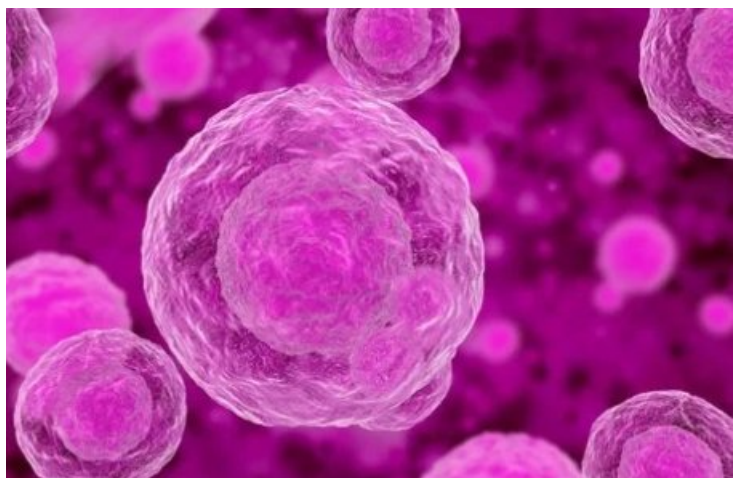


Fujifilm and Horiba co-develop high-sensitivity inline Raman measurement system

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For real-time monitoring of cell culture and purification in biopharmaceutical manufacturing



Japan-based Fujifilm Corporation and Horiba have announced the co-development of a high-sensitivity inline Raman measurement system that enables continuous, real-time monitoring of component concentrations directly from bioreactor and process equipment during cell culture and purification in biopharmaceutical manufacturing.

When this system is used to control purification processes in antibody drug manufacturing, antibody yield improves by approximately 10% compared with conventional UV-Vis-based process control methods.

The system developed jointly by the two companies combines a high-sensitivity Raman spectrometer, a single-use probe with a superior optical throughput, and Fujifilm's proprietary measurement algorithms to predict quality attributes.

By integrating Fujifilm's optical design technologies, cultivated through its imaging and optical device businesses, and its expertise in biopharmaceutical manufacturing in its Bio-CDMO business with Horiba's Raman spectroscopy technologies, known for their high sensitivity, precision, and stability, the companies have developed an inline Raman measurement system that achieves industry-leading sensitivity. This enables high-precision, real-time monitoring of changes in the composition of cell culture media and purification solutions.

Going forward, the two companies will work together to verify the system towards real-world use. By improving manufacturing processes' monitoring and advanced data analysis technologies, the system is intended to contribute to the stable manufacturing of high-quality biopharmaceuticals, including antibody drugs, and the reduction of manufacturing costs.