

## **3M Introduces the Emphaze™ AEX Hybrid Purifier**

*Laboratory and Scale-up Single Use Capsules Now Available.*

**ST. PAUL, Minn.** – July 22, 2014 – 3M Purification’s new purification technology platform, under the 3M Emphaze brand, is designed to help biopharmaceutical manufacturers achieve high product purity early in the manufacturing process, improving efficiency and process economics. The new 3M™ Emphaze™ AEX Hybrid Purifier, the first in a series of chromatography and membrane chromatographic products, combines three unique 3M technologies — advanced polymer materials, fine fiber nonwovens, and membranes — to deliver an all-synthetic clarifying product line containing both a novel anion exchange nonwoven media, and a fine particle, bioburden reduction membrane. The 3M Emphaze AEX Hybrid Purifier Laboratory and Scale-up capsules are now available with the Production capsules to be launched at the end of the year.

“The 3M Emphaze AEX Hybrid Purifier is a multi-mechanism clarifying device,” said Tom Martin, Global Business Manager, Life Sciences Process Technologies, 3M Purification. “This product actually represents a new class of clarifying products, with an all-synthetic construction, substantial chromatographic capability, and a defined 0.2 µm pore size.”

The product is an integral combination of two types of media (Q-functional nonwoven and membrane) that work together to provide unsurpassed product purity after clarification when using a single unit operation. The defined pore size of the qualifying membrane provides tremendous removal of insoluble particles well below 0.1 µm in size, resulting in superior turbidity reduction. At the same time, the high chromatographic capacity of the Q-functional nonwoven provides substantial reduction of negatively charged, soluble impurities including DNA and HCP. This combination of attributes allows the hybrid purifier to provide superior product purity before and, most importantly, after the protein A column, enabling a novel and simple post protein A mAb purification process.

“We designed the 3M Emphaze AEX Hybrid Purifier to provide the highest possible level of product protein purity early in biopharmaceutical downstream process. What is truly exciting is that by targeting the removal of particularly problematic impurities from entering the protein A column, a profound impact on the entire downstream process can be realized,” said Greg Jellum, Global Laboratory Manager, Life Sciences Process Technologies, 3M Purification. “This new product platform is a tremendous demonstration that 3M’s materials-based technology engine will enable true innovation for our industry.”

The 3M Emphaze AEX Hybrid Purifier offers a loading capacity similar to fine grades of highly-charged conventional depth filters, and can easily be incorporated into existing manufacturing processes where such a depth filter would be used. The 3M Emphaze AEX Hybrid Purifier will be encapsulated in 3M’s signature single-use capsule design, thereby providing the opportunity to minimize capital in a matched component harvest solution. By providing the best possible protection of valuable downstream unit processes, the technology holds significant potential for improving efficiency in the production of mAb drugs for conditions including various cancers, as well as autoimmune diseases like rheumatoid arthritis and Psoriasis.

For more information, visit <http://3Mpurification.com/Emphaze>

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**About 3M**

3M captures the spark of new ideas and transforms them into thousands of ingenious products. Our culture of creative collaboration inspires a never-ending stream of powerful technologies that make life better. 3M is the innovation company that never stops inventing. With \$31 billion in sales, 3M employs 89,000 people worldwide and has operations in more than 70 countries. For more information, visit [www.3M.com](http://www.3M.com) or follow [@3MNews](https://twitter.com/3MNews) on Twitter.

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