

Attendance

Registration Fees:

Industry: 600 €
(Owners of an SPS Instrument will receive a 20% discount)
Academia: 400 €
Student: 200 €
Accompanying persons 60 €
(for conference dinner and evening programme)

The registration fee includes:

- Seminar participation
- Handouts
- Conference dinner and evening programme
- Lunch, coffee and refreshments on both days
- Shuttle service from hotel to the centre and back

Registrations will be regarded as provisional until full payment has been received.

Bank account:

Sparkasse Ulm
„Projekt Messtechnik“
Account 643405, BLZ 630 500 00
For international transfers please use the following codes:
IBAN: DE25 6305 0000 0000 6434 05
SWIFT-BIC.: SOLADES1ULM

Accommodation

Hotel Stern
The Hotel Stern is only 250m from the central railway station and 250m from the world famous Münster dome close to the historical city centre.
Stern-gasse 17
89073 Ulm/Donau
Telefon: (0731) 1552-0
Fax: (0731) 1552-99
Internet: www.hotelstern.de
E-mail: reception@hotelstern.de

Special rates for this event

(before 21 September 2009):
For a single room: 80 €
For a double room: 120 €
Prices include buffet breakfast, service and taxes.

Contact

Dipl Ing. Jürgen Dillenz, Projekt Messtechnik
Grimmelfinger Weg 65-67, D-89077 Ulm
Phone: +49 (0)731 379 357 74, Fax: +49 (0)731 379 357 80
E-Mail: j.dillenz@pmtj.com
www.pmtj.com/seminar_E

Course Registration Form

Moisture Sorption Analysis Seminar 2009

October 15. – 16. 2009 at the Service and Training Centre of
Projekt Messtechnik Ulm

_____	_____
Last Name	Title

First Name	

Company	

Address	

City	Zip Code

Country	

Phone	Fax

E-Mail	

Signature	Date

Invoice Address (!):

Please state (tick) whether your name

- should be written on the invoice
 or the company only.

In case the invoice address should be different to the one stated above, please tell us.

Please send the form via Fax or E-Mail:

Fax: +49 (0)731 379 357 80
Email: pmtj.com

Should we book the hotel for you? (please tick)

- yes no

Arrival- /departure date: _____

Number of nights: _____

- Single double room

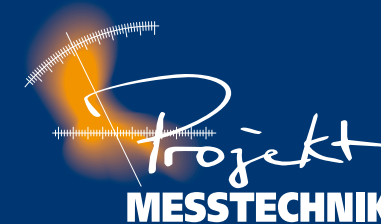
MSAS 2009

Moisture Sorption Analysis Seminar

15th to 16th October 2009
Ulm, Germany



A joint seminar between the
University of Innsbruck and Projekt Messtechnik
with friendly support of the
Fraunhofer Institute IVV, Freising



Objectives

The MSAS will communicate basic and advanced knowledge as well as practical know-how about moisture sorption analysis. All users that apply moisture sorption as an analytical tool for the evaluation of materials in either research or industry to the principles will benefit from the seminar.

The seminar will

- introduce into the basic principles and mechanisms of moisture interactions
- explain and evaluate current analytical methods
- give an overview how to successfully set up and conduct experiments
- show how to process and evaluate the measured data
- discuss applications in pharmaceutical, food, textile etc. research/industry
- provide the opportunity to exchange knowledge with experts and other users

Lecturers

Univ. Prof. Dr. Ulrich Griesser -
Institute for Pharmacy, University Innsbruck
Wolfgang Danzl -
Fraunhofer Institut für Verfahrenstechnik und Verpackung
Jürgen Dillenz – *Projekt Messtechnik*

Participants

The number of participants is limited to 15 persons. The registration acceptance will be determined by the date of registration.

Language

The official language of the workshop will be English and no translation will be provided.

Location

The seminar will be held at the Service and Training Centre of Projekt Messtechnik in Ulm. The centre is located in the periphery of the historical town of Ulm. Ulm is situated in the southern part of Germany 70 kilometers from the Stuttgart Airport and 150 km from the Munich Airport with excellent train connections.

Social Event

Following to the conference dinner a medieval night watchman will show us a typical night watch tour through the fishermen and tanner quarters of Ulm and tell us stories and anecdotes from historical Ulm. The tour will take about two hours and will end with a drink in the former bath house.

Programme

Thursday Morning – Basics

9:00 - 9:15

Welcome

9:15 - 10:00

Fundamental Aspects of Moisture Sorption
Water properties, humidity, Mollier diagram, units, terms, calculations etc.

10:00 - 10:30

Moisture Interactions with Solids
Overview, chemical physical changes, general problems and applications

10:30 - 10:50

Coffee Break

10:50 - 11:20

Moisture Sorption Isotherms
Types of isotherms, classification etc.

11:20 - 11:50

Analytical Aspects of Water Determination in Materials
Overview, advantages and disadvantages of relevant methods

11:50 - 12:30

Principles of Dynamic Vapor Sorption Instruments
Operating principles, instrumentation, technical details

12:30 - 13:30

Lunch Break

Thursday Afternoon - Experiments and Applications

13:30 - 14:00

Moisture Sorption Instruments - Demonstration
SPS series

14:00 - 15:00

Calibration and validation of
Moisture Sorption Analyzers
Instrument validation, Min weight considerations, GLP, ISO certification, CFR21 part 11

15:00 - 15:20

Coffee Break

15:20 - 16:00

Experimental Aspects and Strategies
Sample preparation, predrying, choosing the experimental setup

16:00 - 17:00

Interpretation and Evaluation of measurements
Representative examples, hydration, phase transitions, deliquescence, decomposition etc.

17:00

Discussion

19:00

Conference dinner at the "Stern" hotel

21:00

Guided tour through Ulm with a medieval night watchman

Friday Morning - Specific Materials and Topics

9:00 – 9:30

Sorption Measurements in Food Research
aw-values and microorganisms, lactose crystallization in milk powder and foods containing milk powder

9:30 – 10:00

Emulsions and Desiccation
Water diffusion within food and how to simulate in a moisture sorption instrument

10:00 – 10:20

Coffee break

10:20 – 11:30

Moisture Sorption in Different Research Areas
Pharmaceuticals, textiles, building materials, tasks and problems examples, patent relevance, etc.

11:30 – 12:00

Future Developments

12:00 – 13:00

Lunch break

Friday Afternoon – Discussion and End

13:00

Discussion

14:00

Coffee / End of Seminar