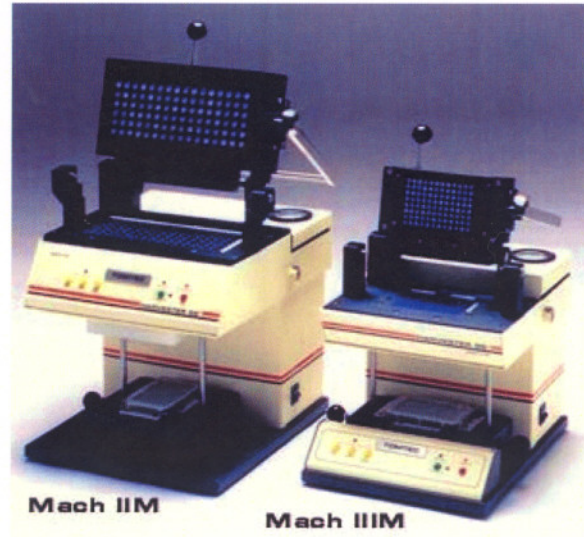


# MANUAL HARVESTER 96®

## SEMI-AUTOMATED 96 WELL HARVESTER

The Manual Harvester 96® is designed to provide the utmost flexibility in cell harvesting. Parameters are individually controlled to enable the operator to set the optimum conditions for any protocol. This flexibility allows operators to use their own creativity in achieving the desired results. By including a pulse wash program, controlled by the operator, this model also brings the gap between a fully automated and a manual Harvester.



### Semi-Automated Harvesters

- Low cost
- Compact size
- Ease of operation
- Microplates or Microtubes
- Adjustable wash rates
- Pulse wash program
- Removable wash tips
- Double "O" ring filter mat sealing
- Autotrap accessory
- Quick & easy quality controls

### Pulse Wash Program

All the durations of wash and aspirate times, in the pulse wash program, can be set from program switches under the front panel. By varying the wash, aspirate and wash/aspirate times, the operator can achieve optimal harvesting. The pulse wash program has five cycles of five steps each. The first cycle is designed as a prewet from an empty plate. At the pause, the operator changes to the test plate. Pressing run completes the remainder of the program with a series of filling and emptying of the wells. This action aids in cleaning the wells while concurrently washing down the background count.

### Safety Features

The Manual Harvester 96 is equipped with a vacuum switch that inhibits operation if the vacuum is less than 5" of Hg, thus avoiding flooding. An automatic aspirate time of two seconds after each wash/aspirate empties the wells. When the Manual Harvester 96 is used with the Autotrap, a blinking LED alerts you when the trap is full. Simultaneously it disables the aspirate function, to avoid spilling liquid.

