

## **UPSTREAM MICROBIAL PROCESS CHARACTERIZATION WITH SINGLE-USE BIOREACTORS FROM 15ML TO 50L**

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Developing biological and industrial molecules derived from microbial fermentation relies upon performant bioreactors to allow a rapid scale up to commercial batches. For this it is relevant to minimize any possible risks while developing a process that fits the industry quality standards. The choice of a well characterized system plays an important role from R&D through to production stages. The aim of this poster is to provide evidence to demonstrate the benefits of a microbial process developed using single-use, high throughput, and scalable upstream solutions. The method chosen to showcase this consistency is based on the DECHEMA Guidelines for Engineering Characterization principles and with the Zurich University of Applied Sciences, ZHAW. DECHEMA guidelines include a set of standard conditions for bioreactor characterization. By using process development and pilot scale bioreactors like the ambr 15f, ambr 250, and BIOSTAT STR 50, it is possible to accelerate development timelines and ensure process success.