

MEA 2

Personal Protein Purification System



PhyNexus

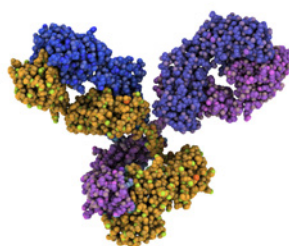
Now part of


Biotage®

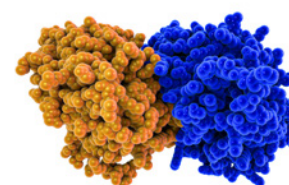
A Complete Solution for Automated Lab Scale Protein Purification

The system is delivered with both a 200+ μ L and 1000 μ L pipetting head. These can be easily exchanged in just a few minutes.

The MEA2 is a fully automated system for unattended protein purification by PhyTip® Columns. The MEA 2 is the second generation MEA Personal Purification System and has been upgraded for additional functionality.



Antibody purification by affinity resins such as Protein A, Protein G and ProPlus.



Recombinant, tagged proteins, such as purification of His-tagged proteins by IMAC resin.

PhyNexus Inc
Capture - Purify - Enrich™

- » Automated 12-channel liquid handling system allows complete flexibility of protocols and applications with maximum throughput.
- » Protein purification by our patented PhyTip® Columns for up to 95% recovery, high purity and unmatched reproducibility.
- » Streamlined and configurable system. Delivered with a 200+ µL and a 1000+ µL interchangeable pipetting heads.
- » Cold-room compatible for sample stability of sensitive proteins.
- » Easy-to-Use, intuitive user interface.
- » Flexible - compatible with several different PhyTip® Column resins and the user can easily modify preprogrammed methods.
- » The on-deck chiller plate keeps samples cold for prolonged sample stability.
- » Small volumes: When used with the unique PhyTip Cover (PCP 96-10-20) elution plates retain integrity of the final elution at volumes as low as 10 µL to guarantee high concentration of ultra-high purity samples.

Application Support Included

The MEA 2 system is pre-programmed with validated turnkey protocols for Protein G, Protein A and IMAC PhyTip® Columns – for reproducible and scalable results. To ensure you get the best results, our dedicated application support helps you get started with the purification protocol you want to use.

Applications

Our customers use PhyTip® Columns when they want samples of the highest quality in an automated and simple way. PhyTip Columns® are the perfect format for sample preparation for any application that require high throughput processing.

- » Affinity purification of therapeutic monoclonal antibodies in drug discovery and development or expression optimization
- » Affinity purification of recombinant, labelled proteins for enzyme engineering
- » Sample desalting
- » Glycosylation analysis by normal phase resin sample preparation
- » Protein purification by reversed phase resin for sample preparation for LC-MS/MS analysis

For any Protein or Sample you are Working on

PhyTip® Columns for the MEA 2 are available with a variety of different resins. Regardless if you are interested in affinity chromatography, ion exchange or regular chromatography resins – we've got you covered. Existing methods can also easily be adapted for optimal performance for your specific application. No programming skills are required.

The systems processes 1 – 96 samples in each run and sample volumes between 100 µL and 60 mL can be used.



PhyTip® Columns

Our proprietary PhyTip® columns is the heart of our technology. The purification resin is packed in a tip format for automation of the purification process by a liquid handling robot.

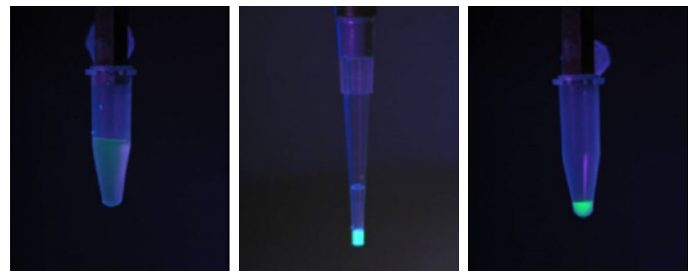
PhyTip® columns ensure the highest quality of purified protein for you to get results you can rely on in following analyses – every time. The samples are processed in three steps: capture, wash and elute by dual flow chromatography. In each step, liquid is drawn in and out of the PhyTip column and across the packed purification resin with a controlled flow several times.

