



# Food drying technology short course

Werribee 3 & 4 March 2020

## Program<sup>1</sup>

### Day 1

<b>8.30 am</b>	<b>Welcome and introduction</b>	
	Dried products and their quality	Gordon Young, FoodStream Pty Ltd
	Basic drying theory	Gordon Young, FoodStream Pty Ltd
<b>10:00 am</b>	<b>Morning Break</b>	
	Drying systems used in the food industry	Dennis Forte, FoodStream Pty Ltd
	Water activity: Basic concepts & sorption/desorption isotherms, methods of measurement	Gordon Young, FoodStream Pty Ltd
<b>12.00 pm</b>	<b>Lunch</b>	
	Lab demonstration; water activity/moisture content / DVS	
	Water activity: relevance to food stability and the drying process	Gordon Young, FoodStream Pty Ltd
	Principles of mass and energy balances as applied to drying processes (Exercise: Using mass and energy balance techniques to analyse simple drying system)	Gordon Young, FoodStream Pty Ltd
<b>2:30 pm</b>	<b>Afternoon break</b>	
	Principles of psychrometrics, tracing a drying process on a psychrometric chart	Gordon Young, FoodStream Pty Ltd
	Mass & energy balances applied to more complex drying systems: case studies	Gordon Young, Dennis Forte FoodStream Pty Ltd
<b>4.30 pm</b>	<b>End of day 1</b>	

1. The following program may be subject to minor change

## Day 2

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<b>8.15 am</b>	<b>Start of day 2</b>	
	Modelling the drying curve (practical measurement/modelling of product drying curve and how it can be used)	Dennis Forte, FoodStream Pty Ltd
	The use of dimensional analysis to optimise a drying process (an industry case study)	Dennis Forte, FoodStream Pty Ltd
<b>9.45 am</b>	<b>Morning break</b>	
	Specialised drying systems	Darren Gardiner and Henry Sabarez, CSIRO
	Clextal innovative intensified drying technology	Camille Challard, Clextal Pacific
	<i>Pilot Plant visit</i>	
<b>12.15 pm</b>	<b>Lunch</b>	
	<b>Option 1:</b> Design and specification of drying systems Gordon Young, FoodStream Pty Ltd Case studies of a range of drying technologies, Gordon Young, FoodStream and Henry Sabarez, CSIRO	<b>Option 2:</b> Spray drying technology Darren Gardiner, CSIRO
<b>3.00 pm</b>	<b>Afternoon break</b>	
	Improving efficiency of established drying processes – a case study	Gordon Young, FoodStream and Henry Sabarez, CSIRO
	Drying Process – economic analysis	Dennis Forte, FoodStream Pty Ltd
<b>4:30 pm</b>	<b>Course close</b>	

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