### Push Button Operation

*Five push buttons control the functions of the semi-automatic Harvester 96*

**Wash:** Pressing this button opens the wash valve for a time, as set by the switch SW1.

**Aspirate:** The aspirate valve is open for as long as this button is pressed.



### Mach IIM

6 x 16 format  
on 15mm centers

Supports Wallac Betaplate®

### Mach IIIM

8 x 12 format  
on 9mm centers

Supports  
Wallac Betaplate®

Mach

IIIMU

8 x 12

format  
on 9mm  
centers

Supports

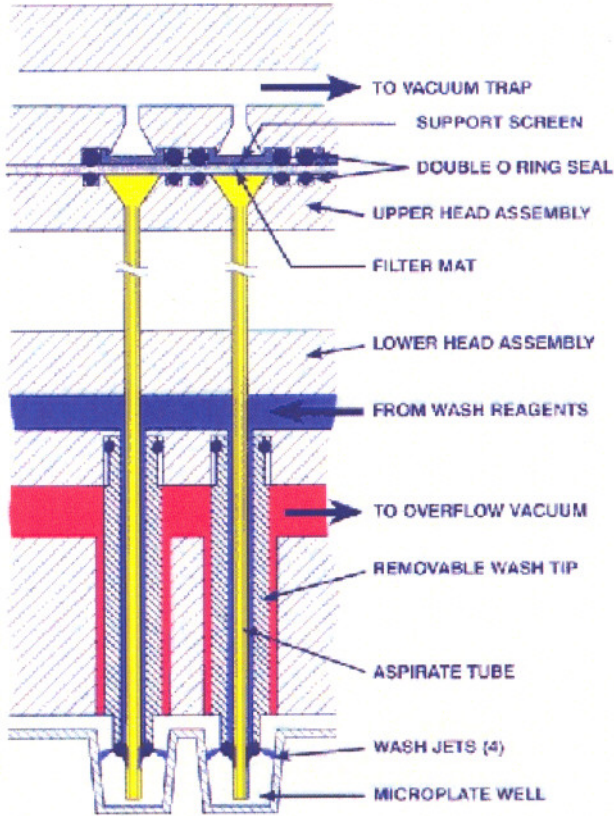
Unifilter®

**Wash/Aspirate:** Both wash and aspirate valves are open as long as this button is pressed. The aspirate valve stays open for two seconds after the button is released.

**Pulse Wash:** This button starts a five cycle pulse wash program. The individual wash, aspirate and wash/aspirate times are set by the operator using the program switches.

**Stop:** Press this button once to pause the Pulse Wash program. If already in pause (as after the first cycle), pressing the stop button quits the program.

### Schematic Cross Section of Removable Tip Design



### Ordering Information

#### Mach IIM

6 x 16 format on 15mm centers  
(supports Wallac Betaplate®)  
Cat. No. 96-2M

#### Mach IIIM

8 x 12 format on 9mm centers  
(supports Wallac MicroBeta®)  
Cat. No. 96-3M

#### Mach IIIMU

8 x 12 format on 9mm centers

# HARVESTER 96®

Mach II, III and IV

## THE BENCHMARK FAMILY OF 96 WELL HARVESTER

The Harvester 96® harvests cells simultaneously from the 96 well format of either microplates or microtubes. The difference between the three models is in the filter format. Each model is designed to provide the maximum filter area spot that can be accommodated by the corresponding scintillation counter.



**Mach II**  
6 x 16 format  
on 15mm centers  
Supports  
Wallac Betaplate®

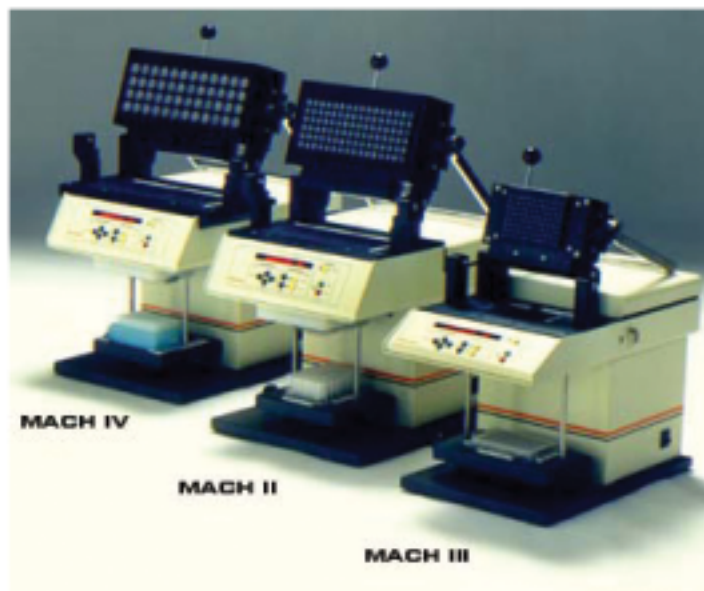


**Mach III**  
8 x 12 format  
on 9mm centers  
Supports  
Wallac Betaplate®

**Mach IIIU**  
8 x 12 format  
on 9mm centers  
Supports Unifilter®



**Mach IV**  
4 x 12 format on 25.4mm centers  
Supports Wallac Big Spot Betaplate®  
(Half the microplate is harvested to two  
(2) filter mats)



### Automated Harvesters

- Fully programmable
- Pulse wash programs
- Adjustable wash rates
- Efficient rinse program
- Fast efficient transfer
- Removable wash tips
- Overflow protection
- Quick and easy quality controls
- Double "O" ring filter mat sealing
- Compact installation

### Durable Head Design

The unique double "O" ring seal prevents cross talk between filter mat circles. If necessary, the user can easily remove the "O" rings and screens for cleaning or replacement. Durable 3/4" anodized aluminum plates have a roller locking device. The clamping pressure may be simply adjusted by the user.

