PhyNexus

www.phynexus.com

PHYTIP™ MEA PURIFICATION SYSTEM FOR AUTOMATED PHYTIP™ COLUMN SAMPLE PROCESSING

In order to realize the benefits of PhyTip columns for protein purification and enrichment, PhyNexus has developed the PhyTip MEA Purification System as the platform of choice for automated and unattended purification of up to 96 samples. When used with the PhyNexus Operating Software, this system offers a range of flow rates that maximizes the purification and enrichment efficiency of the various affinity resins available for PhyTip columns. This unique system allows for reproducible positioning of the PhyTip columns into the sample solution, wash buffer(s) and finally the elution buffer used for enrichment. By maintaining the optimum position, the system is able to accurately deliver the programmed volumes of liquids through each column.

The MEA system offers the following:

Automated programming of a 12 channel system: Allows complete flexibility of protocols and applications with maximum throughput. Complete purification of 96 samples in two hours.

Variable plate positions: Can be used with a range of different plate types (standard v-bottom, deep-well) and positions that give complete flexibility.

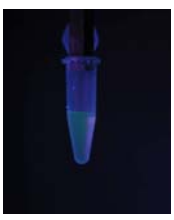
Easy to Use Software Programming: Lets user reproducibly move the pipettor to any position on the sample deck in *x* or *z* axis. Ensures reproducibility of results.

Easy conversion from 200 µL to 1000 µL system: Allows for simple change in sample volumes that can be used with one automation platform.

PHYTIP COLUMNS

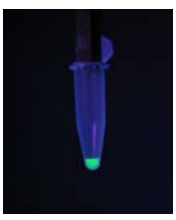
PhyNexus has developed a unique technology for the micro scale purification of engineered proteins and antibodies which enables researchers to routinely purify and enrich their samples by processing volumes up to 1 mL per capture cycle. The exclusive design of the PhyTip columns allows for elution volumes as low as 10 µL, thus producing enrichment factors as high as 50 x, with concentrations of purified protein of up to 5 mg/ml, at a purity of greater than 95%.

The process to purify and enrich is a simple three step technique where the protein of interest is first captured, then purified and finally enriched. The entire process can take less than 15 minutes to produce high concentrations of fully functional protein ready for further analysis.



Fluorescently labeled IgG before purification (200 µL)

Fluorescently labeled IgG captured on the affinity resin of a PhyTip 200+ column



Purified and enriched IgG (10 µL)

PhyTip columns are available in two volume sizes and with a range of standard affinity resins. Simply choose the option that best fits your application.

MEA ROBOT (CONT'D)

The ready-to-use MEA robot is dedicated to PhyTip column operation.

The PhyNexus MEA operating software has been designed for simple to use automation of methods, preprogrammed into the system for each of the specific affinity resins available for PhyTip columns. Each method is a series of protocols, which controls the volume and flow rates for the individual steps of Capture, Purify and Enrich, with pauses and prompts built-in between each step. Flexible programming allows the user to designate the specific plate positions for each of the steps in the process.

The software is designed to operate with PCs running Windows XP, 2000, NT, and 98.

There are two positions available for PhyTip column boxes, four positions for sample, wash, and elution plates, and one position for a neutralization trough for cases where low pH elution buffers are used to remove the protein from the column.

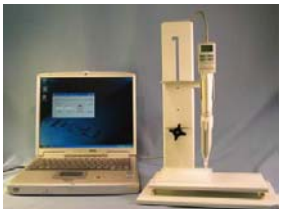
Features of the MEA robot include:

- Ability to purify and enrich a plate of 96 samples in two hours
- Processing of 1-12 samples in parallel
- Capability of functioning in a 4°C cold room
- Accommodation for evaporation control
- Two plate positions capable of cooling down to 4°C (with 5 position temperature increment control)
- Based on full automation of industry standard ME 200 and ME 1000 instrument systems
- Easily converts within minutes for use with either 200+ or 1000+ tips

Purification Systems with PhyTip Columns:

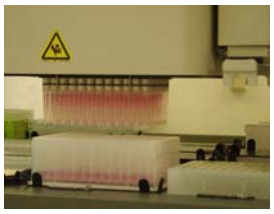
Whether separations are performed a few times a week or a few thousand times a day, PhyTip columns may be used with PhyNexus' manual, semi automated, or automated purification systems. The MEA robot fills the productivity gap between the ME semi automated instruments and full capability robots.

Manual Operation



Semi Automated

Fully Automated
96 well plate
200+ or 1000+



Full Robotics
200+

MEA System (US Power Supply)	Part Number PHR 96-000-00	$ 24,950.00
200+ 12 Channel Pipettor with Clamping Device	Part Number PHR 12-020-00	$ 1,795.00
1000+ 12 Channel Pipettor with Clamping Device	Part Number PHR 12-100-00	$ 1,995.00
MEA Cooling System	Part Number PHR 00-000-96	$ 1,995.00

FOB San Jose, CA