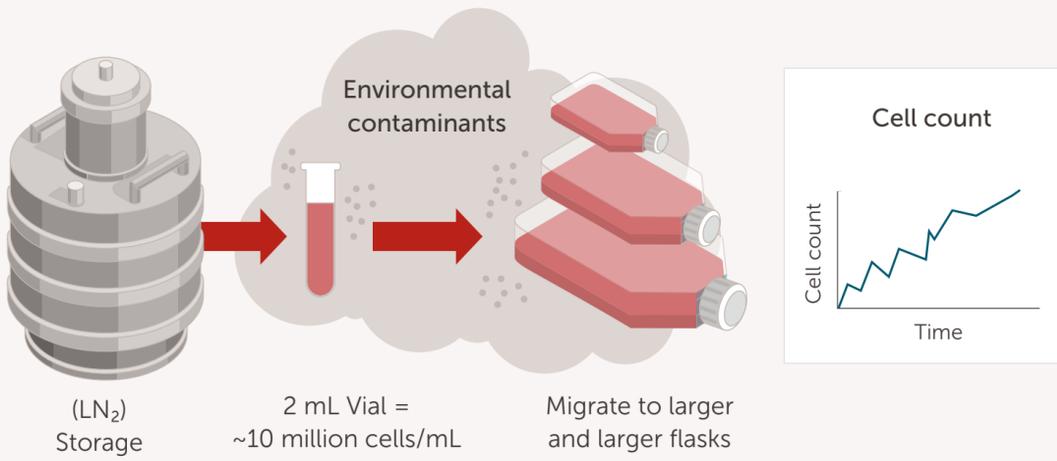


Shorten the Seed Train with High-Density Cell Banking

The current process of growing production-level biological cultures from a single cell sample has two major difficulties: it takes a long time and includes many opportunities for contamination. Entegris can help with Aramus™ single-use fluoropolymer bags. Here's how.

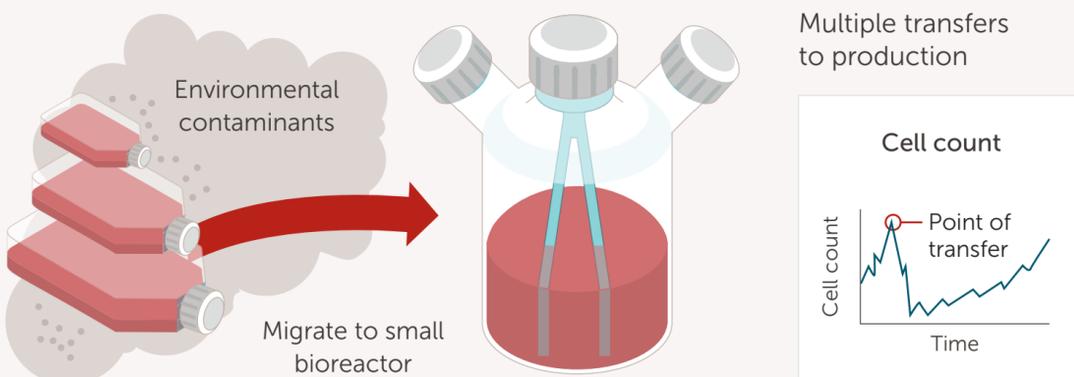
TRADITIONAL SEED TRAIN

Bioproduction typically begins from a single sample of ~10 million cells/mL in a frozen 2 mL vial, which is thawed and transferred to a culture flask. This step is repeated several times until optimal cell count is achieved.



The next step in the seed train involves moving the cells to larger and larger flasks, up to a small bioreactor. However, each time you open the container to transfer material, you introduce potential contaminants. This adds time, errors, and cost to the process.

