IMPROVING SINGLE USE BIOREACTOR DESIGN AND PROCESS DEVELOPMENT USING THE HyPerforma 5:1 S.U.B

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Operating bioreactor vessels at low working volumes (high turn-down ratio) is often desirable but brings about challenges in regard to mixing, mass transfer, and process control. Research done towards optimizing cell culture has provided methods to improve performance and control when operating under these special conditions.

- Impacts of enhanced energy transfer-Implementing bottom heat exchange, alternate impeller positions, and considering agitation dissipation rates.
- Maximizing your platform-Taking advantage of the unique Thermo Fisher Scientific Drilled Hole Sparge design and implementing a new Cross Flow Sparge into the headspace have yielded reliable mass transfer and cell culture results from 10-2000L working volumes.
- Improving bioprocess production–How new technology improves equipment utilization, scheduling efficiency, inventory logistics, and reactor harvest consistency.
- Operating at 5:1 Turn Down with the new 1000L and 2000L Hyperforma S.U.B. - cGMP operating considerations, design features, implementing enhanced processing tools.