



Harvester96TM

Product Brief



At-a-Glance

Reliable – Over 90% of all harvester are still in service

Serviceable – Automated cleaning cycle and removable tips

User Friendly – Intuitive controls for either Manual or Automated operation

Cost effective – Affordable manual version or up-scale automated version

Safe – Safety shutoffs and Autotrap level sensor to eliminate spillage of contaminants

The Harvester96TM is cost effective, simple to use and designed to last for decades. Tomtec has been shipping best in class cell harvesters for over twenty of those years. Based on a highly reliable and eloquent design, the Harvester96 is a rugged cost effective bench-top lab instrument, designed to harvest biologics from a 96 well microplate or microtubes onto a glass fiber filter map in a small bench-top footprint.

The Cell Harvester96 operation and features

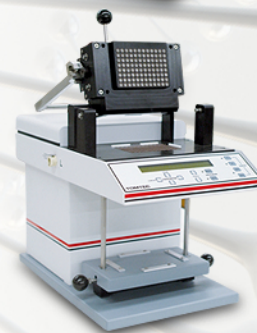
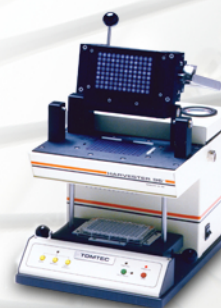
Microplate or Microtubes contents are transferred via a unique and controlled aqueous wash cycle, designed to gently suspend adherent biologics. Each of the 96 wells is individually processed by a unique flow tip design which washes the well wall from the top down, while regulating well levels. The suspended material is aspirated from the bottom of the well and drawn directly into the sterile glass fiber filter map which is pressure sealed between a double “O” ring arrangement. Biologics are collected onto targets on a 8 x 12 grid with 9 mm centers making them quantifiable by a wide range of measuring instruments such as a scintillation counter.

One of the key imperatives of maintaining any flow-chemistry instrument is keeping pathways and collection sites clean. The Harvester96 has evolved over the past 20 years with this key imperative in mind. Not only is there a fast and efficient automatic rinse cycle, but tips can be easily removed, ultrasonically cleaned or replaced in minutes. To ensure continuous, uninterrupted operation great care and thought went in to minimizing the number of internal moving parts. To that end, there are only five industrial-grade stainless steel solenoid valves, with a MTBF in the thousands of hours. The result is a robust instrument; where nearly all the units we have sold over the years, are still in service making it the most reliable and cost effective cell harvester available today.

Tomtec offers two versions, manual for small budget-conscience labs and a more automated version for high-end BioPharma labs and research facilities. The manual system is equipped with a simple push and hold controls interface, while the automated version can be programmed with up to 16 unique procedures. Both versions are based on the same core industrial design.

Harvester96 – Manual: This simple to use and maintain harvester is equipped with a single reagent line (input) and vacuum line (waste output). It comes with a nine (9) liter reagent bottle along with an 11.5 liter high-level float controlled vacuum Autotrap™ (to collect hot or cold waste). There is a simple four command push and hold interface for; (1) Pulse-Wash, (2) Continuous-Wash, (3) Continuous Aspirate and (4) Continuous Wash & Aspirate.

Harvester96 – Automatic: This automated version is equipped with dual nine (9) liter buffer inputs that are flow controlled (i.e., buffer1 and buffer2). If desired, the waste may be sent to one of two separate Autotraps™ with high-level float control for “HOT” or “COLD” waste containment. The embedded micro controller can be programmed via the moisture resistant membrane touch key pad with up to 16 unique work-flows which can be saved and recalled on demand from nonvolatile memory.



U.S and European models differ in appearance

Applications

The Harvester96 is designed to address a wide range of Pharma, BioPharma and laboratory work-flows such as:

- Cell proliferation assays (titrated thymidine uptake) - Scintillation counter
- Cytotoxicity assays - luminescent assay reader
- Receptor binding assays - luminescent assay reader
- Nucleic acid degradation - spectrophotometer assay reader;
- Trichloroacetic acid preparations - microscopy;
- Cell wash station for adherent cell assays.

Specifications

- Serviceable wash-tips and “O” rings which you can replace or ultrasonically clean
- Precision fit double “O” ring design eliminates cross-talk
- Durable head design which assert a uniform clamping pressure to eliminate cross talk between adjacent wells.
- Flow-tip design captures overflow to prevent spillage within the plate
- The vacuum manifold design ensures even fluid draw over the 96 flow-tips
- The waterproof membrane and display makes programming simple and wet lab ready

Harvester96	Manual	Automatic
bench foot-print	12" wide x 24" deep	12" wide x 24" deep
height	closed 16" / open 22"	closed 16" / open 22"
weight	50lb	50lb
power	120w	120w
vacuum connections	1	2
reagent connections	1	2
reagent bottles	one nine (9) liter bottle with thread on feed cap pressure connection (5 psi)	two nine (9) liter bottles with thread on feed cap pressure connection (5 psi)
vacuum Autotraps™	one 11.5 liter trap with gage and high level float control	two 11.5 liter traps gage and high level float control

