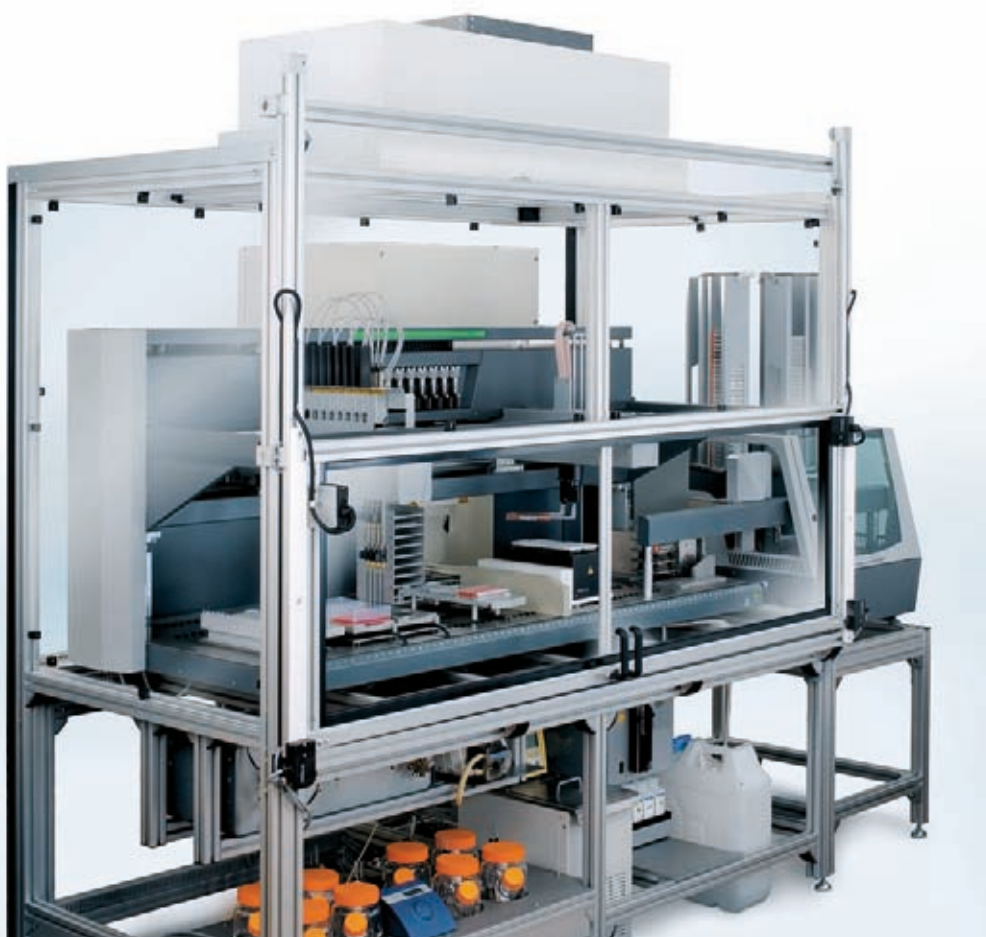


Cellerity™

– fully automated cell culturing



An overview of the Cellerity system

Maintenance, expansion, harvesting and plating of cell lines is essential for many laboratories, but the process is hugely laborious and time-consuming, sometimes even requiring attention during the weekends. With the increasing amount of cell culture work performed in today's life science laboratories, automation is becoming a necessity rather than a luxury.

The Cellerity system fully automates various cell culture and downstream processes, providing consistent, high quality cells in a walkaway instrument. The modular system is based on the industry-proven Freedom EVO® platform, with a modified liquid handling configuration

that is capable of both rapid bulk media dispensing and precise small volume pipetting, including the MultiChannel Arm™ pipetting option for dispensing cells into plates of up to 1,536 wells.

The key to unattended operation is having the right resources available in the right quantity and at the right time. Cellerity, aided by its intuitive CellGEM™ (Cell Growth, Expansion and Maintenance) scheduling software, supports this need by anticipating usage and consumption of labware and other resources, based on a production schedule. The software guides users through all cell culturing processes and maintenance actions, and even allows users to request assay-ready

cells for delivery on specific dates by automatically scheduling and performing the required tasks to grow sufficient cells, providing real-time feedback and alerts by email.

The labor-intensive, error-prone yet critical task of cell harvesting is made easy by the Cellerity, which can optimize each cell line's harvesting protocols for the unique Te-Flipper™ module to reliably execute the dissociation of adherent cells. The tedious chore of cell counting is also automated, eliminating operator variability to yield reproducible results. Cellerity allows dilution of harvested cell suspensions to required densities, and calculates cell growth rate, determines viability and document cell size, morphology and aggregation rate. Cellerity in standard configuration has the capacity for eight different bulk media, so the platform can simultaneously grow and maintain many cell lines. Up to 80 l of media can be stored in the refrigerator, and required amounts are warmed to approximately 30 °C immediately before use. Cellerity's incubator monitors and controls the temperature and, optionally, the atmospheric CO₂, N₂ and/or O₂.

Several manufacturers supply automation-friendly flasks that are fully compatible with the Cellerity, such as the Corning® RoboFlask®, which has standard microplate dimensions and a pierceable septum cap to maintain sterility during media exchange. Cellerity's robotic manipulator (RoMa) arm handles culture vessels through automated processes, and all liquid handling operations are performed in a sterile enclosure.

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For more information about Tecan's Cellerity system, visit www.tecan.com/cellerity