

Name: Desai Meghal Ashwinkumar

Date of Birth: 21st December, 1978

Qualification: Ph.D. in Chemical Engineering

Designation: Assistant Professor

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Sardar Vallabhbhai National Institute of Technology
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Education Qualifications:

Degree	Subject	University/Institution	Year
B.E.	Chemical Engineering	South Gujarat University, Surat, Gujarat	2000
M.Tech.	Chemical Engineering	Institute of Technology, Banaras Hindu University, Varanasi, Utter Pradesh	2004
Ph.D.	Chemical Engineering	Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat	2012

Thesis title: Extraction of Essential Oil from *Cymbopogon flexuosus* using Novel Extraction Techniques (Ph.D.)

Dissertation title: Extraction of Limonoid Glucosides from Citrus Peels (M. Tech.)

Experience:

Designation	Name of the Institute	Period
Lecturer	Sarvajanik College of Engineering and Technology, Surat	15/06/2005 – 17/10/2007
Assistant Professor	Sardar Vallabhbhai National Institute of Technology, Surat	Since 18/10/2007

Area of Interest:

- Extraction of natural products using various techniques: Conventional and Novel techniques like Hydro-/Steam- Distillation, Solvent Extraction, Microwave Assisted Extraction, Hydrotropic Extraction.
- Aggregation behavior of amphiphiles

Courses involved with

- PG:
Chemical Engineering Mathematics
- UG:
Core:
Chemical Engineering Materials
General Chemical Technology
Mass Transfer Operations
Instrumentation and Process Control
Chemical Engineering Plant Design and Economics
Elective:
Sustainability and Green Chemistry

M.Tech. Dissertations Supervised

- Completed: 03
Student: Shaikh Mohsin Mohammad Ismail, Year: 2012-13
Dissertation Title: Extraction of natural dye from beetroot using novel techniques
Supervisor: Dr. Jigisha K. Parikh and Dr. Meghal A. Desai

Student: Sunny Arora, Year: 2013-14
Dissertation Title: Extraction of butein from *Butea monosperma* using novel techniques
Supervisor: Dr. Meghal A. Desai

Student: Sagar Deotale, Year: 2013-14
Dissertation Title: Solubility estimation of Telmisartan in pure and binary solvents
Supervisor: Dr. Sanjay R. Patel and Dr. Meghal A. Desai
- Ongoing: 01

Ph.D. Supervision

- Ongoing: 04

Research Project

Sr. No.	Name of the funding agency	Project Title	Year of Sanction of Grant	Amount Sanctioned	Status: Completed/ Ongoing	Investigators
01	Council of Scientific and Industrial Research, New Delhi.	Studies on Novel Techniques for Extraction of Essential oil from Patchouli	2013 (2 Years)	9.8 Lacs	Ongoing	Dr. Jigisha K. Parikh, Dr. Meghal A. Desai, Dr. Giriraj C. Jadeja

Course Development Project

Sr. No.	Name of the funding agency	Project Title	Year of Sanction of Grant	Amount Sanctioned	Status: Completed/ Ongoing	Investigators
01	National Mission Project on Pedagogic Research, MHRD, Govt. of India	Project to develop a course on “Chemical Reaction Engineering – I”	2013	5.0 Lacs	Ongoing	Dr. Jigisha K. Parikh, Dr. Meghal A. Desai, Dr. Giriraj C. Jadeja

Publications: (Annexure I)

- International Journal: 10
- National Journal: 01
- International Conference: 10
- National Conference: 08

Journal Reviewer:

- Natural Product Research, Taylor & Francis Group

Training Courses Organized:

- AICTE sponsored STTP on “Energy Conservation and Recycling” at SVNIT, Surat during 07/07/2008 to 11/07/2008.
Coordinators: Dr. Jigisha K. Parikh, Meghal A. Desai, Dr. A. K. Jana
- AICTE sponsored STTP on “Advanced Instrumental Methods of Analysis” at SVNIT, Surat during 24/08/2009 to 28/08/2009.
Coordinators: Dr. Jigisha K. Parikh, Meghal A. Desai, Dr. A. K. Jana
- TEQIP-II sponsored STTP on “Green Chemistry and Engineering: Towards a Sustainable Future” at SVNIT, Surat during 18/11/2013 to 22/11/2013.
Coordinators: Dr. Girirajsinh C. Jadeja, Dr. Meghal A. Desai, Dr. Jigisha K. Parikh

