Press Release

Sartorius Stedim Biotech launches new ambr® 250 high throughput bioreactor system for perfusion culture

- **Unique, single-use perfusion system offers a fast-track to intensified cell culture process development**
- **Product innovation being unveiled at BPI West Conference, San Francisco, USA**

Goettingen | Germany, March 14, 2018 - Sartorius Stedim Biotech (SSB), a leading international supplier for the biopharmaceutical industry today announced the launch of the ambr® 250 high throughput (ht) perfusion, a new automated parallel bioreactor system. It has been specially designed for rapid cell culture perfusion process development to optimize production of therapeutic antibodies. The system will be launched at the BPI West 2018 Conference in San Francisco, USA (19-22 March, 2018).

The ambr 250ht perfusion system has been developed in collaboration with major biopharma companies. It combines 12 or 24 single-use perfusion mini bioreactors (100-250 mL working volume) with associated single-use perfusion components, all controlled by one automated workstation. The combination of this multi-parallel processing capacity and fully single-use perfusion vessel enables scientists to perform more perfusion culture experiments in a fraction of the time and cost of using traditional perfusion-enabled bench top bioreactors. This new innovation supports a range of hollow fiber perfusion applications, enabling Design of Experiments (DoE) studies for high cell density process development in a Quality by Design (QbD) approach.

Central to the system is the novel perfusion bioreactor assembly, which is based on the established and award-winning ambr® 250 bioreactor design. Intensified cell culture processing is enabled via new components such as high efficiency spargers, perfusion pump chambers and an industry standard hollow fibre for cell retention filter. The geometrical similarity of the mini perfusion bioreactor design to BIOSTAT STR® pilot and manufacturing scale bioreactors, enables rapid scale-up of optimized perfusion processes, and shorter development timelines.

The ambr 250ht perfusion system is simple to set up and use, due to the fully assembled and irradiated perfusion bioreactors which include all the essential components. This includes single-use sensors to continuously monitor pressure at the culture fluid inlet and permeate outlet, enabling online monitoring of transmembrane pressure, as well as standard parameters such as pH and DO.

Dr Barney Zoro, ambr Product Manager at Sartorius Stedim Biotech, explains: "By introducing our new ambr 250ht perfusion system, we are offering our customers an important enabling technology for early-stage development of intensified cell culture processes. Transitioning from fed-batch to perfusion culture offers the potential to reduce capital intensive risk by using 1-2000L single-use bioreactors instead of 10,000L production volumes in stainless steel. ambr 250ht perfusion is a predictive process development tool that could lower the cost of goods of antibody production, as well as significantly shortening development timelines."

Sartorius Stedim Biotech looks forward to welcoming bioprocess scientists to **Stand 407 at BPI West** where they can find out how utilizing this single-use perfusion platform will deliver a step-change in their scalable bioprocess development.

To find out more about SSB's new ambr 250ht perfusion system, please click for more details:
https://www.sartorius.com/sartorius/en/EUR/products/bioreactors-fermentors/multi-parallel-bioreactors/ambr_perfusion

Image Files:

The ambr 250ht perfusion system has been specially designed for rapid cell culture perfusion process development to optimize production of therapeutic antibodies.

SSB new ambr 250 high throughput perfusion system photo 1
SSB new ambr 250 high throughput perfusion system photo 2

Video File:
https://sartorius.wistia.com/medias/5a446hh1c5

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A profile of Sartorius Stedim Biotech

Sartorius Stedim Biotech is a leading international supplier of products and services that enable the biopharmaceutical industry to develop and manufacture drugs safely and efficiently. As a total solutions provider, Sartorius Stedim Biotech offers a portfolio covering nearly all steps of biopharmaceutical manufacture. The company focuses on single-use technologies and value-added services to meet the rapidly changing technology requirements of the industry it serves. Headquartered in Aubagne, France, Sartorius Stedim Biotech is quoted on the Eurolist of Euronext Paris. With its own manufacturing and R&D sites in Europe, North America and Asia and an international network of sales companies, Sartorius Stedim Biotech has a global reach. In 2017, the company employed approx. 5,100 people, and earned sales revenue of 1,081 million euros.

ambr® systems are designed and manufactured by Sartorius Stedim Biotech/TAP (Royston UK), specialized for automated cell culture and fermentation systems for life science research, development and production. The ambr® systems are widely used for cell line development and process optimization at pharmaceutical, biotechnology and academic laboratories. They are proven to provide a reliable model and consistent scalability to a range of upstream processes.

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