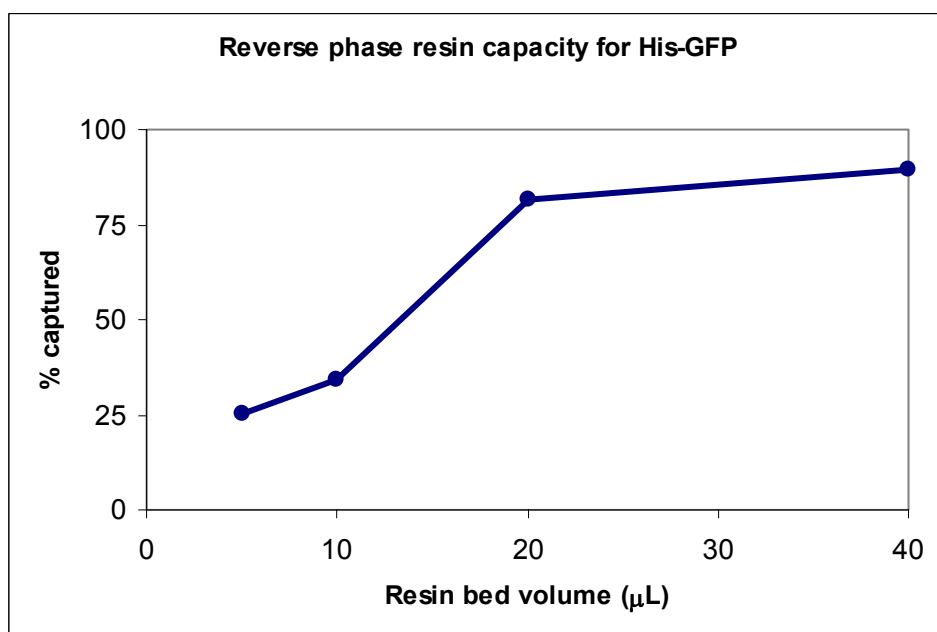


PHYTIP® REVERSE PHASE COLUMNS

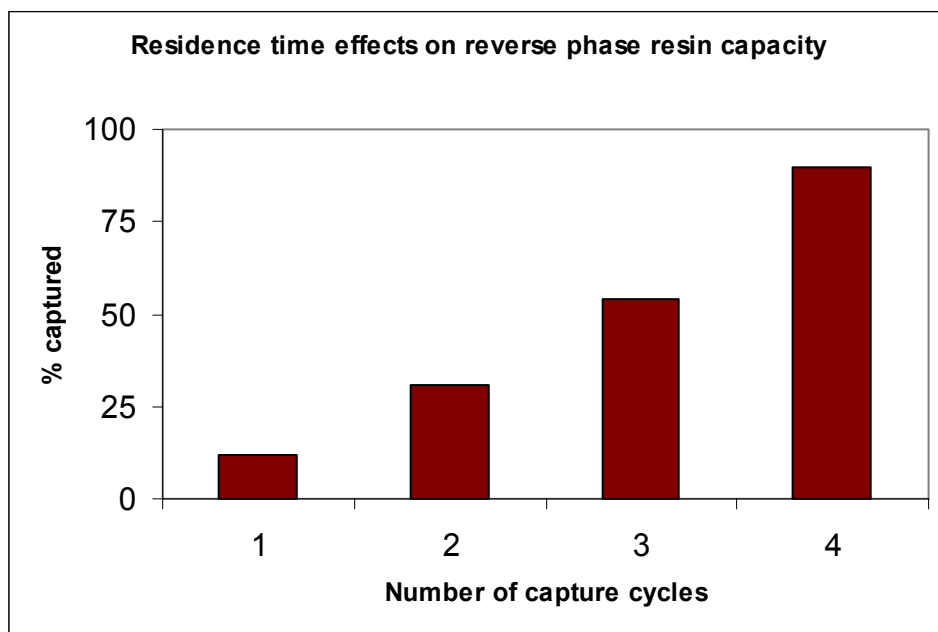
PhyNexus has expanded its current affinity, gel filtration and ion exchange columns to include reverse phase resins. For analytical methods that require low salt preparations or to simulate chromatography-like separations in small-scale, the reverse phase PhyTip columns are an ideal tool. Through PhyNexus' custom packing program, researchers have the flexibility to customize their PhyTip column separations to plethora of resin materials. PhyTip columns containing customized resins allow for optimizing conditions prior to scale-up, performing small-volume, high-throughput purifications where only microgram yields are necessary, and screening of different resins in parallel to determine the optimal protein-resin interaction.

- Capture, purify and enrich in as little as 5 minutes
- Process samples in a reproducible, high throughput, automated format
- Purify sample volumes as low as 5 μL
- Desalt and prepare samples prior to HPLC and Mass Spectroscopy analysis
- Automate using the MEA Personal Purification System or a number of other robotic liquid handling systems
- Contact PhyNexus to find out if your resin of choice is compatible with PhyTip column technology



Samples were prepared by spiking His-GFP into buffer at a total volume and concentration of 20 μL and 0.1mg/mL. Using the MEA Personal Purification System, 200 μL PhyTip columns containing 5 μL reverse phase resin (or 1000 μL columns containing either 10, 20 or 40 μL of reverse phase resin) were wetted in 2X 100 μL (500 μL) acetonitrile (ACN), equilibrated in 2X 100 μL (500 μL) H₂O, 0.2% trifluoroacetic acid (TFA), followed by capture of 20 μL sample at a flow rate of 0.25mL/minute (1mL/minute) using ten back-and-forth capture cycles. Columns were washed in 2X 100 μL (500 μL) H₂O, 0.2% TFA and eluted in 20 μL 80% ACN, 0.1% TFA. Samples following capture and elution samples were measured for absorbance at 280nm by a Nano-Drop UV spectrometer and the % capture and recovery were calculated.

PHYTIP® REVERSE PHASE COLUMNS CONT'D



Samples were prepared as above and used to determine the residence time necessary for efficient capture on the reverse phase material. 1000 μ L columns containing 20 μ L of reverse phase resin were wetted and equilibrated as above. Samples were captured by performing a back and forth cycle of volume sufficient to process the 20 μ L sample at a flow rate of 1mL/minute. To ensure that sample flow went to completion, ten second pauses were programmed after each aspirate and dispense step. An aliquot was measured for absorbance at 280nm following each capture cycle for a total of four cycles. Maximum capture is achieved after 4 capture cycles corresponding to about a 3 minute residence time.

PhyTip Reverse Phase columns available in the following formats:

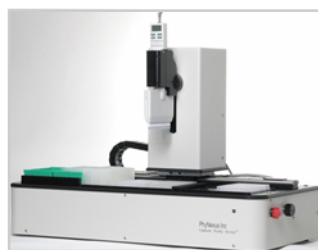
200 μ L column with Reverse Phase bed volume of 5 μ L and 20 μ L

1000 μ L column with Reverse Phase bed volume of 10, 20, 40, 80, 160, and 320 μ L

200 μ L columns available in the following systems:

Beckman Biomek FX, Tecan TeMo, Caliper Sciclone, Perkin Elmer Minitrak and Dynamic Devices

PhyTip columns are specifically manufactured for the automated MEA bench top, walk-away system.



PhyTip columns can also be used with the ME 200 and ME 1000 semi-automated purification systems.

