

WORKSHOP ON LYOPHILIZATION TECHNOLOGY

The topics of the two days workshop will cover areas of freeze-drying relevant to the professionals in the Pharmaceutical Industry. New developments continuously challenge professionals in terms of regulations, technology and trends. The workshop will facilitate participants gaining a better knowledge of the process and validation. The sessions will be interactive allowing lot of opportunities for discussions :

Freezing and Nucleation:

- Slow freezing will produce big crystals, fast freezing produces small crystals

Physical product properties allowing the identification of critical events and temperatures:

- Collapse, melting, eutectic, glass transition. Examples and images

Primary drying. Theory and control. Maximizing throughput.

- Detailed calculation process to predict product interface temperature according to shelf temperature and chamber pressure (maximizing efficiency while maintaining product temperature below the collapse conditions)
- Exercises with a software (done in Excel) distributed to all participants

cGMP for Aseptic Processing. Particular application on lyophilized products

A (timid) PAT approach to lyophilization

- PAT Introduction
- A technique for monitoring of group of process variables without the need to physically insert a probe will be presented.
- Demonstration how the monitored variables can be used to close the loop

Rationale of process recipe design.

- Extracting valuable information from the process graphs.

Invitation

The Indian Chapter of



International Society of Lyophilization - Freeze Drying, Inc.

**Organizes a
two days interactive workshop on
Freeze Drying Technology**

at

**Fortune Chariot Beach Resort,
Mamallapuram, Chennai**

Oct 23-24, '07



Fortune Chariot Beach Resort,
Mamallapuram, Chennai

ISL-FD – Indian chapter

C/o Spinco Biotech Pvt Ltd,
No.4, Vaidyaram Street, Chennai - 600 017
Phone: 2434 0174 Fax: 2434 0761
Email: islfdindia@yahoo.com





Dear Sir / Madam

We all set for the second Workshop on "Freeze Drying Technology". This year it will be held at Fortune Chariot Beach Resort, Mamallapuram, Chennai on October 23 & 24.

ISL-FD headquarters have deputed the following two experts on Freeze Drying Technology to conduct workshop this year,

- ✦ **Ivette Novoa**, Vice President, ISL-FD is an authority on Lyophilization Technology, with 10 years experience in the pharmaceutical industry. Till recently, she was the Head of the Development Department at the National Center of Bioproducts in Cuba. Presently, she is consulting for various projects.
- ✦ **Miquel Galan** is an expert in pharmaceutical engineering as well as vacuum technology. He has been with Telstar for over 24 years and is presently Innovation - R&D Director, Technology Department. He is an active member of ISPE, PDA, ASME, PHSS and AAPS.

Ivette and Galan have chaired several freeze drying conferences, and lectured on many freeze drying courses and workshop.

The two days session will focus on various aspects of freeze drying covering Freezing, Nucleation, Primary drying, Lyophilization process and Validation, Applications of cGMP on lyophilized products, PAT approach to Lyophilization etc.. (details on overleaf)

This is a specialized workshop and we strongly recommend that those involved in production scale operations only attend the same. The seats are limited to ensure closer interaction among the participants.

The registration charges for the two days residential workshop are:

- ✦ Rs. 33,710.. per person for Single Occupancy (inclusive of 12.36% service tax)
- ✦ Rs. 28,090.. per person for double Occupancy* (inclusive of 12.36% service tax) *(when rooms shared by two)

The companies deputing four or more participants can avail 10% discount.

The registration fee includes two-night stay (Oct. 22 & 23), break fast, lunch and dinner plus 12.36% service tax. The participants should reach on the evening of Oct. 22 for the welcome meeting and to discuss and set the agenda.

Please post the filled up registration form with DD before October 1, '07.

For more details, please contact :


desikan@shasun.com

thyagarajan@spincotech.com

We look forward to your presence.

With kind regards,

Sincerely,


K. R. DESIKAN
Chairman


S. THYAGARAJAN
Secretary