

News Release

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May 21, 2015

EMD Millipore Introduces Single-Pass Tangential Flow Filtration with Pellicon® Cassettes for Increased Capacity, Recovery and Concentration

- A simpler way to reduce processing volumes and eliminate process bottlenecks
- Reduction in pump size and less hardware, resulting in lower cost and a more compact footprint
- Allows higher concentration factors and higher product recovery

Billerica, Massachusetts, May 21, 2015 – <u>EMD Millipore</u>, the Life Science business of <u>Merck KGaA</u> of Darmstadt, Germany, today introduced single-pass tangential flow filtration (TFF) with Pellicon® cassettes, an enhanced application of EMD Millipore's existing TFF technology that allows concentration of process streams without the recirculation required in traditional TFF. This alternative application eliminates typical process constraints caused by higher volumes or concentration factors, resulting in increased capacity. It also enables continuous processing by coupling the TFF step inline with other process steps.

"Tangential flow filtration is widely used by biopharmaceutical manufacturers for downstream concentration, and the industry can benefit from new ways to simplify the process," said Daniel Stamm, Head of Global Pharma Processing. "EMD Millipore has been collaborating with its customers on single-pass TFF process development, allowing them to meet the demands of higher titer processes without major investments in new equipment with great success."



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EMD Millipore's single-pass TFF system uses its proven Pellicon[®] cassettes, which are TFF devices ideal for higher titer therapeutic antibodies as well as more demanding filtration processes that require higher operating pressures, temperatures, concentrations or caustic cleaning regimes. The cassettes deliver unmatched performance consistency and have been used by EMD Millipore customers worldwide at every stage and scale of biopharmaceutical production.

Please click here for more information about single-pass TFF with Pellicon® cassettes.

About EMD Millipore

EMD Millipore is the U.S. Life Science subsidiary of Merck KGaA, Darmstadt, Germany. As part of the global Life Science business of Merck KGaA, Darmstadt, Germany, EMD Millipore offers a broad range of innovative, performance products, services and business relationships that enable our customers' success in research, development and production of biotech and pharmaceutical drug therapies. Through dedicated collaboration on new scientific and engineering insights, and as one of the top three R&D investors in the life science tools industry, the Life Science business of Merck KGaA, Darmstadt, Germany, serves as a strategic partner to customers and helps advance the promise of life science. Headquartered in Billerica, Massachusetts, the global business has around 10,000 employees, operations in 66 countries and 2014 revenues of €2.7 billion.

For more information, please visit www.emdmillipore.com.

About Merck KGaA, Darmstadt, Germany

Merck KGaA, Darmstadt, Germany, is a leading company for innovative and top-quality high-tech products in healthcare, life science and performance materials. The company has six businesses − Biopharmaceuticals, Consumer Health, Allergopharma, Biosimilars, Life Science and Performance Materials − and generated sales of € 11.3 billion in 2014. Around 39,000 employees work in 66 countries to improve the quality of life for patients, to foster the success of customers and to help meet global challenges. Merck KGaA, Darmstadt, Germany, is the world's oldest pharmaceutical and chemical company − since 1668, the company has stood for innovation, business success and responsible entrepreneurship. Holding an approximately 70% interest, the founding family remains the majority owner of the company to this day. Merck KGaA, Darmstadt, Germany holds the global rights to the Merck name and brand. The only exceptions are Canada and the United States, where the company operates as EMD Serono, EMD Millipore and EMD Performance Materials.

For more information, please visit www.emdgroup.com.