period Nov ‘12- Apr’13 and completed.
- iv) Ms. P.B.Padmaja, a B.Tech (Food and Nutrition) student from the Rajalakshmi Engineering College, Chennai for her investigation work. A project work on the title entitled, “Studies on the extraction and characterization of *simarouba glauca* fat’ was planned for the period Dec‘13- Mar’14 and completed.
- v) Ms.Rutuja Sudhir Atrey; M.Tech Food Technology (Food Quality Management); Sam Higginbottom University of Agriculture, Technology & Sciences (SHUATS), Naini, Allahabad during Jan – May 2017. **Topic:** Detection of level of adulteration of groundnut oil and evaluation of fat in chocolates.
