

Normal Phase 1 PhyTip® Columns for Glycan Enrichment



PhyTip® columns are available in two formats, 200+ with a recommended maximum sample volume of 200 µL and 1000+ with a recommended maximum volume of 1000 µL. For each of the PhyTip® column formats there are several different resin volumes available. Each PhyTip® column has been designed for maximum efficiency of capture and elution of the specific protein(s) of interest when using the specified protocol. See below.

Shipping and Storage

Each pack of PhyTip® columns has been manufactured and qualified to the highest standards and shipped in retainer boxes that maintain the integrity of the specific affinity resin within each PhyTip® column. This product is shipped at ambient temperatures, but on receipt should be stored in a standard laboratory refrigerator between 4 and 8 °C.

- » Do NOT freeze or store frozen.
- » When not in use, keep the lid of the box closed and sealed, store in the refrigerator.

PhyTip® Normal Phase 1 columns are NOT stored with additives when shipped from Biotage.

PhyTip® Columns

This specification sheet provides details on Normal Phase 1 PhyTip® Columns for Glycan Enrichment.

Note: Unlike agarose-type affinity resins, Normal phase 1 PhyTip® columns are not water-swollen and thus are shipped without additives.

PhyTip® columns are unique capture, purification and enrichment tools from Biotage designed for small volume protein sample preparation. PhyTip® Normal Phase 1 columns are designed for the purification of glycans, oligosaccharides and complex carbohydrates. PhyTip® columns are available for a variety of liquid handling platforms and contain specific affinity resins for application specific requirements. Normal phase 1 PhyTip® columns are PhyTip® columns packed with normal phase 1 resin for glycan enrichment.

Samples for purification and enrichment must be clear and free from particulate matter. It is highly recommended to centrifuge samples and use the clear supernatant only, prior to use with PhyTip® columns.

Important Product Information

The packed column of the PhyTip® can cause pressure to build up within the tip. This internal pressure must be compensated for at each aspirate and dispense step. This is especially important when working with small volumes.

- » 1000+ format
 - » If you need to process a volume < 250 µL, add 230 µL to that volume.
 - » Example: A 200 µL volume should be programmed as 430 µL (200 + 230).
- » 200+ format
 - » If you need to process a volume < 75 µL, add 40 µL.
 - » Example: A 10 µL volume should be programmed as 50 µL (10 + 40).

Prevent aspirating or dispensing air in the PhyTip® column by only mixing 95% of the volume within the well.

- » Example: Aspirate and dispense 950 µL of a 1000 µL sample
Calibration tips can be requested free of charge from Biotage.

Normal Phase 1 PhyTip® Columns for Glycan Enrichment

Normal Phase 1 PhyTip® columns for Glycan Enrichment have been optimized for use with specific PhyNexus reagents and instrument flow rates/volumes as shown below. This information was collected using the MEA 2 Personal Purification System.

These columns are ideal for the purification of fluorescently-labeled glycans required the removal of excess dye. Biotage recommends using the following buffers:

Conditioning Solution:

20% Acetonitrile

Equilibration Solution:

95% Acetonitrile

Capture Solution:

Dilute 200 µL samples five-fold by adding 800 µL 95% acetonitrile

Wash Solution:

95% Acetonitrile

Elution Solution:

20% Acetonitrile

1000+ Normal Phase 1 PhyTip® Columns

Glycans from at least 500 ng of glycoproteins are digested by conventional methods. Prepare sample by diluting digest 5-fold with 95% acetonitrile.

Condition:

500 µL Conditioning Solution passed through the resin bed for 2 cycles at a flow rate of 500 µL per minute with 20 second pauses.

Equilibrate:

500 µL Equilibration Solution passed through the resin bed for 2 cycles at a flow rate of 500 µL per minute with 20 second pauses.

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Capture:

1000 µL Sample passed through the resin bed for 8 cycles at a flow rate of 500 µL per minute with 20 second pauses.

Wash:

1000 µL Wash Solution passed through the resin bed for 4 cycles at a flow rate of 500 µL per minute with 20 second pauses. Repeat two more times in fresh wash solution.

Enrich:

100 µL Elution Solution passed through the resin bed for 4 cycles at a flow rate of 500 µL per minute with 20 second pauses.

200+ Normal Phase 1 PhyTip® Columns

Glycans from at least 100 ng of glycoproteins are digested by conventional methods. Prepare sample by diluting digest 5-fold with 95% acetonitrile.

Condition PhyTip® Column:

100 µL Conditioning solution passed through the resin bed for 2 cycles at a flow rate of 250 µL per minute with 20 second pauses.

Equilibrate PhyTip® Column:

100 µL Equilibration solution passed through the resin bed for 2 cycles at a flow rate of 250 µL per minute with 20 second pauses.

Capture:

200 µL Sample passed through the resin bed for 8 cycles at a flow rate of 250 µL per minute with 20 second pauses.

Wash:

200 µL Wash solution passed through the resin bed for 4 cycles at a flow rate of 250 µL per minute with 20 second pauses. Repeat two more times in fresh wash solution.

Enrich:

20 µL Elution Solution passed through the resin bed for 4 cycles at a flow rate of 250 µL per minute with 20 second pauses.

Ordering Information

For Ordering information please visit: www.biotage.com

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