### Flexible Programming



**Harvester 96® Mach III**

Since the automated Harvester 96 is fully programmable, the user's creativity can be the controlling factor in setting up protocols. From the front panel, the user may be set up to 16 protocols to meet individual criteria. Once established, programs may be recalled or modified at any time. Programmability eliminates the variables of cell harvesting, thus enabling the user to achieve repetitive precision every time.

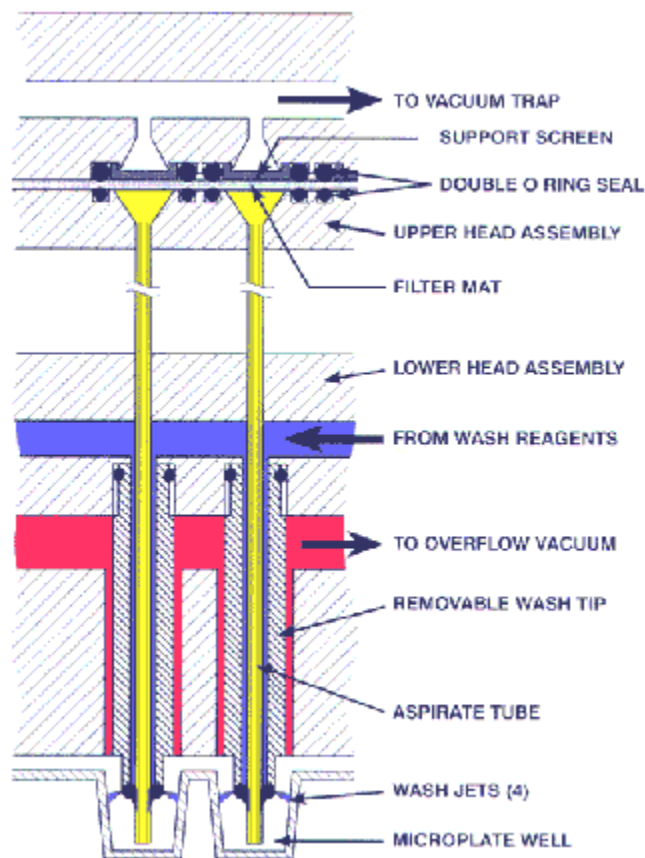
### **User Serviceable for Convenience**

The most vital aspect of maintaining any Harvester is keeping it clean. The Harvester 96 provides fast, efficient, automatic rinse cycles. Wash tips may be easily removed for ultrasonic cleaning or replacement. The only internal moving parts are five stainless steel solenoid valves. The Harvester 96 is a reliable instrument that can be easily maintained by the user.

### **Short, Fast Aspirate Pathways**

The unique removable tip design of the Harvester 96 adds wash buffer to the top of each well. This washes down the sidewalls to the aspirate tube located at the bottom of the sidewalls to the aspirate tube located at the bottom of the well. The well contents are aspirated directly to the filter mat which is sealed with a double "O" ring arrangement.

The advanced ascending area design of the vacuum pathways assures uniform, rapid transfer from the microplate to the filter mat, eliminating dissociation. Each of the 96 wells is surrounded by an overflow vacuum ring. During the addition of wash, should a well overflow because of an air bubble, the overflow is captured, preventing loss of the adjacent wells. Aspirate extender tubes may be added to accommodate various deep well plates or microtubes



## TCA Applications

For those protocols using Trichloroacetic Acid, a special stainless steel / polypropylene head is available to withstand the aggressive corrosion created by TCA.

## Ordering Information

**Mach II** - 6 x 16 format on 15mm centers  
Cat. No. 96-2

**Mach III** - 8 x 12 format on 9mm centers  
Cat. No. 96-3

**Mach IIIU** - Harvests Unifilter® plate  
Cat. No. 96-3U

**Mach IIIUSS** - Harvests Unifilter® plate  
*Stainless Steel head for TCA applications*  
Cat. No. 96-3USS

**Mach IIIW** - Harvests Wallac filter plate  
Cat. No. 96-3W

**Mach IV** - 4 x 12 format on 25.4mm centers  
Cat. No. 96-4

**Please call your Local Sales Representative for current pricing.**

*Users outside the USA, please specify frequency.*