



**University of Tehran  
Department of Food Science and Technology  
Workshop Program**



**April 2017  
IRAN-KARAJ**

## Workshop Program 1

### Food Texture, Theory and measurement

4-6 April 2017

Day	Time	Proposed Topics	Lecturer
1	09:00-10:00	Registration, Reception & cocktail	-
	10:00-12:00	Workshop intro	Prof. M. Mousavi
	12:00-13:30	Lunch Time	
	13:30-15:00	Basic concept on Food Physics	Prof. M. Mousavi
	15:00-16:30	Engineering Aspects of Food Rheology	Prof. Emam-Djomeh
		Coffee break, End of session	
2	08:00-10:00	Introduction to Rheological models	Prof. M. Mousavi
	10:00-10:30	Coffee Break	
	10:30-12:00	Useful software in Food Physics	Dr. H. Kiani
	12:00-13:30	Lunch time	
	13:30-15:00	Sensory aspects of Food Rheology	Dr. R. Askai
	15:00-16:30	Measurement Techniques on Food Rheology	Prof. M. Mousavi
	Coffee break, End of session		
3	08:00-08:30	Solid Foods Theory	Prof. M. Mousavi
	08:30-10:00	Solid Foods Practical	
	10:00-10:30	Fluid Foods Theory	Prof. M. Mousavi
	10:30-12:00	Fluid Foods Practical	
	12:00-13:30	Lunch time	
	13:30-14:00	Semi solid Foods Theory	Prof. M. Mousavi
	14:00-16:30	Semi solid Foods Practical	
	Closure of Workshop		

**\*Workshop fee: \$2000, which includes all lectures, meals, accommodation (3 nights).**

## Workshop Program 2

### Advanced Instrumental Analysis

4-6 April 2017

Day	Time	Proposed Topics	Lecturer
1	8:00-8:30	Registration, Reception & cocktail	-
	08:30-10:15	Introduction to Advanced Instrumental Analysis (Part 1)	Dr. K.Rezaie
	10:15 : 10:30	Coffee Break	
	10:30-12:30	Introduction to Advanced Instrumental Analysis (Part 2)	Dr. K.Rezaie
	12:30-14:00	Lunch time	
		Discussion Panel	
	14:00-16:45	Problem solving related to the analysis	Dr. K.Rezaie
		End of Day 1	
2	08:00-10:00	Analysis of volatile components by GC	Dr. K.Rezaie
	10:00-10:15	Coffee Break	
	10:15-12:45	Practical work : (Fatty Acid Analysis ...)	Dr. K.Rezaie & his assistants
	12:45-14:00	Lunch time	
	14:00-17:00	Practical work : (pesticides analysis by GC)	Dr. K.Rezaie & his assistants
		End of Day 2	
3	08:00-09:45	Analysis of sugars (Fructose, Glucose and Sucrose) by HPLC	Dr. K.Rezaie & his assistants
	10:00-12:30	Practical work	Dr. K.Rezaie & his assistants
	12:30-14:00	Lunch time	
	14:00-17:00	Practical work: Analysis of Organic acids etc.) by HPLC	
			Closure of Workshop

\*This workshop deals with hands-on experiences on different instruments including GC, HPLC, GC-MS, LC-MS and other techniques that are currently used for the qualitative and quantitative analysis of different compounds.

**\*Workshop fee for minimum 5 registrations: \$950, which includes all lectures, meals, accommodation (3 nights).**

\* If requested, the following items can also be included in the program for milk analysis of proteins, fats, lactose and minerals.

## Workshop Program 3

### Food Biotechnology

25-27 April 2017

Day	Time	Activity	Lecturer
		<b>Fermentation Technology</b>	-
1	08:00-8:30	Registration, Reception & cocktail	
	8:30-10:30	-Microbial growth systems, -Upstream process & downstream process.	Prof. Razavi
	10:30 – 12:30	-Bioreactor operations for microbial fermentations (laboratory session included).  -Scale-up of microbial cells from bench scale to fermenter	Prof. Razavi
	12:30-14:00	Lunch Time	
	14:00-16:30	Demo's batch fermentation	Prof. Razavi
2	8:30-10:30	Fermentation technology (Lab demonstration).	Prof. Razavi
	10:30-10:45	Coffee Break	
	10:45-12:30	Modelling & Kinetics of enzymes	Dr. Khodaiyan
	12:30-14:00	Lunch Time	
	14:00-16:00	Problems solution by software	Dr. Khodaiyan
3		Novel detection techniques applied in food microbiology	Dr. Z.Mousavi
	8:30-10:30	Introduction to FISH method	Dr. Z.Mousavi
	10:30-10:45	Coffee Break	
	10:45-12:30	Demo;s FISH method	Dr. Z.Mousavi
	12:30-14:00	Lunch Time	
	14:00-16:30	Demo;s FISH method	Dr. Z.Mousavi
			Closure of Workshop

