

Food drying technology short course

Werribee 14 & 15 March 2018

Program1

**Day 1**

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| 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**

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| 8.30 am | Start of day 2  |  |
| 8.30 am | Modelling the drying curve (practical measurement/modelling of product drying curve and how it can be used) | Dennis Forte,FoodStream Pty Ltd |
| 9.15 am | The use of dimensional analysis to optimise a drying process (an industry case study) | Dennis Forte, FoodStream Pty Ltd |
| 10:00 am | **Morning break** |  |
| 10.20 am | Specialised drying systems  | Darren Gardiner, CSIRO  |
| 11.30 am | *Pilot Plant visit* |  |
| 12.30 pm | **Lunch** |
| 1:00 | **Option 1:**Design and specification of drying systemsGordon Young, FoodStream Pty Ltd Case studies of a range of drying technologies, Gordon Young, FoodStream and Henry Sabarez, CSIRO | **Option 2:**Spray drying technologyDarren Gardiner, CSIRO |
| 3.00 pm | **Afternoon break** |  |
| 3.20 pm | Improving efficiency of established drying processes – a case study | Gordon Young, FoodStream and Henry Sabarez, CSIRO |
| 4:15 pm | **Course close** |  |