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CERTIFICATE COURSE ON SURFACTANT APPLICATION AND CHALLENGES

CROP PROTECTION | PERSONAL CARE | TEXTILES

📅 8 - 10 July, 2026 📍 Institute of Chemical Technology, Mumbai 🕒 8:30 am to 6:00 pm



Keynote Speakers



Prof. R. D. Kulkarni
Vice Chancellor
University of Mumbai



Prof. S. S. Bhagwat
Director
IISER Pune



Prof. A. R. Athalye
Head, Dept. of Textiles
ICT Mumbai

Experts from KRÜSS



Katharina Wulz
Application Market
Manager



Dr. Thomas Willers
Director, Product &
Business Strategy



Dr. Fiona Antony
Lab Manager - APAC
region

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About the Workshop

From Formulation to Performance:

Mastering Surface Science in Crop Protection, Personal Care & Textiles

In crop protection, personal care, and textile industries, product performance is strongly influenced by surfactant behavior, wetting, spreading, foaming, surface tension, and interfacial interactions. Whether it is improving pesticide coverage on leaves, enhancing the effectiveness of shampoos and cosmetics, or optimizing textile processing and finishing, a deeper understanding of surface science is essential for innovation and product success.

This certificate course is designed specifically for formulation scientists, R&D professionals, technical managers, academicians, and students seeking practical knowledge that can be directly applied to real-world challenges. Through expert-led lectures, industry case studies, and hands-on training, participants will gain valuable insights into solving formulation, wetting, foaming, and performance-related issues across crop protection, personal care, and textile applications.

The number of participants is limited to 30 seats!

Participation Fee Structure

Participation Fees: INR 30,000 + 18% GST = **INR 35,400/-**

Payable in favour of **Orbit Research Associates Pvt. Ltd.**

A/C No. 003705001101

ICICI Bank, Preet Vihar, New Delhi – 110092

IFSC Code: ICIC0000037

Payment can also be made on the contact number: +91 93100 39977 (Mr. Surendra Khurana)

The fee is inclusive of the course fee, course material, lunch & tea

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Account Details

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For any queries, contact – **jt.waghmare@ictmumbai.edu.in**


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Certificate Course on Surfactant Application and Challenges

Schedule – Day 1 (8th July 2026)

Time	Topic	Speaker
08:00 – 9:00	Registration & Tea	
9:00 – 10:00	Inauguration	
Keynote Session		
10:15 – 10:45	Introduction to Surfactants: Types & Applications	Prof. R. D. Kulkarni VC University of Mumbai
Technical Session		
10:45 – 11:15	Methods of Static Surface Tension Measurement	Dr. Fiona Mary Antony <i>KRÜSS GmbH</i>
High Tea & Networking (11:15 – 11:30)		
Technical Session		
11:30 – 12:00	Mechanistic Insights into Surfactants in Textile Processing	Dr. Bijay Kumar Mishra
12:00 – 12:30	Personal Care Surfactants: Properties & Applications	Dr. Milind Kalekar Galaxy Surfactants
12:30 – 13:00	Measuring Dynamic Surface Tension	Katharina Wulz <i>KRÜSS GmbH</i>
Lunch Break (13:00 – 14:00)		
Technical Session		
14:00 – 14:45	Surface, Interfacial tension & its relevance in agrochemical formulations	Dr. Hrushikesh Mirgal
Hands-on Laboratory		
15:00 – 17:30	Static & Dynamic Surface Tensiometer by Du-Nouy Ring Method, Wilhelmy Plate Method, Pendant Drop Method, Bubble Pressure Method	
17:30 Onwards	Networking & General Discussions	



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Schedule – Day 2 (9th July 2026)