**\*Workshop fee for minimum 5 registrations: \$1000, which includes all lectures, meals, accommodation (3 nights).**

## Workshop Program 4

### Isolation, Purification and preservation 4-6 April 2007

Day	Proposed Topics	Lecturer	
<b>Introduction</b>			
1	Teleology and classification of nutraceuticals, Nutraceuticals bioavailability	Dr. M. salami Dr. A. Madadlou	
	<b>Extraction(Theory&amp; Practical)</b>		
	Ultrasound assisted	Dr. Emam-Djomeh	
	Microwave assisted	Dr. Askari	
	Crystallization	Dr. Salami	
	Super and sub critical fluids	Dr. Emam-Djomeh	
2	<ul style="list-style-type: none"> <li>•Fundamentals of solid-liquid separation, Theory of cake formation, cake washing and cake deliquoring</li> <li>•Selection criteria of industrial filters</li> <li>•Characteristic and selection of filtration clot</li> </ul>	Dr. Emam-Djomeh	
	<ul style="list-style-type: none"> <li>•Design and operation of rotary filters (vacuum and pressure filters)</li> <li>•Design and operation of discontinuous filters (filter press, filter nutschs)</li> <li>•Dynamic crossflow filtration: Fundamentals and applications</li> <li>•Operational problems of filters; modernization of running filters by filter revamping</li> </ul>		
	<b>Characterization &amp; purification (Theory&amp; Practical)</b>		
	Different Technics		
		Dr. Salami	
<b>preservation</b>			
<b>Drying</b>			
3	<ul style="list-style-type: none"> <li>•Recent developments and R&amp;D opportunities in drying</li> <li>•Energy savings strategies for industrial dryers</li> <li>•Conductive and convective drying: TSK's Practical Experience</li> <li>•Recent improvements of dryers</li> </ul>	Dr. Askari	
	<ul style="list-style-type: none"> <li>•Introduction, fundamentals, design strategy, classification and selection of Industrial dryers</li> <li>•Advances in drying technologies: focus on quality and energy aspects</li> </ul>	Dr. Askari	
	<b>preservation</b>		
	<b>Classical Technics (Theory&amp; Practical)</b>		
	Encapsulation: Emulsion-based delivery systems (nanoemulsions, microemulsions, double emulsions, and colloidosomes), Solid lipid particles and nanostructured lipid carriers, Anti-solvent particulation technique, Coacervates, Liposomes and niosomes, Hollow particles	Dr. Emam-Djomeh Dr. A Madadlou	

**\*Workshop fee: \$1000, which includes all lectures, meals & accommodation (3 nights).**

## Workshop Program 5

### Application of Computer in Food Research and Analysis

25-27 April 2017

Day	Time	Proposed Topics	Lecturer
1	09:00-10:00	Registration, Reception & cocktail	-
	10:00-10:30	Welcome Note and Intro	-
	10:00-11:00	Image processing for Food Properties and Microscopy Evaluation	Dr. H. Kiani
	11:00-12:00	Microscopy and Image Processing Practice	Dr. H. Kiani
	12:00-14:00	Lunch time	
	14:00-16:30	Working with data loggers and laboratory logging systems	Dr. H. Kiani
			End of Day 1
2	08:00-09:15	Principles of Modelling and Computer Simulation	Prof. M. Mousavi
	09:20-10:30	Automation and Computer in Food Processing	Dr. R. Askari
	10:30-10:45	Coffee Break	
	10:45-12:00	Working with MATLAB	Dr. H. Kiani
	12:00-14:00	Lunch time	
	14:00-16:30	Process Modelling and Simulation Software Practice	Dr. H. Kiani
			End of Day 2
3	08:00-09:20	Reference and Citation Management Software	Dr. H. Kiani
	09:30-10:30	Response Surface Methodology	Dr. F. Khodaeian
	10:30-10:45	Coffee Break	
	10:45-12:00	Experimental Modelling and Machine Learning	Prof. Eman-Djomeh
	12:00-14:00	Lunch time	
	14:00-16:30	Statistical Analysis Software Practice	Dr. H. Kiani
			Closure of Workshop

\* All participants should bring their own Laptops to the workshop.

\*Workshop fee: \$1000, which includes all lectures, meals & accommodation (3 nights).