Dual Flow Chromatography Benefits

- » Unmatched reproducibility
- » Up to 95% recovery of sample
- » Gentle on the protein for high levels of active protein
- » Elution volumes down to 10 µL for high concentrations of ultra-pure samples
- » Enrichment of the sample for easier detection in following analysis
- » Simple processing of samples in three easy steps

Capture – Purify – Enrich

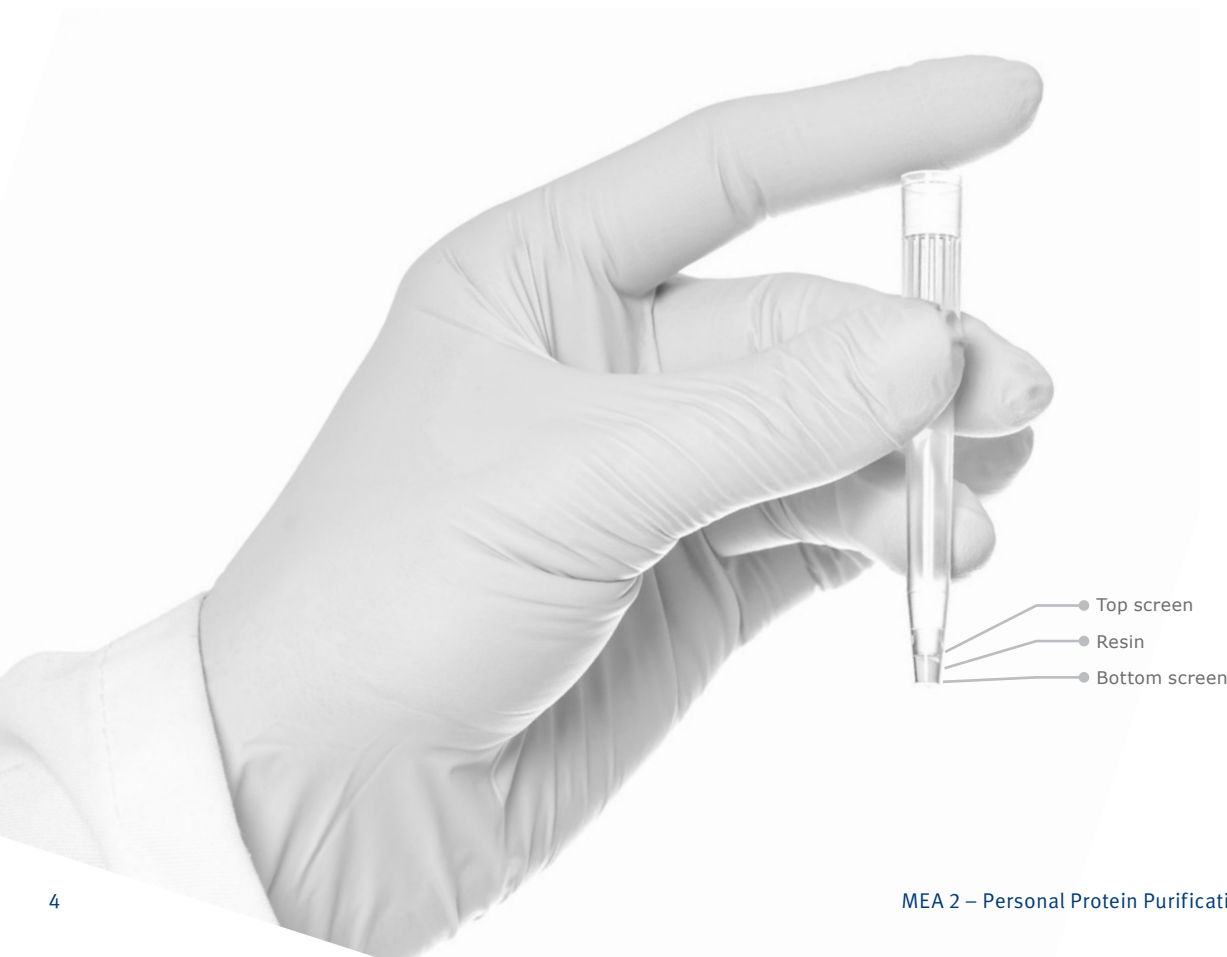
With our dual flow chromatography technology, the protein from the entire sample is concentrated to the small volume of packed resin inside the PhyTip® column. In the elution step, even very small volumes down to 10 µL can be used. The result is a concentrated highly pure protein sample optimal for further analyses.