Time	Topic	Speaker
9:00 – 9:45	Tea & Snacks	
Keynote Session		
9:45 – 10:15	Problems in industry associated with wetting & spreading	Prof. Ashok Athalye ICT Mumbai
Technical Session		
10:15 – 11:15	Understanding wetting/De-wetting, Surface free energy & Solid-Liquid interactions by Contact Angle Measurement	Dr. Fiona Mary Antony KRÜSS GmbH
High Tea & Networking (11:15 – 11:30)		
Technical Session		
11:30 – 12:00	Impact of wetting properties & contact angles of surfactants in hair care products	Dr. Renuka Thergaonkar
12:30 – 13:00	Surfactant selection for textile wet processing: Integrating performance, sustainability & process economics	Dr. Navnath Pingle DyStar
Lunch Break (13:00 – 14:00)		
Technical Session		
14:00 – 14:45	Understanding de-wetting by Stood-up Drop Method	Dr. Thomas Willers KRÜSS GmbH (Virtual Mode)
Hands-on Laboratory		
15:00 – 17:30	Contact angle measuring instruments, working with solids, and surface free energy measurement	
17:30	General discussions on surfactant applications	



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Schedule – Day 3 (10th July 2026)

Time	Topic	Speaker
9:00 – 9:30	Tea & Snacks	
Keynote Session		
9:30 – 10:30	Foam fundamentals in surfactant systems Industrial challenges – Foaming/De-foaming/Anti-foaming	Prof. Sunil Bhagwat Director, <i>IISER</i> Pune
Technical Session		
10:30 – 11:30	Foam characterization – Foamability, Foam Kinetics & Foam Structure	Dr. Fiona Mary Antony <i>KRÜSS GmbH</i>
High Tea & Networking (11:30 – 11:45)		
Technical Session		
11:45 – 12:15	Surfactants role in cosmetic formulations	Prof. Jyotsna Waghmare ICT Mumbai
12:15 – 12:45	Selection of suitable surfactants for different textile applications	TBD
12:45 – 13:15	Defoaming Dynamics & Solutions for Foam Prevention in Agrochemical Formulations	Dr. A. T. Mirajkar ICT Mumbai
Lunch Break (13:15 – 14:00)		
Hands-on Laboratory		
14:00 – 16:00	Foam Kinetics & Foam Structure Open Discussion with experts and free sample testing*	
*Not more than 2 samples can be scheduled on prior intimation from the participant		
16:00 - 17:00	Closing Session, Certificates, General Discussions & Feedback	
High Tea & Networking (17:00 – 17:30)		

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About Oil Technologists' Association of India

Founded in 1943, the Oil Technologists' Association of India (OTAI) is a premier network of 1,600 professionals dedicated to advancing research in oils, fats, and surfactants. Operating across five regional zones, OTAI actively bridges the gap between scientific development and industry application. Continuing this mission, its upcoming certificate course on "Surfactant Applications and Challenges" will focus on delivering sustainable, cutting-edge solutions to address evolving industry needs across crop protection, personal care, and textile applications.



About Department of Oils, Oleochemicals & Surfactants Technology, Institute of Chemical Technology, Mumbai

Founded in 1943, the Department of Oils, Oleochemicals & Surfactants Technology at the Institute of Chemical Technology (ICT), Mumbai, is a recognized global leader in lipid science. Over eight decades, it has evolved from a pioneer in Oils, Fats, and Waxes into a powerhouse of cutting-edge research, with expertise spanning surfactants, cosmetics, and automotive applications. The department is renowned for its world-class faculty and strong industry linkages, creating an environment where rigorous academic training meets real-world industrial exposure. By co-hosting this event, the department highlights its role as a hub for innovation, offering deep technical expertise in the application of oleochemicals for critical sectors like lubricants and oil fields, and empowering the next generation of industry-ready professionals.

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About KRÜSS GmbH

As specialists in interfacial chemistry and the world's leading supplier of measuring instruments for surface and interfacial tension, we at KRÜSS GmbH - do not only provide high-quality product solutions - our offer is a combination of technology and scientific consulting. These include seminars, technical service, our Customer Support Lab and our Surface Science Centre for professional measurement services. Many well-known companies have already been inspired by our know-how, precision and passion consulted by our offices in Hamburg, USA & China,China and with the help of our exclusive distributor network.

About KRÜSS Surface Science Lab APAC -Mumbai

KRÜSS APAC Lab has been set up to build capabilities in surface science through essential measurement methods, instrumentation training, and capacity-building programs for students, academia, and industry

About Orbit Research Associates

Orbit Research Associates, KRÜSS's trusted partner in India since 1991, has been at the forefront of promoting surface science by providing cutting-edge instrumentation, application expertise, and technical support to academia, R&D laboratories, and industry.

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