TRADITIONAL INOCULUM TRAIN



CALENDAR TIME TO PRODUCTION: MONTHS

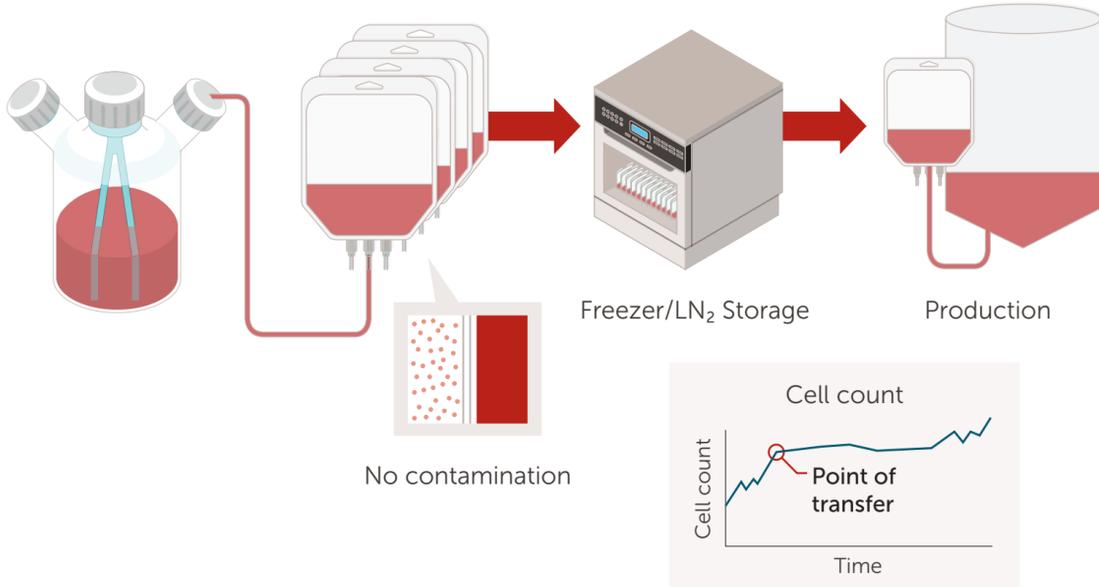


USING ARAMUS SINGLE-USE BAGS FOR HIGH-DENSITY CELL BANKING

As an alternative, the seed train process can be redesigned from using vials and flasks to Aramus single-use fluoropolymer bags, which can be frozen and stored with the highest cell concentration, and then used directly to inoculate a large-scale bioreactor. The Aramus bag assembly is a closed system, which will reduce contamination risks.

Aramus bags replace the seed train

Store until ready for the next production campaign

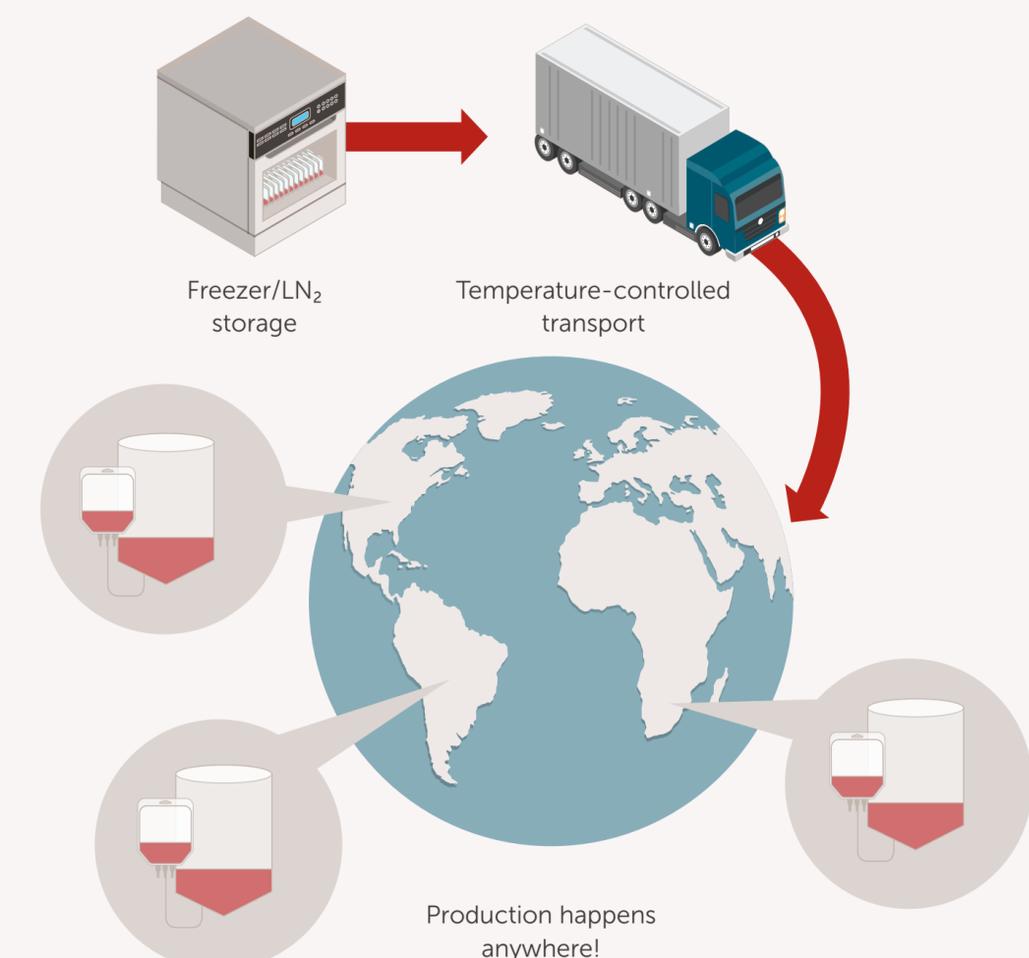


CALENDAR TIME TO PRODUCTION: WEEKS



ENABLING A DISTRIBUTED WORKFLOW

Aramus single-use bags are compatible with your intermediate cell banking processes and will withstand low temperatures and reduce leakage risks. Technology can now efficiently transfer around the globe for growing new cultures, and intermediate cell banks can ship anywhere in the world for rapid, localized production.



High-density cell banking with Aramus bag assemblies accelerates the upstream process by reducing seed train processes by several weeks. This process increases yield and transportability while reducing contamination risk inherent in conventional seed trains.

Learn More
www.entegris.com/hdcb