Fluorescently labeled IgG before purification (200 µL).

Fluorescently labeled IgG adsorbed to the affinity resin of a PhyTip 200 µL column.

Purified and enriched IgG in eluted volume of 10 µL.



Technical Specifications



Weight
25 kg



Footprint
73 x 35 cm (w x d)



Interfaces
PC Windows 10



Number of Channels
12



Number of on-deck SBS positions
7



Number of on-deck non-SBS positions
1



Pipetting heads
Interchangeable pipetting heads 1000 μ L and 200 μ L



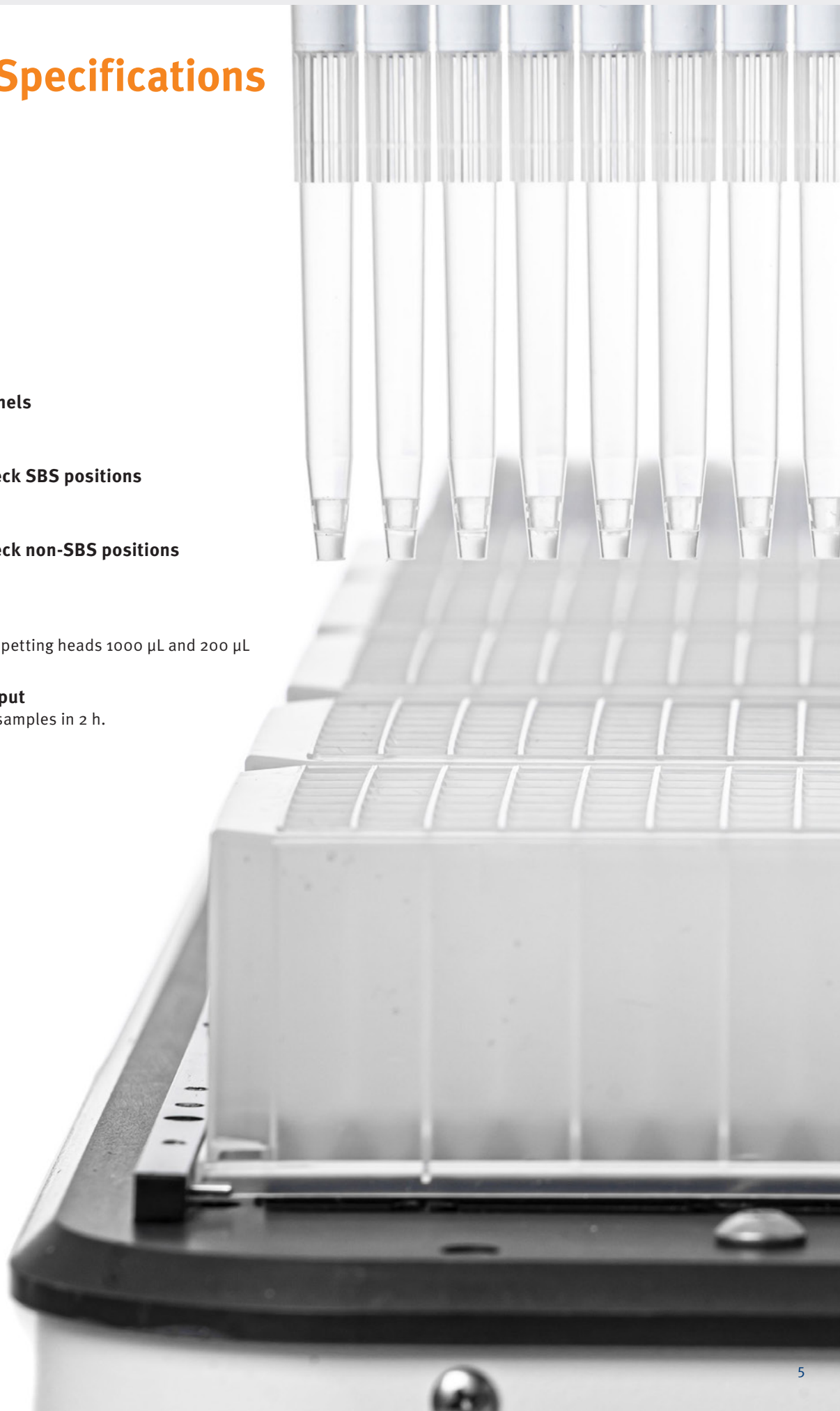
Sample throughput
Purification of 96 samples in 2 h.



