

Food drying technology short course

Werribee 13 & 14 March 2019

Program¹

Day 1

8.30 am	Welcome and introduction	
8.45 am	Dried products and their quality	Gordon Young, FoodStream Pty Ltd
9.20 am	Basic drying theory	Gordon Young, FoodStream Pty Ltd
10:00 am	Morning Break	
10.20 am	Drying systems used in the food industry	Dennis Forte, FoodStream Pty Ltd
11.10 am	Water activity: Basic concepts & sorption/desorption isotherms, methods of measurement	Gordon Young, FoodStream Pty Ltd
12.00 pm	Lunch	
12:40	Lab demonstration; water activity/moisture content / DVS	
1:10 pm	Water activity: relevance to food stability and the drying process	Gordon Young, FoodStream Pty Ltd
1.50 pm	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
2:30 pm	Afternoon break	
3.00 pm	Principles of psychrometrics, tracing a drying process on a psychrometric chart	Gordon Young, FoodStream Pty Ltd
3.30 pm	Mass & energy balance applied to a more complex drying system – A case study	Gordon Young, FoodStream Pty Ltd
4.30 pm	End of day 1	

1. The following program may be subject to minor change

Day 2

8.15 am	Start of day 2	
8.15 am	Modelling the drying curve (practical measurement/modelling of product drying curve and how it can be used)	Dennis Forte, FoodStream Pty Ltd
9.00 am	The use of dimensional analysis to optimise a drying process (an industry case study)	Dennis Forte, FoodStream Pty Ltd
9.45 am	Morning break	
10.05 am	Specialised drying systems	Darren Gardiner, CSIRO
11.00	Clextral innovative intensified drying technology	Camille Challard, Clextral Pacific
11.15 am	<i>Pilot Plant visit</i>	
12.15 pm	Lunch	
12:45	An introduction to electrostatic spray drying	Joel Migchelbrink, Fluid Air Headquarters USA
1.00	Option 1: 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	Option 2: Spray drying technology Darren Gardiner, CSIRO
3.00 pm	Afternoon break	
3.15 pm	Improving efficiency of established drying processes – a case study	Gordon Young, FoodStream and Henry Sabarez, CSIRO
4.00 pm	Drying Process – economic analysis	Dennis Forte, FoodStream Pty Ltd
4:30 pm	Course close	