

HIGH-DENSITY VERO CELL PERFUSION CULTURE IN BIOBLU® 5P SINGLE-USE VESSELS

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Vero cells are anchorage-dependent cells that are widely used as a platform for viral vaccine production. In stirred-tank bioreactors, they are ordinarily grown on microcarriers. Fibra-Cel® disks are a promising alternative attachment matrix with a high surface-to-volume ratio. They provide a three-dimensional environment that protects cells from damaging shear forces, helping to achieve high cell densities. In this study, we cultivated Vero cells in Eppendorf BioBLU 5p Single-Use Vessels pre-packed with Fibra-Cel. The process was controlled with a BioFlo® 320 bioprocess control station. We cultivated the cells in perfusion mode, which ensures a consistent supply of nutrients and the removal of toxic byproducts. We achieved the very high Vero cell density of approximately 43 million cells per mL, demonstrating great potential for Vero-cell-based vaccine production using Fibra-Cel packed-bed vessels.