Sample volumes
100 μ L–60 mL



Certifications
CE



Ordering Information

Part Number	Description	Qty.
Instruments		
PHR-96-000-10	MEA 2 Personal Purification System – US	1
PHR-96-000-11	MEA 2 Personal Purification System – UK	1
PHR-96-000-12	MEA 2 Personal Purification System EU	1
Sub components		
PHR-96-020-11	200+ pipette head for MEA 2 System	1
PHR-96-100-00	1000+ pipette head for MEA 2 System	1
PHR-96-900-00	Laptop computer for MEA 2 System. Includes installed MEA 2 software	1
Accessories		
PCP-01-00-00	5 X 1 290 mL well reagent reservoir trough	1
PCP-96-20-10	5 X 96 2 mL well sample plate	1
PCP-12-20-10	5 X 96 2 mL well sample plate	1
PCP-08-32-10	10 X 8 32 mL well sample plate	1
PCP-96-10-10	10 x 96 1 mL well sample plate	1
PCP-96-08-10	3 X 96 wide bore transfer tips for MEA	1
PCP-96-60-00	Neutralization Reservoirs: 36 rows of 12 wells	1
PCP 96-10-20	PhyTip Cover for Elution Plates, qty. 100	100
PHF-96-200-01	Adaptor Block for 200 µL Desalting column	1
PHF-96-600-01	Adaptor Block for 600 µL Desalting column	1
PCP 96-12-00	Rainin transfer tips. 8 racks of 96 -LTS 1200 µL	8
Protein A Affinity Resin		
PTR-91-10-01	PhyTip® Protein A 1 mL column, 10 µL resin, MEA	96
PTR-91-20-01	PhyTip® Protein A 1 mL column, 20 µL resin, MEA	96
PTR-91-40-01	PhyTip® Protein A 1 mL column, 40 µL resin, MEA	96
PTR-91-80-01	PhyTip® Protein A 1 mL column, 80 µL resin, MEA	96
PTR-91-16-01	PhyTip® Protein A 1 mL column, 160 µL resin, MEA	96
PTR-91-32-01	PhyTip® Protein A 1 mL column, 320 µL resin, MEA	96
PTR-92-05-01	PhyTip® Protein A 200 µL column, 5 µL resin, MEA	96
PTR-92-20-01	PhyTip® Protein A 200 µL column, 20 µL resin, MEA	96
Protein G Affinity Resin		
PTR-91-10-02	PhyTip® Protein G 1 mL column, 10 µL resin, MEA	96
PTR-91-20-02	PhyTip® Protein G 1 mL column, 20 µL resin, MEA	96
PTR-91-40-02	PhyTip® Protein G 1 mL column, 40 µL resin, MEA	96
PTR-91-80-02	PhyTip® Protein G 1 mL column, 80 µL resin, MEA	96
PTR-91-16-02	PhyTip® Protein G 1 mL column, 160 µL resin, MEA	96
PTR-91-32-02	PhyTip® Protein G 1 mL column, 320 µL resin, MEA	96
PTR-92-05-02	PhyTip® Protein G 200 µL column, 5 µL resin, MEA	96
PTR-92-20-02	PhyTip® Protein G 200 µL column, 20 µL resin, MEA	96
ProPlus Affinity Resin		
PTR-91-10-07	PhyTip® ProPlus 1 mL column, 10 µL resin, MEA	96
PTR-91-20-07	PhyTip® ProPlus 1 mL column, 20 µL resin, MEA	96
PTR-91-40-07	PhyTip® ProPlus 1 mL column, 40 µL resin, MEA	96
PTR-91-80-07	PhyTip® ProPlus 1 mL column, 80 µL resin, MEA	96
PTR-91-16-07	PhyTip® ProPlus 1 mL column, 160 µL resin, MEA	96
PTR-91-32-07	PhyTip® ProPlus 1 mL column, 320 µL resin, MEA	96
PTR-92-05-07	PhyTip® ProPlus 200 µL column, 5 µL resin, MEA	96
PTR-92-20-07	PhyTip® ProPlus 200 µL column, 20 µL resin, MEA	96

