

With FDA and USP Speakers

# Particles in Parenterals

## Visual Inspection Systems & Root Cause Analysis

7-8 May 2013, Vienna, Austria

## Highlights

- Regulatory & compendial requirements
  - Pharmacopeias (EU, US, Japan)
  - FDA's expectations
  - GMP requirements in EU & US
- Particle Sources & Root Cause Analysis
  - Sources for visible and sub-visible particles
  - Particle OOS handling
  - Risks associated with particles
- Particle Detection
  - QA aspects of manual, semi-manual and fully automated visual inspection
  - Detection methods for sub-visible particles
  - Classification of defects
  - Qualification and validation of an automated visual inspection system

## Speakers:

Scott Aldrich USP

Dr Helmut Gaus Rentschler Biotechnologie

Dr Stephen Langille FDA

**Dr Daniel Müller** Regional Government Tübingen, Germany

**Dr Tobias Posset** *Roche Diagnostics* 

Bernd Renger European QP Association



EUROPEAN COMPLIANCE ACADEMY

## **Particles in Parenterals**

7-8 May 2013, Vienna, Austria

Objectives

Background

Main topic of this conference is the detection of particles in parenterals as well as finding their origin. Besides special tests conducted during root cause analysis, routine 100% inspection of products for parenteral use will be addressed. Apart from technical aspects and quality assurance as also the practical operation of inspection systems will be examined, and you will receive guidance on putting them into operation.

In most cases particles found in parenteral medicines will lead to a quarantined product or even to the recall of the product – as we have seen in 2012 in the cases of some bigger companies. Responsible staff in charge will have to start root cause analysis to find the source of the particles. There are several origins possible. Particles found can be categorised in extrinsic (not part of the process), intrinsic (part of the process) or inherent (product agglomerates). Nevertheless their source must be found and eliminated.

The testing methodology in the major compendia have been harmonised with regard to subvisible particles, coming for example from agglomeration of biopharmaceutical products. But: the Pharmacopoeias do not address particles smaller than 10  $\mu$ m in parenteral drugs. Recent publications have emphasised the need to measure these small particles as well, and the FDA wants to further understand possible threats to

the health of patients by these particles. New requirements are expected.

Despite the harmonisation of the tests concerning subvisible particles, there is confusion within the global pharmaceutical industry with regard to the requirements for testing on visible particles.

The required 100% visual inspection can be done manually, semiautomated and fully automated.



mage: Seidenader

Throughout the last years there has been a recognisable trend towards automated inspection machines. The challenge for pharmaceutical companies is to find a suitable machine for their products and to determine reasonable inspection parameters during qualification and validation. But also during routine process there are questions arising like the permission of re-testing and the usage of test-sets and setting AQL-Levels.

We will address those topics during the conference and discuss and answer questions on

- The compendial requirements concerning particles
- The test methodology with respect to particle testing
- The possible origins of particles in sterile products
- The methodology of determining the possible sources
- The GMP requirements for routine testing on particles
- QA aspects of visual inspection and AQL testing
- The qualification and validation of an automated system

**Target Audience** 

This conference is directed at specialists and executives from sterile operations, that is manufacturing, quality control and engineering. But also persons responsible for CAPAs in case of particle OOS and suppliers of primary packaging materials for sterile medicinal products are target group of this conference.

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Bernd Renger Chairman of the European QP Association

#### Regulatory and Compendial Requirements

#### **Compendial requirements for particle testing**

- Current requirements for visible particles
- Current requirements for subvisible particles
- Trends and upcoming changes
- FDA proposals & industry response
- Harmonisation and differences in EU and Japan
- Particle Identification
  - The nature of particles and their sources
  - Current trends for compendial guidance

#### FDA's thinking on particles and particle testing (US)

- FDA regulations relating to particulate matter in injectable drug products
- FDA drug application requirements and trends,
- Recent recall events due to particulate matter contamination
- Clinical concerns regarding particulate matter contamination
- The <10 um particle issue</p>

#### **Regulatory requirements and GMP inspections of visual inspection systems (EU)**

- Regulatory Documents (EU-GMP-Guide, Annex 1, others)
- Qualification of premises & equipment
- Requirements for workplace & personnel
- Evaluation of risk / particulate contamination & glass breakage
- Experience for GMP-inspections (observations) & surveillance of quality defects (rapid alert / recall)

#### Sources of particulate matter in injectables

- External sources
  - Containers & closures
  - Filters, tubing etc.
  - Abrasion form equipment
- Internal sources (product inherent particles, ..)
- Risks associated with particles

#### Particle OOS - what to do?

- Root Cause Analysis
  - Procedures
  - Tools
    - Analytical methods
- Examples
- Documentation

#### Particle Detection and Inspection Systems

#### Quality assurance topics to be considered in manual and automatic visual inspection

- Defect classes
- Warning limits
- OOS- and Deviation-Matrix
- Training of the personnel
- AQL-testing, release decision
- Test kits und test samples

#### Subvisible Particles: the Subvisible Particle Count Test

- What does 'subvisible' mean?
- Compendial Methods
- Comparison of the methods
- Different detection methods
- Validation & Verification of the Particle Count Tests
- Relevance of subvisible particles

#### Implementation of an automated inspection system

- Qualification program
- Validation program
- Sample sets for qualification purposes
- Generation and Classification of defects and defect libraries
- Performance comparison with the manual inspection
- Ejection of defects & re-inspection
- Routine inspection and system capability

Particles - Origin and Root Cause Analysis

#### **Scott Aldrich**

#### USP, Ultramikro LLC, USA

Scott is a biologist and recognized expert in pharmaceutical particulate matter control. He started his career in 1971 working for several pharmaceutical companies in R&D. At Pfizer he led a group for particle identification an contamination control. He now works for Ultramikro, LLC, a consulting firm configured to address projects regarding particulate matter source, control and reduction. Scott is an active member of the 2010-2015 USP Dosage Forms Expert Committee, principally for Injections; USP chapters <1>, <788>, <789> and several others.

