



Questions related to High Density Cell Factory systems

Q: What is a Thermo Scientific™ Nunc™ High Density Cell Factory™ system?

A: A High Density Cell Factory system is a Nunc Cell Factory system with 30% more surface area and the same footprint as a standard Cell Factory system.

Q: How is the dimensional footprint maintained?

A: The height of the cell culture trays for the High Density Cell Factory system has been reduced. For example, a High Density Cell Factory 13-layer system offers three more growth layers than a standard Cell Factory 10-layer system. The increased surface area may allow 30% more cell yield* in the same footprint with minimal changes to your existing protocols.

Q: Do the High Density Cell Factory systems require different handling?

A: The handling of a High Density Cell Factory system is virtually identical to the handling of a standard Cell Factory system. The basic steps for filling and emptying are the same. Additional care is recommended to minimize foaming. Excess foaming may cause liquid to transfer to other layers by capillary action, due to the reduced tray height of the High Density Cell Factory system.

* The increase in yield may vary depending on the type of cells cultured.

Q: What sizes are available for the High Density Cell Factory format?

A: This system is available in three configurations. The table below shows the equivalent standard Cell Factory system configurations (by footprint) and the respective surface areas for comparison.

High Density system		Standard system	
No. of layers	Surface area	No. of layers	Surface area
3	1,896 cm ²	2	1,264 cm ²
13	8,216 cm ²	10	6,320 cm ²
52	32,864 cm ²	40	25,280 cm ²

Q: What is the recommended volume of medium for High Density Cell Factory systems?

A: The recommended volume of medium is the same for all Cell Factory systems: 150–200 mL total or 2.4–3.2 mm per layer.

Q: Have there been any changes to the materials of construction from the standard Cell Factory systems?

A: No, the High Density Cell Factory systems are constructed from the same materials as the standard Cell Factory systems.

Component	Material
Cell culture tray	Polystyrene
Port and plug	White ABS
Port and plug gasket	TPV
Vented port closure	HDPE

Q: What is the maximum volume per tray for High Density Cell Factory systems?

A: 220 mL per tray.

Q: Will my standard Cell Factory accessories work with the High Density Cell Factory systems?

A: The High Density Cell Factory systems have the same port design and dimensions to support current manufacturing processes and protocols. The High Density Cell Factory system port is compatible with all existing standard Cell Factory accessories.

Q: Why does the High Density Cell Factory port have one TPV gasket whereas there are two in the standard Cell Factory systems?

A: The High Density Cell Factory systems tray height only allows enough space for one gasket.

Q: What is the cell culture surface of a High Density Cell Factory system?

A: The High Density Cell Factory systems have a Thermo Scientific™ Nunclon™ Delta–certified cell culture surface. It is the same surface used for the Thermo Scientific™ Nunc™ Dishes, Plates, Flasks. and the standard Cell Factory systems.

Q: With the additional layers of the High Density Cell Factory systems, how much heavier are they compared to standard Cell Factory systems?

A: A High Density Cell Factory 13-layer system filled with 200 mL of media per tray is 0.905 kg (2 lbs) heavier than a standard Cell Factory 10-layer system. A High Density Cell Factory 52-layer system filled with 200 mL of media per tray is 3.82 kg (8.4 lbs) heavier than a Cell Factory 40-layer system.

Q: Are High Density Cell Factory systems leak-tested?

A: Yes, 100% of all High Density Cell Factory and standard Cell Factory systems are leak-tested.

Q: Are High Density Cell Factory systems compatible with all automated Cell Factory manipulator generations?

A: Yes, with minor modifications to the manipulators and standard Cell Factory 10-layer system rack (if applicable). Due to the lower height of the High Density Cell Factory tray, new clamping cassettes will be required. These are available upon request with instructions on how to make the modification. Note: The new clamping cassettes are compatible with both systems.

Find out more at thermofisher.com/cellfactory