Part Number	Description	Qty.
ProPlus LX Affinity Resin		
PTR-91-10-26	PhyTip® ProPlus LX 1 mL column, 10 µL resin, MEA	96
PTR-91-20-26	PhyTip® ProPlus LX 1 mL column, 20 µL resin, MEA	96
PTR-91-40-26	PhyTip® ProPlus LX 1 mL column, 40 µL resin, MEA	96
PTR-91-80-26	PhyTip® ProPlus LX 1 mL column, 80 µL resin, MEA	96
PTR-91-16-26	PhyTip® ProPlus LX 1 mL column, 160 µL resin, MEA	96
PTR-91-32-26	PhyTip® ProPlus LX 1 mL column, 320 µL resin, MEA	96
PTR-92-05-26	PhyTip® ProPlus LX 200 µL column, 5 µL resin, MEA	96
PTR-92-20-26	PhyTip® ProPlus LX 200 µL column, 20 µL resin, MEA	96
BacBV Capture Select Affinity Resins		
PTR-91-10-31	PhyTip® CaptureSelect™ KappaXL 1 mL column, 10 µL resin, MEA	96
PTR-91-10-22	PhyTip® CaptureSelect™ LC-lambda (Hu) 1 mL column, 10 µL resin, MEA	96
PTR-91-10-23	PhyTip® CaptureSelect™ IgG-Fc (Hu) 1 mL column, 10 µL resin, MEA	96
PTR-91-10-24	PhyTip® CaptureSelect™ IgG-Fc ms) 1 mL column, 10 µL resin, MEA	96
PTR-91-10-30	PhyTip® POROS CaptureSelect™ IgM 1 mL column, 10 µL resin, MEA	96
PTR-91-20-31	PhyTip® CaptureSelect™ KappaXL 1 mL column, 20 µL resin, MEA	96
PTR-91-20-22	PhyTip® CaptureSelect™ LC-lambda (Hu) 1 mL column, 20 µL resin, MEA	96
PTR-91-20-23	PhyTip® CaptureSelect™ IgG-Fc (Hu) 1 mL column, 20 µL resin, MEA	96
PTR-91-20-24	PhyTip® CaptureSelect™ IgG-Fc ms) 1 mL column, 20 µL resin, MEA	96
PTR-91-20-30	PhyTip® POROS CaptureSelect™ IgM 1 mL column, 20 µL resin, MEA	96
IMAC Affinity Resin		
PTR-91-10-03	PhyTip® IMAC 1 mL column, 10 µL resin, MEA	96
PTR-91-20-03	PhyTip® IMAC 1 mL column, 20 µL resin, MEA	96
PTR-91-40-03	PhyTip® IMAC 1 mL column, 40 µL resin, MEA	96
PTR-91-80-03	PhyTip® IMAC 1 mL column, 80 µL resin, MEA	96
PTR-91-16-03	PhyTip® IMAC 1 mL column, 160 µL resin, MEA	96
PTR-91-32-03	PhyTip® IMAC 1 mL column, 320 µL resin, MEA	96
PTR-92-05-03	PhyTip® IMAC 200 µL column, 5 µL resin, MEA	96
PTR-92-20-03	PhyTip® IMAC 200 µL column, 20 µL resin, MEA	96
Glutathione Affinity Resin		
PTR-91-10-04	PhyTip® Glutathione 1 mL column, 10 µL resin, MEA	96
PTR-91-20-04	PhyTip® Glutathione 1 mL column, 20 µL resin, MEA	96
PTR-91-40-04	PhyTip® Glutathione 1 mL column, 40 µL resin, MEA	96
PTR-91-80-04	PhyTip® Glutathione 1 mL column, 80 µL resin, MEA	96
PTR-91-16-04	PhyTip® Glutathione 1 mL column, 160 µL resin, MEA	96
PTR-91-32-04	PhyTip® Glutathione 1 mL column, 320 µL resin, MEA	96
PTR-92-05-04	PhyTip® Glutathione 200 µL column, 5 µL resin, MEA	96
PTR-92-20-04	PhyTip® Glutathione 200 µL column, 20 µL resin, MEA	96
Streptavidin Affinity Resin		
PTR-91-10-05	PhyTip® Streptavidin 1 mL column, 10 µL resin, MEA	96
PTR-91-20-05	PhyTip® Streptavidin 1 mL column, 20 µL resin, MEA	96
PTR-91-40-05	PhyTip® Streptavidin 1 mL column, 40 µL resin, MEA	96
PTR-91-80-05	PhyTip® Streptavidin 1 mL column, 80 µL resin, MEA	96
PTR-91-16-05	PhyTip® Streptavidin 1 mL column, 160 µL resin, MEA	96
PTR-91-32-05	PhyTip® Streptavidin 1 mL column, 320 µL resin, MEA	96
PTR-92-05-05	PhyTip® Streptavidin 200 µL column, 5 µL resin, MEA	96
PTR-92-20-05	PhyTip® Streptavidin 200 µL column, 20 µL resin, MEA	96

