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Continuous culture in the age of single-use

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CONTINUOUS CULTURE IN THE AGE OF SINGLE-USE

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Continuous culture offers a number of advantages, e.g. higher titres and constant culture environment and is the method of choice for challenging therapeutic proteins such as coagulation factors. Additional opportunities arise for the commercial production of monoclonal antibodies using so called concentrated fed-batch mode where the product is retained in the bioreactor and fresh medium is constantly perfused through the culture and combining it with single use production technologies. This approach is an effective way to reduce time to market as additional scale-up steps after phase III are not required to produce large amounts of product whilst benefiting from the widely discussed advantages of single use technologies.

We will present our approach to single-use continuous manufacturing, how to deal with typical challenges and share data from a case study at 2000L scale.