

Day	Time	Activity	Session	Topics	Contents description	
Monday, 29th June 2020	Morning				Travel	
	Afternoon				Travel	
	from 17:00	Registrations Open			Registration	
	from 19:00	Welcome cocktail				
Tuesday, 30st June 2020 (DAY 1)	09:00 - 11:00	Theoretical lesson: 3 Topics - 40 minutes each	Raw materials processing	Raw materials processing	Clear & cloudy juice extraction Clear juice clarification	
				Citrus extraction	Orange extraction	
				Raw materials extraction	Puree extraction	
	11:00 - 11:30	Coffee break				
	11:30 - 13:00	Theoretical lesson: 2 Topics - 45 minutes each	Thermal juice stabilization	Effects on microorganisms, enzymes and nutritional compounds	D, z and F ₀ parameters	
					Ea and k parameters	
				Technologies action mechanism	Inactivation kinetics Conventional thermal Ohmic heating	
	13:00 - 14:00	Lunch				
	14:00 - 14:30	Adjourn to laboratory session	Subdivision into 3 groups (GROUP A, B and C) of 16/17 people, who will go to the various labs and companies in rotation.			
	14:30 - 17:30	Hands-on activities	Pilot-scale lines (GROUP A)	Raw materials extraction and Thermal stabilization	Zenith + UHT MIX pilot-scale line	
				Thermal processing	Ohmic heating pilot line	
			Pilot-scale lines (GROUP B)	Non-Thermal processing	PEF	
				Non-Thermal processing	HPP	
			Laboratory activity (GROUP C)	Chemistry	Brix, PH, Color, Mass spectrography	
Microbiology	Yeasts and Molds (HRM), ACB (alicyclobacillus), TVC (total viable count)					

**Wednesday, 1st July 2020
(DAY 2)**

09:00 - 10:30	Theoretical lesson: 2 Topics - 45 minutes each	Non-thermal juice stabilization	HPP	Technology action mechanism & equipment description + mathematical models for inactivation kinetics (pressure resistance)	
			PEF	Technology action mechanism & equipment description + mathematical models for inactivation kinetics (electroresistance)	
	10:30 - 11:00		Coffee break		
	11:00 - 13:00	Theoretical lesson: 2 Topics - 60 minutes each	Filling and Packaging: technologies and materials	Filling technologies	Aseptic
					Ultra clean
					Hot fill
				Packaging materials: features, sustainability and influence on shelf-life	Glass
					Cartons
					Cans
					Pouches
	Plastic				
	13:00 - 14:00		Lunch		
	14:00 - 14:30		Adjourn to laboratory session		
	14:30 - 17:30	Hands-on activities	Pilot-scale lines (GROUP B)	Raw materials extraction and Thermal stabilization	Zenith + UHT MIX pilot-scale line
				Thermal processing	Ohmic heating pilot line
Pilot-scale lines (GROUP C)			Non-Thermal processing	PEF	
			Non-Thermal processing	HPP	
Laboratory activity (GROUP A)			Chemistry	Brix, PH, Color, Mass spectrography	
			Microbiology	Yeasts and Molds (HRM), ACB (alicyclobacillus), TVC (total viable count)	

Thursday, 2nd July 2020 (DAY 3)	09:00 - 11:00	Theoretical lesson: 3 Topics - 40 minutes each	Methods of Analysis and Various Legislations pre- screening (linked to juice processing)	Methods of Analysis	
				Authenticity	Industry codes (AIJN)
					Types of adulteration
					Testing scope
	Legislation	Pre-screening of allowed additives and processing aids in various legislation (CODEX, FDA, etc)			
	11:00 - 11:30	Coffee break			
	11:30 - 13:00	Theoretical lesson: 2 Topics - 45 minutes each	Nutritional aspects linked to juice processing	Nutritional quality of juices	
				Nutrients preservation in juices processing	
	13:00 - 14:00	Lunch			
	14:00 - 14:30	Adjourn to laboratory session	Subdivision into 3 groups (GROUP A, B and C) of 16/17 people, who will go to the various labs and companies in rotation.		
	14:30 - 17:30	Hands-on activities	Pilot-scale lines (GROUP C)	Raw materials extraction and Thermal stabilization	Zenith + UHT MIX pilot-scale line
Thermal processing				Ohmic heating pilot line	
Pilot-scale lines (GROUP A)			Non-Thermal processing	PEF	
			Non-Thermal processing	HPP	
Laboratory activity (GROUP B)			Chemistry	Brix, PH, Color, Mass spectrography	
			Microbiology	Yeasts and Molds (HRM), ACB (alicyclobacillus), TVC (total viable count)	
from 19:00	Goodbye dinner				
Friday 3rd July 2020	9:00 - 13:00	Post-course activity	Recruiting day Companies-students	Networking activities organized as an Open-day, in which students, companies, startups and University labs will have the opportunity to get to know each other opening opportunity for recruitment and collaborations.	