Part Number	Description	Qty.	Part Number	Description	Qty.
Normal Phase resin			Strong Anion Resin		
PTR-91-10-09	PhyTip® Normal Phase I 1 mL column, 10 µL resin, MEA	96	PTR-91-10-11	PhyTip® Strong Anion 1 mL column, 10 µL resin, MEA	96
PTR-91-20-09	PhyTip® Normal Phase I 1 mL column, 20 µL resin, MEA	96	PTR-91-20-11	PhyTip® Strong Anion 1 mL column, 20 µL resin, MEA	96
PTR-92-05-09	PhyTip® Normal Phase I 200 µL column, 5 µL resin, MEA	96	PTR-91-40-11	PhyTip® Strong Anion 1 mL column, 40 µL resin, MEA	96
PTR-92-20-09	PhyTip® Normal Phase I 200 µL column, 20 µL resin, MEA	96	PTR-91-80-11	PhyTip® Strong Anion 1 mL column, 80 µL resin, MEA	96
Reversed Phase Resin C18 90 Å Pore Size			PTR-91-16-11	PhyTip® Strong Anion 1 mL column, 160 µL resin, MEA	96
PTR-91-10-18	PhyTip® C18 Reverse Phase 90 Å 1 mL column, 10 µL resin, MEA	96	PTR-91-32-11	PhyTip® Strong Anion 1 mL column, 320 µL resin, MEA	96
PTR-91-20-18	PhyTip® C18 Reverse Phase 90 Å 1 mL column, 20 µL resin, MEA	96	PTR-92-05-11	PhyTip® Strong Anion 200 µL column, 5 µL resin, MEA	96
PTR-91-40-18	PhyTip® C18 Reverse Phase 90 Å 1 mL column, 40 µL resin, MEA	96	PTR-92-20-11	PhyTip® Strong Anion 200 µL column, 20 µL resin, MEA	96
PTR-91-80-18	PhyTip® C18 Reverse Phase 90 Å 1 mL column, 80 µL resin, MEA	96	Weak Anion Resin		
PTR-91-16-18	PhyTip® C18 Reverse Phase 90 Å 1 mL column, 160 µL resin, MEA	96	PTR-91-10-12	PhyTip® Weak Anion 1 mL column, 10 µL resin, MEA	96
PTR-91-32-18	PhyTip® C18 Reverse Phase 90 Å 1 mL column, 320 µL resin, MEA	96	PTR-91-20-12	PhyTip® Weak Anion 1 mL column, 20 µL resin, MEA	96
PTR-92-05-18	PhyTip® C18 Reverse Phase 90 Å 200 µL column, 5 µL resin, MEA	96	PTR-91-40-12	PhyTip® Weak Anion 1 mL column, 40 µL resin, MEA	96
