

Thermo Fisher Scientific introduces new products for Biopharma

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Thermo Fisher Scientific highlighted its bioprocessing production capabilities "built for biopharma," at the International Pharmaceutical Expo (INTERPHEX) to support its expanding customer base of global biopharmaceutical manufacturers. New products at the show include innovations in single-use technologies, cell culture, protein purification and mass spectrometry.

"Emerging markets for precision medicine, continued growth for biotherapeutics and a renewed focus on cost, increase pressure on customers to identify efficiencies in their production processes," said Mr Cory Stevenson, president of Thermo Fisher's bioproduction business. "Our emphasis on best-in-class products across the workflow helps our customers to accelerate innovation and increase productivity."

Thermo Fisher has developed a comprehensive protein analytics platform to support microbial and process quality when accuracy and time-to-results are critical. The Applied Biosystems ProteinSEQ Protein Quantitation System, a breakthrough immuno-PCR platform for residual host-cell protein (HCP) and protein A quantitation, is designed for sensitive and robust protein quantitation with dynamic range, providing four orders of magnitude of greater confidence and quality of data throughout the production process.

Glycosylation is one of the key critical quality attributes of monoclonal antibody-based biotherapeutics, affecting a biological drug's safety, efficacy, clearance and immunogenicity. The new Applied Biosystems GlycanAssure Glycan Analysis and Quantitation System is the first solution to combine high-throughput and high-data quality in an integrated platform. This helps save labor, time and analysis cost by using a simple sample preparation, a multi-capillary CE instrument and assay-specific software.

To enhance productivity while improving protein quality, Thermo Fisher introduced Gibco GlycanTune, a feeding supplement engineered to provide precision and control in predictively shifting glycan profiles. Based on EfficientFeed technology, the

feed also enables a multi-fold increase in titers and maximizes bioreactor utilization.

Thermo Fisher's single-use technologies comprise best-in-class bioreactors, mixers, fermentors and ancillary products that enable efficiency, speed and reproducible results. At the core are both standard and custom-built BioProcess Containers, which are specially engineered films configured to fit customers' unique applications and provide process flexibility.

Overcoming Technical and Economic Challenges in the Purification Process

To address downstream purification challenges, new Thermo Scientific POROS CaptureSelect AAV8 and POROS CaptureSelect AAV9 Affinity Resins are engineered to address the high selectivity and capacity requirements needed for the purification of adeno-associated virus types 8 and 9, which are often used for gene therapy applications.

Also featured at INTERPHEX is a novel approach to protein A capture chromatography. Thermo Scientific POROS MabCapture A Select Resin combines high-throughput purification performance at a lower price to reduce the cost of pre-clinical development and process-scale manufacturing.

Finally, regulatory changes and increased competition from biosimilar products continue to pressure biopharmaceutical drug manufacturers to streamline their analytical processes. The recently launched Thermo Scientific Vanquish Flex system is a UHPLC instrument with a fully biocompatible flow path, sample pre-compression and a broad range of detectors to suit biopharmaceutical analysis from intact proteins to unlabeled free glycans.