

Dr. Navneet Kumar



Qualification: Ph. D. (Food Engineering and Technology)

Designation: Associate Professor & Head (PFE)

ORCID: 0000-0003-3709-0823

Total Experience: 23 Years (09 Years at CAET, AAU, Godhra)

Specialized Subjects: Processing and food engineering, Food engineering, Drying and dehydration, Food extrusion, Process and storage kinetics, Agricultural process engineering

Personal Details:

E-Mail:	navneetkumar@aau.in
Birth Date:	03/11/1975
Qualification:	<p>2011 Ph. D. in Food Engineering & Technology from SLIET, Longowal, Punjab, India</p> <p>1999 NET in Agricultural Structures & Process Engineering</p> <p>1998 NET in Agricultural Structures & Process Engineering</p> <p>1998 M. Tech. (Agricultural Engineering) with specialization in Process and Food Engineering from GBPUA&T, Pantnagar, Uttarakhand, India</p> <p>1995 B. Tech. (Agricultural Engineering) from GBPUA&T, Pantnagar, Uttarakhand, India</p>
Experiences:	<ul style="list-style-type: none">• Associate Professor (19.06.2012 to till date) College of Agricultural Engineering and Technology, Anand Agricultural University, Godhra, Gujarat, India• Lecturer (05.08.2005 to 18.06.2012) Rastriya Kisan (Post Graduate) College (Affiliated to Choudhary Charan Singh University, Meerut), Shamli, UP, India• Reader (26.08.2003 to 04.08.2005) Sir Chhotu Ram Institute of Engineering & Technology, Choudhary Charan Singh University, Meerut, UP, India• Research Associate (15.09.2001 to 25.08.2003) Indian Agricultural Research Institute, New Delhi, India• Research Associate (23.01.2001 to 14.09.2001) Central Institute of Post Harvest Engineering and Technology, Ludhiana, Punjab, India• Research Associate (15.12.1997 to 30.09.2000) Indian Agricultural Research Institute, New Delhi, India

Research Activities:	Projects handled/ associated Externally funded <ul style="list-style-type: none"> • Encouraging Tribal Youth/Women for Adopting Proven Agril. Engg. Technology on Mechanization, Value Addition and Resource Conservation in Middle Gujarat (2012-13) as Co – Principal Investigator • Developing a small Agro-Tourism Conclave to Promote Experimental Learning on Watershed based Interventions, Kakanpur (2012-2016) as Co – Principal Investigator AGRESCO project <ul style="list-style-type: none"> • Process Development of juice preparation and byproduct utilization using underutilized vegetable: Ivy Gourd (<i>Coccinia grandis</i>) as Principal Investigator • Production Technology for Preparation of Wood Apple (<i>Limonia acidissima</i>) Jam as Co-Principal Investigator • Comparative study on various drying techniques of cluster bean as member • Development of rapid system for measurement of angle of response for grain as Principal Investigator • Development of appropriate harvest and post-harvest technology for custard apple for tribal area of Gujarat as member • Development of multipurpose solar dryer cum cooker as member • Design and Development of Custard apple pulp extracting machine with automatic feeding machine as member • Development of perforated storage bin for garlic as Principal Investigator • Optimization of process parameters for protein fortified Kesar mango leather as member
Publications:	Publications in National/International Journal <ul style="list-style-type: none"> • Popalia, C., Kumar, N. (2021). Effect of Temperature and Processing Time on Physico-Chemical Characteristics in Hot Water Blanching of Sweet Corn Kernels, Journal of The Institution of Engineers (India): Series A, 102, 16 – 173. • Nayi, P., Kumar, N. (2021). Development of ready to reconstitute dehydrated traditional sweet corn halwa, Journal of food science and technology, doi: 10.1007/s13197-020-04930-4. • Jethva, K.R., Sutar, R.F., Kumar, N., Vyas, D.K. (2021). Effect of whey protein on sun dried protein enriched kesar mango leather, Journal of Pharmacognosy and Phytochemistry 10 (2), 824-830. • Kumar, N., Kachhadiya, S. and Nayi, P. (2020). Storage stability and characterization of biochemical, rehydration and colour characteristics of dehydrated sweet corn kernels, Journal of Stored Products Research 87, 101619 • Anadani, S.V., Akbari, S. H., Kumar, N., Ravani, A. (2020) Processing and mechanization of Indian traditional food products, Journal of Pharmacognosy and Phytochemistry, 9 (1), 2313-2315 • Khodifad, BC & Kumar, N. (2020) Foaming properties of custard apple pulp and mathematical modelling of foam mat drying, Journal of Food Science and Technology, 57 (2), 526-536 • Agravat, V.M., Khodifad, B.C., Matholiya, C., Swarnkar, R., Kumar, N. (2019). Food Process Industries: Island of Automation in Agriculture sector, Acta Scientific Agriculture 3(12), 85-86 • Kachhadiya, S, Kumar, N. and Seth, N. (2018) Process kinetics on physico-chemical and peroxidase activity for different blanching methods of sweet corn, Journal of Food Science and Technology 55 (12), 4823-4832 • Khodifad, BC, Kumar, N., Bhatt, HG, Vyas, DM (2018) Effect of Packaging Material on Colour Kinetics and Biochemical Parameters of Custard Apple Powder During Storage, Journal of Packaging Technology and Research 2 (3), 223-232

