



BIOne Single-Use Fermentor

Fully Closed System: No Cleaning, Assembly or Sterilization Required

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BIOne SUF out of and installed in a double walled vessel

Versatile Single-Use Solution for Diverse Microbial Applications

The BIOne Single-Use Fermentor (SUF) by Distek is ideal for numerous microbial fermentation applications ranging from plasmid DNA production in E.coli to recombinant protein expression in yeast, meeting the extreme oxygen transfer demands of highly aerobic microbial cultures. Available in a 2L and 10L volume, the BIOne Single-Use Fermentor offers reduced turnaround time and seamless transitions between processes. Featuring an agnostic design compatible with most common bioprocessing controllers, the BIOne Single-Use Fermentor is ready-to-use out of the box.

READY-TO-USE

The BIOne SUF, assembled in Distek's ISO 7 cleanroom with USP Class VI materials and gamma sterilized, minimizes contamination risk. This closed system removes the need for cleaning, assembly, or autoclave sterilization and is ready-to-use out of the box.



FLEXIBLE

The BIOne SUF is ideal for a wide range of microbial applications, including plasmid production with E. coli, protein expression in yeast, and cultivated food development. The SUF is designed to operate under the same demanding conditions as comparable autoclavable vessels.



AGNOSTIC DESIGN

With a range of motor adapters available, the BIOne Single-Use Fermentor is compatible with many common bioprocessing controllers on the market. This allows for seamless integration into any microbial bioprocessing laboratory.



Helping Science Improve Lives

Designed to Meet your Diverse Microbial Needs with Ease

Discover our single-use fermentor solution for microbial applications, specifically designed to handle a variety of needs. Key features include dual Rushton impellers and a baffle cage for effective mixing, along

	BIOne 2L SUF	BIOne 10L SUF
WORKING VOLUME (MAXIMUM)	1.9L	9.1L
WORKING VOLUME (MINIMUM)	750mL	2.5L
OPERATING TEMPERATURE RANGE	4°C to 60°C ¹	
OPERATING PRESSURE (MAXIMUM)	5 psig (.0345 mPa)	
AGITATION RANGE*	15 to 1250 rpm	15 to 900 rpm
GAS FLOW	Up to 2vvm	
IMPELLER DIAMETER	2.3"	3.18"
GAMMA IRRADIATED	25 to 40 kGy	

¹ BIOne SUF materials are rated for use at temperatures up to 60°C (except the Hamilton Single-Use pH probe, rated to 50°C). Structural Integrity Testing has been completed up to 60°C. Leachable and Extractables Testing completed at 40°C.

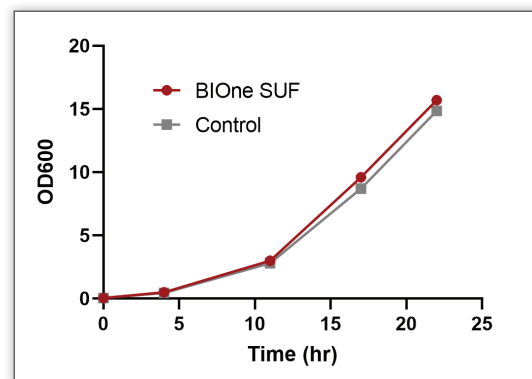
* (1) BIOne 2L SUF: 800 to 1250 rpm requires a minimum of 1vvm of sparging.

(2) BIOne 10L SUF: 600 to 900 rpm requires a minimum of 1.5vvm of sparging.

with the option for an integrated single-use pH probe. Enjoy the benefits of a non-invasive DO (polarographic) port and a standard septum port for easy integration. Our weldable TPE tubing comes in various sizes to suit your process requirements. High capacity sparge and exhaust filters along with a flute sparger with 7 x 1.5 mm holes delivers excellent gas exchange for highly aerobic microbial cultures.

E. COLI GROWTH PROFILE: BIOne SUF vs. CONTROL

E. coli growth profiles were evaluated in a 2L BIOne Single-Use Fermentor (SUF) and glass vessel control for a 22-hour batch process. Both systems were operated with identical conditions. Similar growth and titer were observed in the BIOne SUF and glass vessel control. Performance results indicate that the BIOne SUF is a suitable bench scale model for microbial fermentation process development and material generation.



STANDARD HEADPLATE CONFIGURATION

ADDITION PORT (STANDARD)	4	Tubing, TPE, 1/8" ID x 1/4" OD, C-Flex, Luer Connector	
ADDITION PORT (FINE)	1	Tubing, TPE, 1/16" ID x 1/8" OD, PharMed BPT, Luer Connector	
ADDITION PORT (LARGE)	1	Tubing, TPE, 1/4" ID x 7/16" OD, C-Flex, MPC Connector	
FILTERS (INLET)	1	50mm, 0.2µm PE Filter (2L)	200cm ² Capsule Filter (10L)
FILTERS (OUTLET)	1	200cm ² Capsule Filter	
HARVEST LINE	1	1/8" ID x 1/4" OD, C-Flex, Luer Connector	
NON-INVASIVE DO PROBE PORT*	1	12mm DO Probe	
SAMPLE PORT	1	Tubing, TPE, 1/8" ID x 1/4" OD, C-Flex, Needleless Connector	
SPARGER	1	Tubing, Platinum Cured Silicone, 1/8" ID x 1/4" OD	
THERMOWELL / RTD PORT	1	Up To 1/4" RTD	
SEPTUM	1	Platinum Cured Silicone, PG13.5 Port	
UNIVERSAL PORT**	1	PG 13.5 / 12mm (2L)	3 PG 13.5 / 12mm (10L)

*Sensor settings Moving Average and Measurement Interval must be adjusted if using Optical DO.

**One port taken by septum and another when optional single-use pH is in use.