#### **Dr Helmut Gaus**

#### **Rentschler Biotechnologie GmbH**

Dr Gaus is Qualified Person and Vice President Quality Control at Rentschler Biotechnologie. Within his various positions in the pharmaceutical industry the incoming inspection of packaging components was always part of his responsibility.

#### **Dr Daniel Müller**

#### Regierungspräsidium Tübingen

Dr Müller studied Pharmacy and started his career in the pharmaceutical industry. Among other positions he served as a Qualified Person of large volume parenterals. In 2001 he joined a German inspectorate and has been working as a GMP-Inspector with focus on biotechnological active ingredients and sterile drug products since that time. He is also a member of the German Expert Group 4 (Biotechnology & Tissue).

#### **Dr Stephen Langille**

### FDA, Center for Drug Evaluation and Research (CDER)

Dr. Langille is a Senior Microbiology Reviewer with the Center for Drug Evaluation and Research. He joined the FDA in 2000 and has served as an FDA liaison to the USP Parenteral Products – Industrial and USP Dosage Forms expert committees. Dr. Langille serves on a number of FDA and USP committees dealing with issues related to particulate matter in injectable drug products.

#### **Dr Tobias Posset**

#### **Roche Diagnostics GmbH**

Tobias Posset studied Biochemistry and Chemistry. Actually he is heading the Production Support unit in the Pharma Production at Roche Diagnositics in Mannheim. Herein he is responsible for the in-process control, the particle laboratory, the automated visual inspection machines and the coordination of the manual inspection training.

#### **Dr Bernd Renger**

**Chairman of the European QP Association; Renger Consulting, Germany** Dr Bernd Renger is a member of the ECA Advisory Board and Chairman of the European QP Association. Since 2011, he is running his own consultancy business. Before that he was Director of Quality Control at Vetter Pharma-Fertigung. He started his career at Hoechst AG as a research and development chemist. Since then, he has held several positions at Mundipharma, Altana Pharma and Baxter.



On 7 May, you are cordially invited to a social event.

This is an excellent opportunity to share your experiences with colleagues from other companies in a relaxed atmosphere.

Social EvenT

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	We look forward to welcoming at one of our next events – and we already wish you a pleasant flight!
	*Please note: You may have to enable pop-ups on the Mobility Partner Program website – other-wise the booking platform window will not open.
GMP Certification Programme	This Conference is recognised within the GMP Certification Programme for the mod- ules "ECA Certified Technical Operations Manager" ans "ECA Certified Sterile Pro- duction Manager". By attending selected seminars, the participant can acquire an additional certificate. We offer the following certification modules:
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	HEIDELBERG. More information about ECA can be obtained on the Website http://www.gmp-compliance.org.

#### **Easy Registration**

Reservation Form: CONCEPT HEIDELBERG P.O. Box 10 17 64 69007 Heidelberg Germany Reservation Form: + 49 6221 84 44 34 e-mail: info@concept-heidelberg.de Internet: www.gmp-compliance.org

#### Date

Tuesday, 7 May 2013, 10.00 to approx. 17.45 h (Registration and coffee 09.30 - 10.00 h) Wednesday, 8 May 2013, 09.00 to approx. 15.00 h

Venue

RENAISSANCE WIEN HOTEL Linke Wienzeile – Ullmannstrasse 71 1150 Vienna, Austria Phone + 43 1 89102 0 Fax +43 1 89102 – 300

#### **Conference fees**

ECA Members EUR 1,490.- per delegate plus VAT APIC Members EUR 1,590.- per delegate plus VAT Non-ECA Members EUR 1,690.- per delegate plus VAT EU GMP Inspectorates EUR 845.- per delegate plus VAT The conference fee is payable in advance after receipt of invoice and includes conference documentation, dinner on the first day, lunch on both days and all refreshments. VAT is reclaimable.

#### Accommodation

registration fee.

Concept Heidelberg has reserved a limited number of rooms in the conference hotel. You will receive a room reservation form with all further information when you have registered for the event. Early reservation is recommended.

#### Registration

Via attached reservation form, by e-mail or by fax message. Or you register online at www.gmp-compliance.org.

#### Conference language

The official conference language will be English.

#### Organisation and Contact

CONCEPT HEIDELBERG P.O. Box 10 17 64 69007 Heidelberg, Germany Phone +49 (0) 62 21/84 44-0 Fax +49 (0) 62 21/84 44 34 info@concept-heidelberg.de www.concept-heidelberg.de

#### For questions regarding content:

Dr Robert Eicher (Director Operations) at +49-62 21 / 84 44 12, or per e-mail at eicher@concept-heidelberg.de.

#### For questions regarding reservation, hotel, organisation etc.:

Ms Nicole Bach (Organisation Manager) at +49-62 21 / 84 44 22, or per e-mail at bach@concept-heidelberg.de.

If the bill-to-address deviates from the specification to the right, please fill out here:	Registration form (please complete in full) Particles in Parenterals 7-8 May 2013, Vienna, Austria Mr Ms Title	
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	Company	
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