- K. R. Jethwa, D. K. Vyas, R. F. Sutar, **Navneet Kumar** & F. G. Sayyad (2018) Bio-Fuels Algae: An Alternative Renewable Energy Source, *International Journal of Agricultural Science and Research*, 8(2), 101-108.
- Jogunuri, S.K., **Kumar, Navneet**, Sayyad, F.G., Pinakin, V. and Patel, V. (2017) Performance Evaluation of Multi-Purpose Mixed-Mode Cabinet Solar Food Processor (Mcsfp), *Current Agriculture Research Journal* 5 (3), 404-413.
- Deshmukh, Y., Sharma, H.K. and **Kumar, Navneet** (2017). Modeling of physicochemical and functional parameters of pumpkin (*Cucurbita pepo*) powder using response surface methodology, *International Food Research Journal* 24(5), 2071-2081.
- Tidke, B., Sharma, H.K. and **Kumar, Navneet** (2017), Development of peanut and chickpea nut brittle (Chikki) from the incorporation of sugar, jaggery and corn syrup, *International Food Research Journal*, 24(2), 657-663.
- A. D. Chauhan, Neeraj Seth, D. K. Vyas & **Navneet Kumar**, (2017), A review of different drying techniques of freshly harvested maize cobs; *International Journal of Agricultural Science and Research*, 7(3); 173-180.
- **Kumar, Navneet**, Singh, A. K., Srivastava, A. and Prajapati, U. (2016) Optimization of Parameters for Ivy Gourd Juice based soft drink, *International Journal of Advanced Scientific Research and Management* 1(2), 41-45.
- Tidke, Bhagwat; Kumar, Navneet; Sharma, HK; (2016). Selection and Characterization of Sugar Syrups for Preparation of Nut Brittle (*Chikki*), ***Sugar Tech* 18(5), 546–552.**
- Shaky, H.B., Kumar, Navneet, Parmar, M.R. and Parmar, S. D. (2016). Optimization of weeding unit performance of manually operated cono-weeder using response surface methodology, *International Journal of Agriculture Sciences* 8(49), 2107-2116.
- B.C. Khodifad, **Navneet Kumar**, D.K. Vyas, Neeraj Seth, Manjeet Prem, (2016), Pre and Post-harvest Practices, Processing and Value Addition of Custard Apple, *International Journal of Food and Fermentation Technology*, Vol. 6 (2), 219-231
- Sengar, G., Sharma, H.K., **Kumar, Navneet**, (2015) Effect of microwave heating on physico-chemical and thermal behavior of blended fat, *International Food Research Journal* 22 (1), 295-303.
- Singh, A., Sharma, H.K., **Kumar, Navneet**, Upadhyay, A., Mishra, K.P. (2015) Thin layer hot air drying of bael (*Aegle marmelos*) fruit pulp, *International Food Research Journal* 22 (1), 398-406.
- Dar, A. H., Sharma, H.K. & **Kumar, Navneet** (2014) Effect of Frying Time and Temperature on the Functional Properties of Carrot Pomace, Pulse Powder and Rice Flour–Based Extrudates, *International Journal of Food Engineering*, 10(1): 139-148.
- Singh, A., Sharma, H.K., **Kumar, Navneet** & Upadhyay, A. (2014). Effect of pretreatments on physical and thermal properties of Bael (*Aegle marmelos Correa*) fruit pulp during storage, *Austin Journal of Nutrition and Food Sciences*, 2(4): 1-8.
- Tiwari, A., Sharma, H.K., **Kumar, Navneet**, Kaur, M. (2014) The effect of inulin as a fat replacer on the quality of low-fat ice cream, *International Journal of Dairy Technology*, 68 (3): 374–380.
- Sharma, H. K., **Kumar, Navneet**, Verma, T. (2013). Optimization and thermal kinetics of manufacturing method of paneer (soft cheese) from the incorporation of okra gum, *Egyptian Journal of Dairy Science*, 41(1): 87-98.
- Dar, A. H., **Kumar, Navneet** & Sharma, H.K. (2013). Physical and microstructural changes in carrot pomace based extrudates, *Italian Journal of Food Science*, 25(3): 313-321.
- Kumar R.R., Sharma, H. K. & **Kumar, Navneet**, (2013.) Development and characterization of apple pomace and rice flour based extrudates, *International Journal of Post Harvest Technology and Innovation*, 3(3): 285-303.
- T. Srikanth, A. D., Sharma, H. K. & **Kumar, Navneet** (2013). Development of Fortified Guava Pomace and Rice Flour based Extrudates, *Journal of Agricultural Engineering*, 50(3):17-28.
- Sayyad, F.G., Sutar, P. P., Agarwal, **Navneet Kumar** (2013) Optimization of moisture loss and fat uptake of goat meat during frying, *Journal of Meat Science and Technology*, 1(2), 56-63.
- Dar, A. H., Sharma, H.K. & **Kumar, Navneet** (2012). Effect of Extrusion Temperature on the Microstructure, Textural and Functional Attributes of Carrot Pomace Based Extrudates, *Journal of Food Processing and Preservation*, 38(1), 212-222
- Kumar, K., **Kumar, Navneet** and Sharma, H. K. (2012). Mathematical modeling of thin layer drying of fresh green pea husk, *International Journal of Post Harvest Technology and*

