

**PRESENTATION ABSTRACT****Presentation topic: Prefillable syringes: convincing design flexibility****Speaker:**Frank Bamberg  
Product Manager Syringes**Company:**

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- Ready-to-fill syringes with their advantages in terms of convenience and safety of administration showed significant market growth over the last few years and are expected to grow even further. While prefillable syringes made of glass have been established for decades, those made of plastic, the cyclic olefin polymer family in particular, have just made the transition from an interesting innovation to an accepted parenteral drug packaging as indicated by the increased availability from multiple suppliers.
- This presentation reviews the properties of the different cyclic olefin polymers and their use in primary parenteral packaging applications such as prefillable syringes. Clearly, the knowledge base has advanced in the past few years. More companies have included the cyclic olefins in their packaging evaluations, and there is a much higher confidence level on leachables & extractables, as well as regulation of plastics. Beyond this, choosing cyclic olefins has become a valid option to address drug-container interaction topics like tungsten residues, metal ion leaching or reduction of free silicone lubricant or even total lubricant free systems.
- While initially targeting to be an exact copy of the prefillable glass syringe, developments now exploit the extra design space that is given from injection moulding of plastic over the forming of tubular glass. The integration of primary polymer container with a safety device or autoinjector or the realization of customized sizes or multi chamber designs can be realized in a much simpler way. By extending the product range from standard products to highly customizable systems, prefillable polymer syringes can help to fulfill the unmet needs of the pharmaceutical industry.