

SPRAY DRYING: FROM THEORY TO PRACTICE

Learn the ins & outs of spray drying and catch up on the latest developments to optimize your process and save on costs



Introduction

Spray drying is the most applied process for food powder production. It is also a challenging one involving a complex balance between production costs and product quality. Improvement can often be achieved by improving drying capacity, minimizing fouling and reducing cleaning downtime. This two-day course presents the latest developments in drying technology, process optimization and cost-saving strategies, including case studies, examples from the industry and hands-on demonstrations. The course will start with basic drying theory and the 'ins and outs' of spray drying. It then focuses on predictive tools for spray drying optimization with a practical demonstration.

For whom

The course is intended for anybody involved in drying technology, including process and product developers, technologists and plant operational staff. Speakers from NIZO, academia and industry will guide you through the topics from scientific understanding to its practical implications.

Why come to this course?

- Refresh your understanding of spray drying technology.
- Gain new insights into strategies to optimize your spray drying operation.
- Get updated on the latest scientific and technological developments for product-process optimization.
- Expand your network of scientists and industry experts in the field of drying.

Course leaders

This course will be led by **Dr. Kevin van Koerten**, NIZO Expert Processing & **Ben van der Deen**, NIZO Business Development Manager.

Program 2025

Spray drying: from theory to practice

| Thursday January 30 | Friday January 31 |
|--|--|
| 8.30 Coffee and reception | 8.30 Coffee and reception |
| 9.00 Opening: Introduction to the course <i>Dr. Kevin van Koerten & Ben van der Deen, NIZO</i> | 8.55 Welcome and introduction day 2 <i>Dr. Kevin van Koerten & Ben van der Deen, NIZO</i> |
| 9.15 Spray drying basics <i>Dr. Luanga Nchari, NIZO</i> | 9.00 High solids evaporation and drying <i>Dr. Coen Akkerman, Food Process Support BV</i> |
| 10.00 Basic drying theory part I: Sorption isotherms psychrometry <i>Dr. Kevin van Koerten, NIZO</i> | 9.30 Experiences with spraying nozzles <i>Otto Jouwsma BSc, Spraying Systems</i> |
| 10.45 Coffee/tea break | 10.30 Dehumification of inlet air <i>Marcel van den Berghe BSc, HB Drying Systems</i> |
| 11.00 Basic drying theory part II: Macrobaldances <i>Dr. Kevin van Koerten, NIZO</i> | 11.15 Spray dryer safety and control <i>Etienne Hunt, Hobr </i> |
| 12.00 Lunch | 12.15 Lunch |
| 13.00 Basic drying theory part III: Mass and heat transfer & drying kinetics <i>Dr. Kevin van Koerten, NIZO</i> | 13.00 Spray dryer configurations <i>Cris Beekman, Tetrapak</i> |
| 15.00 Coffee/tea break | 14.00 Tour of pilot plant and lab facilities |
| 15.15 Digital design for spray drying <i>Siemens PSE</i> | 15.00 Closing remarks |
| 16.00 Hands-on case study: Spray dryer optimization <i>Dr. Kevin van Koerten, NIZO</i> | |
| 18.15 Course dinner | |

Course fees:

(all packages include a 2-day course and dinner on the evening of Day 1)

Package 1: €2200, - excl. VAT.

Package 2*: €2350,- excl. VAT, including 01-night hotel stay, breakfast & taxi.

Package 3*: €2450,- excl. VAT, including 02-night hotel stay, breakfast & taxi.

Register for the course on **Membrane concentration & evaporation** as well and receive a **€500,- discount!**

For registration, visit:

<https://www.nizo.com/events-courses/spray-drying-membrane-concentration/>

For registration inquiries, please contact:

E: nizocourse@nizo.com

For more information, please contact:

Dr. Kevin van Koerten

T: +31 6 253 470 55

E: kevin.vankoerten@nizo.com

*Hotel accommodation is based on availability. Hotel accommodation is only guaranteed after written confirmation from the hotel.