Expert Lectures Delivered:

- “Introduction to Chemical Engineering” delivered at LTTP on “Industrial Chemical Technology”, N G Patel Polytechnic, Bardoli.
- “Evaporation” delivered at LTTP on “Industrial Chemical Technology”, N G Patel Polytechnic, Bardoli.
- “Supercritical Fluid Extraction” delivered at Novel Separation Techniques, Sarvajanic College of Engineering and Technology, Surat.

- “Reactive Distillation as a Process Intensification Tool” delivered at TEQIP-II sponsored STTP on “Green Chemistry and Engineering: Towards a Sustainable Future” at SVNIT, Surat.
- “Extractions using Microwave Radiation and Hydrotropes” TEQIP-II sponsored STTP on “Green Chemistry and Engineering: Towards a Sustainable Future” at SVNIT, Surat.

Award/Prize/Certificate:

- MHRD scholarship for M.Tech. through GATE exam, 2002-2004.
- BHU medal for standing first in M.Tech. (Chemical Engineering), 2004.

Professional Institute Affiliation:

- **Life Fellow**, International Congress of Chemistry and Environment, Bhopal, India
FW/M-5036
- **Life Member**, Indian Institute of Chemical Engineers, Kolkata, India
LM-46893

Administrative Duties, etc.:

- Work/ed in a team as a coordinator/ member for various administrative duties either at Institute level or Department level
 - Accreditation by Nation Board of Accreditation for PG and UG
 - Preparation of the report (SAR), Filling the online form, Interaction with the expert team during visit for PG accreditation. In this regard, also attended workshops (2nd World Summit on Accreditation organized by NBA during 8-10 March, 2014 at New Delhi and Outcome Based Education during December, 2013 at SVNIT)
 - Training and placement
 - Exam disciplinary actions
 - UG exam
 - Time table
 - Physical stock verification
 - Services to community and tribal development
 - Industry alumni feedback
 - Convocation committee
- Examiner/ paper setter at University level examinations
- Member, Interview committee for the selection of Assistant Professors

PAPER PUBLICATIONS:

• **Papers published in International Journal: 10**

1. **Meghal A. Desai**, Jigisha Parikh, “Extraction of natural products using microwave as a heat source: A review”, *Separation and Purification Reviews*, 39:1–32, December 2010. (DOI: 10.1080/15422111003662320)
2. Jigisha Parikh, **Meghal A. Desai**, Hydrodistillation of essential oil from *Cymbopogon flexuosus*, *International Journal of Food Engineering*, 7, No. 1. (DOI: 10.2202/1556-3758.2067, January 2011)
3. Dhiren P. Prajapati, **Meghal A. Desai**, Jigisha Parikh. “Fractional factorial design for optimization of extraction of essential oil from *Cymbopogon winterianus* by hydrodistillation”, *Research Journal of Chemistry and Environment*, 15: 903-908, June 2011.
4. **Meghal A. Desai**, Jigisha K. Parikh, “Hydrotropic extraction of citral from *Cymbopogon flexuosus* (Steud.) Wats.” *Industrial & Engineering Chemistry Research*, 51, 3750–3757, January 2012. (DOI: 10.1021/ie202025b)
5. **Meghal A. Desai**, Jigisha Parikh, “Microwave assisted extraction of essential oil from *Cymbopogon flexuosus* (Steud.) Wats.: A parametric and comparative study”, *Separation Science and Technology*, 47:1963–1970, August 2012. (DOI: 10.1080/01496395.2012.659785)
6. Kiran Pawar, **Meghal A. Desai**, Jigisha Parikh, “Minimum hydrotrope concentration behavior of aqueous solution of sodium salicylate in presence of additives”, *Journal of Dispersion Science and Technology*, 33: 1746-1751, December 2012. (DOI: 10.1080/01932691.2011.629532)
7. Kiran Pawar, **Meghal A. Desai**, Jigisha Parikh, “Parametric, optimization and thermodynamic studies on the influence of electrolytes on sodium salicylate in aqueous solution”, *Tenside Surfactants Detergents*, 50: 289-296, July/August 2013. (Doc. No. TS110262)
8. Jigisha Parikh, Jitendra Rathore, Darshak Bhatt, **Meghal Desai**, “Clouding behaviour and thermodynamic study of nonionic surfactants in presence of additives”, *Journal of Dispersion Science and Technology*, 34: 1392-1398, September 2013. (DOI:10.1080/01932691.2012.749183)
9. **Meghal A. Desai**, Jigisha Parikh, Achyut K. De, “Modelling and optimization studies on extraction of lemongrass oil from *Cymbopogon flexuosus* (Steud.) Wats.”, *Chemical Engineering Research and Design*, 92: 793-893, May 2014. (DOI: 10.1016/j.cherd.2013.08.011)
10. **Meghal A. Desai**, Jigisha Parikh, “Extraction of essential oil from leaves of lemongrass using microwave radiation: Optimization, comparative, kinetic, and biological studies”, *ACS-Sustainable Chemistry and Engineering* (DOI: 10.1021/sc500562a)

