

PLANNED PROGRAM

# Food Drying Technology

CSIRO, AUSTRALIA, (WERRIBEE) | 28 FEBRUARY - 1 MARCH 2023

Program may be subject to minor changes.

## DAY ONE

Tuesday, 28 February 2023

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|              |  |
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| <b>8:30</b>  | Introduction & Welcome   |
|              | Dried Products & Their Quality   |
|              | Basic Drying Theory  |
|              | <b>Morning Break</b>   |
|              | Drying Systems Used in the Food Industry   |
|              | Water Activity: Basic Concepts & Sorption / Desorption Isotherms, Methods Of Measurement |
| <b>12:00</b> | <b>Lunch</b>   |
|              | Lab Demonstration: Water Activity / Moisture Content / Dvs                               |
|              | Water Activity: Relevance to Food Stability & the Drying Process                         |
|              | Principles of Mass & Energy Balances as Applied to Drying Processes                      |
|              | Exercise: Using Mass & Energy Balance Techniques to Analyse Simple Drying System         |
|              | <b>Afternoon Break</b>   |
|              | Principles of Psychrometrics   |
|              | Tracing a Drying Process on a Psychrometric Chart  |
|              | Mass & Energy Balance Applied to a More Complex Drying System – A Case Study             |
| <b>4:30</b>  | <b>Close Day One</b>   |

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## DAY TWO

Wednesday, 1 March 2023

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|--------------|--|
| <b>8:30</b>  | <b>Start of Day Two</b><br><br>Modelling the Drying Curve<br>Practical Measurement/Modelling of Product Drying Curve & How it Can Be Used<br><br>The Use of Dimensional Analysis to Optimise a Drying Process (An Industry Case Study)<br><br><b>Morning Break</b><br><br>Specialised Drying Systems<br><br>Pilot Plant Visit                                |
| <b>12:15</b> | <b>Lunch</b><br><br><b>Option 1</b><br>Design And Specification Of Drying Systems<br>Dennis Forte & Henry Sabarez<br><br>Case Studies Of A Range Of Drying Technologies<br><br><b>Option 2</b><br>Spray Drying Technology<br>Darren Gardiner, CSIRO<br><br><b>Afternoon Break</b><br><br>Improving Efficiency of Established Drying Processes – A Case Study |
| <b>17:30</b> | <b>Course Close</b>  |