	<p>Innovation, 2(4), 400-413.</p> <ul style="list-style-type: none"> • Kumar, K. and Kumar, Navneet (2012). Development of Vitamin and Dietary Fibre Enriched Carrot Pomace and Wheat Flour Based Buns, <i>Journal of Pure and Applied Science and Technology</i>, Vol. 2 (1), 108-116. • Yadav, A., Singh, S. K. & Kumar, Navneet, (2012). Nutritional and medicinal value of onion, <i>Annals of Horticulture</i>, 5(2): 308-314. • Kumar, Navneet, Sarkar, B. C. and Sharma, H. K. (2011) Mathematical modelling of thin layer hot air drying of carrot pomace. <i>Journal of Food Science and Technology</i>, 49(1), 33-41. • Kumar, Navneet, Sarkar, B. C. and Sharma, H. K. (2011). Effect of Air Velocity on Kinetics of Thin Layer Carrot Pomace Drying, <i>Food Science and Technology International</i>, 17(5), 459-469. • Kumar, Navneet, Sarkar, B. C. and Sharma, H. K. (2011). Colour kinetics and storage characteristics of carrot, pulse and rice byproduct based extrudates, <i>British Food Journal</i>, 114(9), 1279 – 1296. • T. Srikanth, A. D., Sarkar, B. C., Sharma, H. K. & Kumar, Navneet (2011), Modeling and characterization of blended guava pomace and pulse powder based rice extrudates, <i>International Journal of Food Engineering</i>, 8(1), Article 1. • Kumar, Navneet and Kumar, K. (2011). Development of Carrot Pomace and Wheat Flour Based Cookies, <i>Journal of Pure and Applied Science and Technology</i>, Vol. 1 (1), 5-11. • Kumar, Navneet, Sarkar, B. C. and Sharma, H. K. (2010). Development and characterization of extruded product of carrot pomace, rice flour and pulse powder, <i>African Journal of Food Science</i>, 4(11), 703-717. • Kumar, Navneet, Sarkar, B. C. and Sharma, H. K. (2010) Development and characterization of extruded carrot pomace and rice flour based product, <i>International Journal of Food Engineering</i>, 6(03), Article 7.
Patents:	<ul style="list-style-type: none"> • Patent published for “Apparatus and method for measuring angle of repose” on 26.02.2021 (App. No. 202021045467) – Under examination
Book / Book chapters:	<ul style="list-style-type: none"> • Processing and Value Addition of Custard Apple (2018) Author: Navneet Kumar, H. K. Sharma, B. C, Khodifad, Manjeet Prem, chapter contributed in book entitled “Technologies in Food Processing” Ed.: H. K. Sharma, P. S. Panesar, published by Apple Academic Press • Utilization of Carrot Pomace (2017), Author: Sharma, H. K. and Kumar, Navneet, In Book entitled "Food Processing By-Products and their Utilization" 207-229, Published by John Wiley & Sons, Ltd • Post Harvest Engineering (2012), Author: Kumar, Navneet, 156 pages book published by Rama Publications, Meerut (UP), India. (in Hindi)
Awards:	<ul style="list-style-type: none"> • “JFST Best Paper Award in the field of Food Engineering” from amongst the papers published in the year 2012 entitled “Mathematical modeling of thin layer hot air drying of carrot pomace 49 (1), 33-41 authored by Navneet Kumar, BC Sarkar, HK Sharma by Association of Food Scientists and Technologists (India), Mysore • Distinguished Service Certificate awarded by Indian Society of Agricultural Engineers (ISAE) during 47th Annual convention and International Symposium on BIO-ENERGY-Challenges and Opportunities during 28-30 January, 2013 at Acharya N.G Ranga Agricultural University (ANGRAU), Hyderabad, Andhra Pradesh, India • Certificate of honour by Indian Society of Agricultural Engineers (Pantnagar Chapter) during the year 1992-93 for organizing 2 days university level intercollegiate competition. • Fellow of Institution of Engineers awarded by Institutions of Engineers (India) on 31 January 2018
Additional Responsibilities	<ol style="list-style-type: none"> 1. Head of the Department (2012 to till date) 2. Rector (2015-2020) 3. President of Agricultural Engineering Alumni Association Godhra (2016-2019) 4. Overall PG Coordinator (Agricultural Engineering) 5. Coordinator (CAET), Nodal cell to ICAR, AAU 6. Library chairman (CAET, AAU, Godhra)

