

Smart Notes

QA

Is it possible to clarify high titer cell cultures without the hassle of clogged depth filters?

When harvesting cell cultures with high density ($> 250 \times 10^6$ cells/mL) or high turbidity (> 3000 NTU), depth filters can quickly clog and bring the entire process to a standstill. In addition to creating delays, replacing the clogged filters is messy and introduces risks of contamination along with reduced yield.

Use of unique, single-use Thermo Scientific™ CentriPAK™ BioProcess Containers (BPC) and the Thermo Scientific™ Sorvall™ BIOS 16 Centrifuge is an excellent method to pre-clarify supernatants prior to depth filtration or downstream processing. This method reduces overall processing time by eliminating pre-setup and post-cleaning steps as well as avoiding in-process clog-based delays. The sterilized, closed system ensures confidence in culture yield and purity. In this example, we harvest supernatant from a 50 L mammalian culture.



Thermo Scientific™ CentriPAK™ BPC Single

Fill

Place empty CentriPAK BPC sterilized, single use chambers into racked adapters on a scale. Connect the manifold to a single-use bioreactor or single-use fermentor. Open the feed clamp and BPC clamps to fill the BPC chambers. Close the feed clamp and stabilize pressure through the BPCs. Repeat with additional racks containing BPCs and adapters until the culture vessel is empty. Seal each filled BPC chamber.

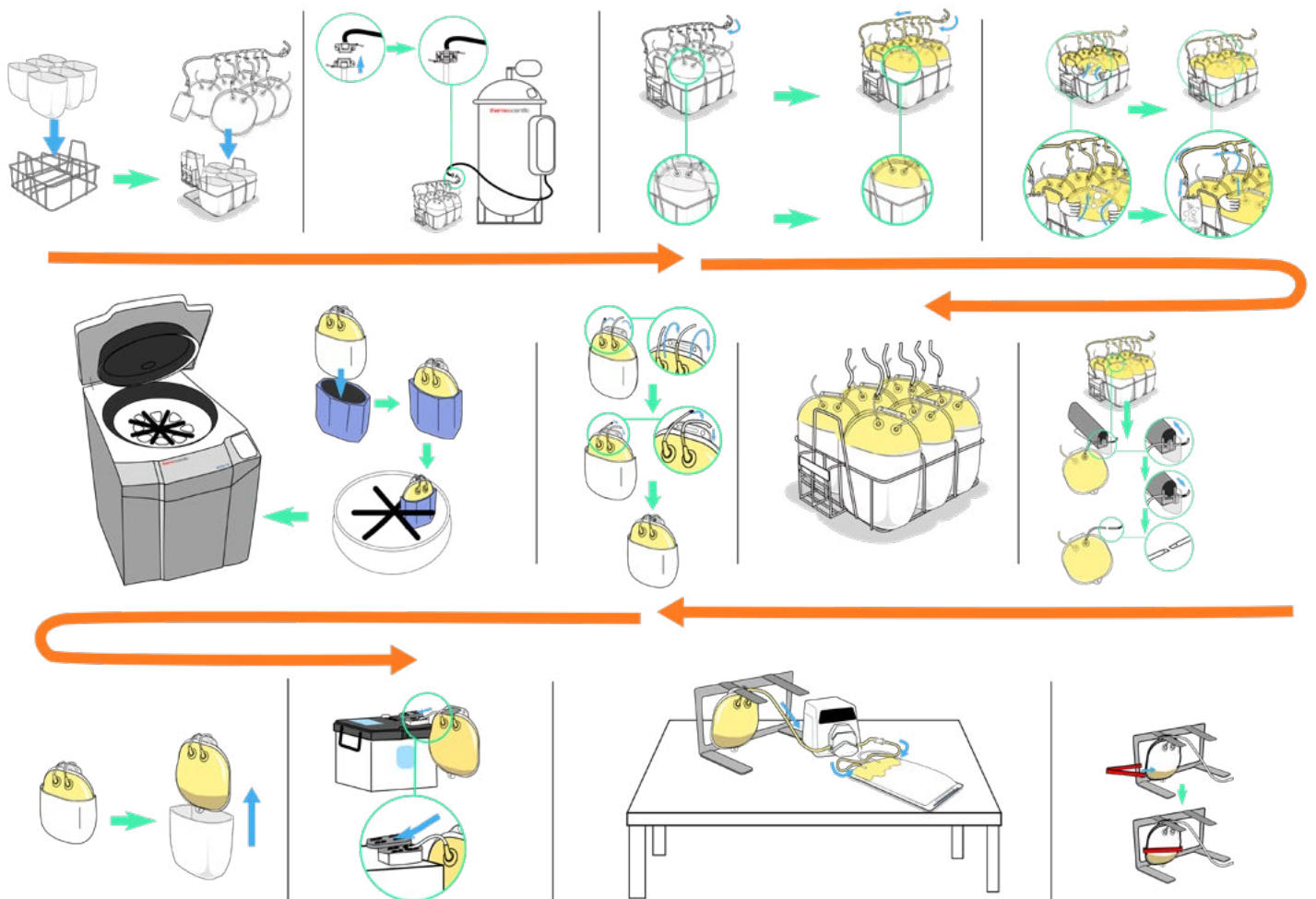
Centrifuge

Load adapters containing filled BPC chambers into the BIOS 16 Centrifuge equipped with the 8 x 2000 mL oval swinging bucket rotor, taking care to tuck the bag hoses

into each adaptor. Centrifuge to separate the supernatant from the solid biomass. Repeat as necessary until all BPC chambers have been centrifuged.

Summary

Using the Thermo Scientific Sorvall BIOS 16 Centrifuge and single-use CentriPAK BPC chambers, cell cultures from 3 to 300 L may be harvested rapidly in a closed system without risking delays and the extra expense of clogs in depth filtration methods.



Find out more at thermofisher.com/centriPAK

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