

# MILLIPORE

## MultiScreen<sup>®</sup> Column Loader

### Introduction

The MultiScreen Column Loader is an accessory product for the MultiScreen Assay System. The Column Loader enables the uniform loading of an equal volume of dry beads, powders, or resins into the 96 wells of a MultiScreen plate. The weight per well varies, depending on the media you use. The Column Loader comes in various sizes, tailored to specific applications. It also comes with a scraper to push material into the Loader wells. These devices are suitable for use with most separations media available as powders, dry resins, or beads. The Loader is made from aluminum that has been coated to release materials, resist abrasion, and be inert. Resins that typically require packing for optimum performance require packing in the MultiScreen plates. This is best accomplished by centrifuging the prewet packing in the plates with an appropriate supporting fluid collection plate in a microplate swinging bucket rotor. (Use MultiScreen alignment frame, MACF 096 04, to assure alignment of the MultiScreen plate with the filtrate receiver plate in the centrifuge.)

The selection of which MultiScreen plate to use with the device depends on the particles you plan to use with it. Millipore generally recommends low-binding Durapore<sup>®</sup> or hydrophilic PTFE plates in these applications. But, you can use clear, opaque, or solvent resistant plates, depending on your application needs. For most work with particles that have a size greater than 1  $\mu\text{m}$ , Millipore recommends that you use Durapore plates (MADV N65 10, 0.65  $\mu\text{m}$  membrane). If you have a smaller particle size, choose a plate with a smaller pore size, for example, a GV plate (MAGV N22 10). For very large particles and high flow rate needs, use the 1.2  $\mu\text{m}$  Durapore (MABV N12 10) plate.

**CAUTION:** Do not load resins or particles on top of glass fiber, DEAE, or phosphocellulose plates because the separation quality will be poor.

### How to Use the Column Loader

1. Make certain the device is clean and dry. Do not use abrasives to clean the device.
2. Set up an area where you can cleanly pour your material over all of the loader surface.
3. Pour an excess of material onto the loader, placed in a suitable container (plastic refrigerator container) to collect the extra resin, for re-use. Using the scraper provided, push the material into all wells and scrape the excess off the open end, preferably into the tray from where you can re-use it.
4. Slide an empty, dry MultiScreen plate into place on the loader, upside down, so that the top of the plate is resting on top of the loader. Be careful to push the plate up against the end stop; this aligns the wells.
5. Hold the two parts (the Column Loader and the MultiScreen plate) together and turn over the entire assembly. Set the MultiScreen plate down on a flat surface, still in contact with the loader. Tap the bottom of the loader (now facing up) a few times to dislodge any particles remaining in the wells.
6. Remove the Loader from the plate carefully. Your particles are now uniformly loaded into the 96 wells of the MultiScreen plate.

**NOTE:** Before you add your sample, you need to wet the loaded MultiScreen plate to properly pack the particles into it for most applications.

- For soft gel LC media requiring a chromatographic type packing (for example, G-25 or G-50), use centrifugal packing. Refer to the protocol in literature number TN050 for centrifugal packing of soft gels. **CAUTION:** You cannot properly pack LC media using vacuum. Channeling and poor separations will occur.

OR

- For HPLC media (for example, C-18), using an appropriate fluid (that differs depending on your resin, beads, or powder), place your resin and 150 to 200  $\mu\text{L}$  of fluid into the plate and then pull through at full vacuum. **CAUTION:** If using solvents (for example with C-18), use a MultiScreen solvent resistant plate. C18 gives optimum performance if packed with methanol and centrifugation, *not* vacuum.

### MultiScreen Column Loader Ordering Information

Catalogue Number	Use For...	Recommended For...
MACL 096 00	100 $\mu\text{L}$ per well loading	Alumina and Dowex, for example, for phosphodiesterase c-amp assays
MACL 096 80	80 $\mu\text{L}$ per well loading	DNA and protein desalting, for example, using G-25 Sephadex <sup>®</sup>
MACL 096 45	45 $\mu\text{L}$ per well loading	DNA (dye terminator removal) and protein purifications, for example, using G-50 or G-75 Sephadex. Loading of C18 or other reverse phase media for large capacity needs
MACL 096 25	25 $\mu\text{L}$ per well loading	Loading reverse phase resins (for example, C4, C8, C18) or other reverse phase media for sample purifications
MACL 0SC 03	Replacement scrapers (3/package) to scrape material into wells	All MultiScreen column loader procedures

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