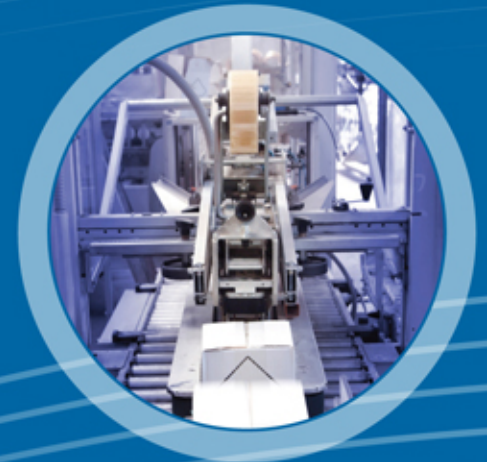




Connecting People, Science and Regulation®

Points to Consider in the Manufacturing of Sterile Products

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Points to Consider in the Manufacturing of Sterile Products

Disclaimer:

The views and opinions expressed in this presentation are those of the author and do not necessarily reflect the official policy or position of Novartis or any of its officers.

Similarly, as the PDA «Points to Consider...» revision is still in progress and it has not been approved yet per the PDA approval process, the opinions expressed in this presentation are those of the author and do not necessarily reflect the official position of PDA .



Points to Consider in the Manufacturing of Sterile Products

Agenda:

- Background
- The PDA Process & Task force
- Some of the points currently included in the revision
- Timelines & Conclusion



Points to Consider in the Manufacturing of Sterile Products

Background

- PDA has almost seventy years of focus and leadership in the best practices for sterile pharmaceutical manufacturing.
- PDA leadership remains focused on promoting science-based guidance, and driving greater international harmonization.
- PDA is prioritizing updates for several of our related technical reports, to ensure state-of-the-art guidance in the manufacturing of sterile medicines.
- PDA has also commented on many of the major regulatory guidances on this subject over the years, and continues to do so, as the technology changes.



Points to Consider in the Manufacturing of Sterile Products

Background (cont.ed)

- PDA published in 2003 the “Points to Consider For Aseptic Processing”*. Much has been learned by the industry since the publishing of that document. In an effort to address the impact of this gained knowledge, the PDA has set up an expert task force, with the purpose of developing a revision of these PtC.
- PDA believes that this document may be of interest also to Health Authorities for the update of existing regulations and guidelines, e.g. the Annex 1 of the European GMPs: a Concept Paper is being developed by EMA (through the GMP/GDP IWG) which may lead to a revision of Annex 1 or issuance of additional clarification notes (“Q&A’s”).
Furthermore, a PIC/S WG has been established on this topic and is operative since August 2014

* PDA Journal of Pharmaceutical Science and Technology, 2003 Supplement, Volume 57, Number 2



Points to Consider in the Manufacturing of Sterile Products

PDA Process & Task Force

- PDA has set up a Task Force made up of subject matter experts from industry, aimed at updating the Points to Consider document to provide recommendations on current topics, best practices, and areas of clarification which are important to the manufacturing of quality sterile products.
- Many of the topics have been included as a result of input from PDA members at conference sessions and meetings. It is the intention of the task force to issue an initial revision and then to supplement the PtC as additional input is received from industry and member.
- The scope of the PtC is aseptic processing. It is anticipated that this scope may be further broadened to include topics related to terminal sterilization and other related topics, which may be reflected in one or more supplements or addendums to this revision, published at a later date.



Points to Consider in the Manufacturing of Sterile Products

PDA Process & Task Force (Cont.ed)

- Five guiding and linked principles are the basis for the revision:
 - Use of science and risk based approaches
 - Use of modern technology
 - Re-evaluation of traditional control strategies
 - Consider new product/container presentations and therapies
 - Support harmonized technical and regulatory language



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PDA Process & Task Force (Cont.ed)

Current PDA “Core” Task Force composition:

- Hal Baseman (Valsource), Co-chair
- Gabriele Gori (Novartis), Co-chair
- Masahiro Akimoto (Toray)
- Marc Besson (Sanofi)
- Jette Christensen (Novo Nordisk)
- Veronique Davoust (Pfizer)
- Vincent O'Shaughnessy (Amgen)
- Phil De Santis (Consultant)
- Richard Johnson (PDA)
- William Miele (Pfizer)
- Janie Miller (PDA)
- Rainer Newman (Consultant)
- Mike Sadowski (Baxter)
- Ed Tidswell (Baxter)

Additional experts contributed on special topics, including (but not limited to) the following: Maik Jornitz (G-Com), Chuck Reed (Weiler), John Shabushnig (Consultant), and others



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Some of the topics currently* included in the revision

- Airflow Velocity and Patterns
- Uni-directional Flow vs Laminar Flow
- Grade A Environment over Cappers
- Differential Pressure
- Testing of HEPA filters and HEPA filters patching
- Tube length and bend radii for total particulate sampling
- «At Rest» status
- Monitoring of $\geq 0.5\mu\text{m}$ and $\geq 5.0\mu\text{m}$ particles and room classification
- EM Alert & Action Levels setting
- Location and Frequency of monitoring of total particulates and viable particles

* This is not a comprehensive list. Also, some of the points described in this list may be removed and/or new points added to the final version of the revised PtC version, based on the on-going review and revision process and the inputs received from the Industry and Regulators.



Points to Consider in the Manufacturing of Sterile Products

Some of the topics currently* included (Cont.ed)

- Process Simulation Design and Criteria
- Aseptic Personnel Qualification and Disqualification
- Entry of Equipment and Material into the Aseptic Processing Area
- Cleaning and Disinfection
- Heat sterilization as method to prefer
- Use of Biological Indicators
- Steam quality monitoring
- Requirements on pre-filtration bioburden limits
- Sterilizing filter integrity testing (pre-/post-)

* This is not a comprehensive list. Also, some of the points described in this list may be removed and/or new points added to the final version of the revised PtC version, based on the on-going review and revision process and the inputs received from the Industry and Regulators.



Points to Consider in the Manufacturing of Sterile Products

Some of the topics currently* included (Cont.ed)

- Manufacturing and Control of WFI
- Sterilization/sanitization of WFI systems
- Isolators/RABS/BFS

* This is not a comprehensive list. Also, some of the points described in this list may be removed and/or new points added to the final version of the revised PtC version, based on the on-going review and revision process and the inputs received from the Industry and Regulators.



Timelines & Conclusion

- PDA has a strict, comprehensive review process prior to releasing technical documents, to include a review and approval by the technical Advisory Boards (SAB, BioAB, RAQAB) and of the PDA Board of Directors. This to ensure the accuracy and quality of the document.
- As already mentioned, it is the intention of the task force to issue an initial revision and then to supplement the PtC as additional input is received from industry and member.
- Initial revision completion targeted for year end.



Points to Consider in the Manufacturing of Sterile Products

Timelines & Conclusion (Cont.ed)

- PDA is devoted to supporting the advancement of technology and science in the manufacturing and control of sterile medicinal products .
- With the revision of the 2003 Points to Consider document, PDA wants to address specific areas that may benefit from clarification, or that could be updated to reflect current state-of-the-art practices.
- An open communication and collaboration with regulators is welcome with the purpose of achieving the common goal to ensure quality and safe products for the patients.



Thank You!

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