- **Papers published in National Journal: 01**

1. **Meghal A. Desai**, P K Mishra, “Limonoid glucosides in Indian lemon (*Citrus limon*) seeds”, The Icfai University Journal of Chemical Engineering, 1:73-78, September 2009.

Papers published/presented in International Conference/Seminar: 10

1. **Meghal A. Desai**, Jigisha Parikh; Thermodynamic study for aggregation behavior of hydrotropic solution; International Conference on Chemical Engineering ; World Congress of Science Engineering & Technology; Amsterdam, The Netherlands; September 2009 (57:227-229).
2. **Meghal A. Desai**, P K Mishra; Identification of limonoid glucosides in Indian orange (*Citrus sinensis*) peels; International Conference on Challenges in Biochemical Engineering and Food Technology; Annamalai University; October 2009.
3. **Meghal A. Desai**, Jigisha Parikh; Supercritical fluid extraction of natural materials; International Conference on Challenges in Biochemical Engineering and Food Technology; Annamalai University; October 2009.
4. Paresh K. Patel, Himanshu Desai, Sidhdharth Barve, **Meghal A. Desai**; Processing of re-refined oil: a step towards waste minimization; International Conference on Separation Processes ; Banaras Hindu University, Varanasi ; October 2009.
5. Himanshu Desai, Rakesh Jain. **Meghal A. Desai**; Nanofluids: a new concept to enhance heat transfer; International Conference on Advances in Mechanical Engineering; Sardar Vallabhbhai National Institute of Technology, Surat; January 2010.
6. Kiran Pawar, **Meghal A. Desai**, Jigisha Parikh; Study of mixed micelle formation and the interaction of nonionic surfactant with ionic surfactants; International Conference on Recent Advances in Chemical Engineering and Technology, Kochi; March 2011.
7. **Meghal A. Desai**, Jigisha K. Parikh; Extraction of essential oil from the leaves of lemongrass using novel extraction techniques; 6th International Conference on Green and Sustainable Chemistry; Nottingham, UK; August 2013.
8. Sagar V. Deotale, Sanjaykumar R. Patel, **Meghal A. Desai**; Solubility and bioavailability of poorly soluble drugs using novel approaches : a review; International Conference on Materials and Characterization Techniques; Centre of Crystal Growth, School of Advance Sciences, VIT University, Vellore, Tamil Nadu, India; March, 2014.
9. Sagar Kapadiya, **Meghal A. Desai**; Solar drying of natural and food products: a review; International Conference on Agriculture, Forestry, Horticulture, Aquaculture, Animal Sciences, Food Technology, Biodiversity and Climate Change Sustainable Approaches (AFHAFBC-2014), Krishi Sanskriti, New Delhi, India; August, 2014.
10. Miral R. Thakker, **Meghal A. Desai**, Jigisha K. Parikh; Extraction of phytochemicals using neoteric solvents; World Congress on “Agriculture, Forestry, Horticulture, Aquaculture, Animal Sciences, Food Technology, Biodiversity and Climate Change: Sustainable Approaches (AFHAFBC-2014), Krishi Sanskriti, New Delhi, India; December, 2014.

- **Papers published/presented in National Conference/Seminar: 08**