M. Tech. thesis guided:	<ul style="list-style-type: none"> • Foam mat drying of custard apple pulp and storage stability of custard apple powder – Mr. Khodifad Bhargavbhai C. (04-2767-2015) – 2017 • Thin layer drying of sweet corn and storage stability of dehydrated sweet corn – Mr. Kachhadiya Sagar Gopalbhai (04-3009-2016) -2018 • Development and performance evaluation of scraped surface heat exchanger for cooking and cooling of kajukatli – Mr. Jaydeep P. Rathod (04-2822-2015) – 2019 • Processing of sweet corn kernels for enhancement of shelf life – Ms. Popalia Chandani Jitendrabhai (Reg. No. 04-3278-2017) – 2019 • Development of carrot pomace blended dehydrated sweet corn halwa – Mr. Nayi Pratikkumar Navinbhai (Registration No. 2050718007) – 2020 • Development of Instant Mix Tomato <i>Khaman</i> Powder using Foam Mat Dried Tomato Powder – Mr. Vinzuda Sudhirkumar B (Regd. No. 04-3340-2017) - 2020
Member of Scientific / Academic Societies:	<ul style="list-style-type: none"> • Indian Society of Agricultural Engineers - Life member • Dairy Technological Society of India - Life Member • Indian Society of Ornamental Horticulture - Life member • Institute of Engineers (India) - Life member • Association of Food Scientists & Technologists (India) - Life member • Agricultural Engineering Alumni Association, Godhra - Life member
Referee / Reviewer Assignments:	<ul style="list-style-type: none"> • Journal of Food Science and Technology (ISSN: 0022-1155) published by <i>Springer</i> • International Journal of Food Science and Technology (ISSN:1365-2621) published by Institute of Food Science and Technology, <i>Wiley-Blackwell</i> • European Food Research and Technology (ISSN: 1438-2377, 1438-2385) published by <i>Springer</i> • Journal of Food Processing and Preservation (ISSN: 1745-4549) published by <i>Wiley Periodicals Inc.</i> • Food Packaging and Shelf Life (ISSN: 2214-2894) published by <i>Elsevier</i> • British Food Journal (ISSN: 0007-070X) published by <i>Emerald Publishing</i> • Journal of Food Measurement and Characterization (ISSN: 2193-4134) published by <i>Springer</i> • Journal of Microwave Power and Electromagnetic Energy (0832-7823) published by <i>Taylor & Francis</i> • International Journal of Heat and Mass Transfer (ISSN: 0017-9310) published by <i>Elsevier</i> • Journal of The Institution of Engineers (India): Series A (ISSN: 2250-2149 & 2250-2157) published by <i>Springer</i> • Journal of the Saudi Society of Agricultural Sciences (ISSN: 1658-077X) published by <i>Elsevier</i> • African Journal of Food Science (ISSN: 1996-0794) published by <i>Academic Journals</i> • Journal of Agricultural Science and Technology (ISSN: 1680-7073) published by Tarbiat Modares University • Polish Journal of Chemical Technology (ISSN: 1899-4741) published by <i>De Gruyter</i> • Journal of Agricultural Engineering (ISSN NO :0256-6524) published by <i>Indian Society of Agricultural Engineers</i> • International Journal of Post Harvest Technology and Innovation (ISSN: 1744-7569, 1744-7550) published by <i>Inderscience Publishers</i>