

Understanding Polymorphism & Crystallisation Issues in the Pharmaceutical Industry

14 - 16 March 2012

The Corinthia Lisbon Hotel, Lisbon, Portugal



"This course was very informative
and nicely paced."

Sigma Aldrich

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Understanding Polymorphism & Crystallisation Issues in the Pharmaceutical Industry

14 - 16 March 2012

The Corinthia Lisbon Hotel, Lisbon, Portugal

Fee & Information

£1275.00

Includes lunch & refreshments, course dinner and comprehensive course manual.

The course begins with registration from 8.45am on Wednesday 14 March and finishes at approximately 2pm, after lunch on Friday 16 March.

Introduction

Crystallisation has been described as one of the most difficult unit operations to control. This is partly because the primary nucleation event, particularly in batch crystallisers, is difficult to control reproducibility without seeding, partly because secondary nucleation processes which result are highly scale and process dependent and partly because of the delicate balance between thermodynamic and kinetic factors in crystallisation processes which operate far from equilibrium.

The consequence of these features can be poor reproducibility of purity, particle size distribution, morphology and crystal structure. The latter phenomenon, known as polymorphism, is a subject which has been and remains an important issue across the pharmaceutical, pigment, agrochemical, explosive and fine chemical industries, where the physical form of the product affects the properties (stability, colour, dissolution rate etc) of the finished product.

It is important, therefore, for chemists who are developing crystallisation operations to understand in detail the key physical processes which occur and which need to be under control – irrespective of whether the process utilises cooling, evaporative, or down-out crystallisation.

This course will teach chemists and engineers some fundamental aspects of crystal chemistry, nucleation and crystal growth, the operation of batch crystallisers and methodologies of characterisations. Because polymorphism is such an important issue the course will cover this in some detail, particularly addressing the case of disappearing (or appearing) polymorphs, when a new form of a product in development (or even worse, in manufacture) suddenly appears. Case studies will be used to illustrate important issues.

Course Outline

Day One

Introduction to Crystallisation

What is Polymorphism

Analytical Principles

Cooling Crystallisations

Drown-outs and Other Crystallisation Methods

Workshop Session

Identifying Polymorphs 1 – Spectroscopic Methods

Identifying Polymorphs 2 – Crystallographic Methods

Screening for Polymorphs

Day Two

Solvates and Hydrates

Monitoring of Crystallisation Processes

Identifying Polymorphs 3 – Thermal and Thermodynamic Methods

Case Studies

Controlling Polymorph Crystallisation

Workshop Session

Disappearing Polymorphs

Polymorphs and Patents

Day Three

Salts and Cocrystals

Scale Up of Crystallisation Processes

Workshop Session

Amorphous Forms

Question/Discussion

Who Should Attend?

Organic Chemists – working in the pharmaceutical, pigment, agrochemical, explosives or fine chemicals industries

Development and Production Chemists

Chemical Engineers and Analysts

Course Tutors



Terry Threlfall and Derek Robinson.

Full Tutor biographies can be found on our website at www.scientificupdate.co.uk.



Venue

Corinthia Hotel

Av. Columbano Bordalo Pinheiro, No. 105
Lisbon 1099-031
Portugal

Tel: 00351 21 7236363
Fax: 00351 21 7236364
www.corinthialisboahotel.com

The Corinthia hotel is close to the historical centre of Lisbon and only 7km from the airport.

A limited number of rooms have been reserved at the hotel for the special rate of €135 per night for a single occupancy room and €155 per night for double occupancy – these rates includes buffet breakfast and taxes.

A hotel booking form will be sent to you register for this course.

Register for this course overleaf or tel +44 (0)1435 873062 info@scientificupdate.co.uk



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