PTR-92-20-18	PhyTip® C18 Reverse Phase 90 Å 200 µL column, 20 µL resin, MEA	96	PTR-91-80-12	PhyTip® Weak Anion 1 mL column, 80 µL resin, MEA	96
Reversed Phase Resin C18 300 Å Pore Size			PTR-91-16-12	PhyTip® Weak Anion 1 mL column, 160 µL resin, MEA	96
PTR-91-10-19	PhyTip® C18 Reverse Phase 300 Å 1 mL column, 10 µL resin, MEA	96	PTR-91-32-12	PhyTip® Weak Anion 1 mL column, 320 µL resin, MEA	96
PTR-91-20-19	PhyTip® C18 Reverse Phase 300 Å 1 mL column, 20 µL resin, MEA	96	PTR-92-05-12	PhyTip® Weak Anion 200 µL column, 5 µL resin, MEA	96
PTR-91-40-19	PhyTip® C18 Reverse Phase 300 Å 1 mL column, 40 µL resin, MEA	96	PTR-92-20-12	PhyTip® Weak Anion 200 µL column, 20 µL resin, MEA	96
PTR-91-80-19	PhyTip® C18 Reverse Phase 300 Å 1 mL column, 80 µL resin, MEA	96	Strong Cation Resin		
PTR-91-16-19	PhyTip® C18 Reverse Phase 300 Å 1 mL column, 160 µL resin, MEA	96	PTR-91-10-13	PhyTip® Strong Cation 1 mL column, 10 µL resin, MEA	96
PTR-91-32-19	PhyTip® C18 Reverse Phase 300 Å 1 mL column, 320 µL resin, MEA	96	PTR-91-20-13	PhyTip® Strong Cation 1 mL column, 20 µL resin, MEA	96
PTR-92-05-19	PhyTip® C18 Reverse Phase 300 Å 200 µL column, 5 µL resin, MEA	96	PTR-91-40-13	PhyTip® Strong Cation 1 mL column, 40 µL resin, MEA	96
PTR-92-20-19	PhyTip® C18 Reverse Phase 300 Å 200 µL column, 20 µL resin, MEA	96	PTR-91-80-13	PhyTip® Strong Cation 1 mL column, 80 µL resin, MEA	96
Reversed Phase Resin C4 300 Å Pore Size			PTR-91-16-13	PhyTip® Strong Cation 1 mL column, 160 µL resin, MEA	96
PTR-91-10-52	PhyTip® C4 Reverse Phase 300 Å 1 mL column, 10 µL resin, MEA	96	PTR-91-32-13	PhyTip® Strong Cation 1 mL column, 320 µL resin, MEA	96
PTR-91-20-52	PhyTip® C4 Reverse Phase 300 Å 1 mL column, 20 µL resin, MEA	96	PTR-92-05-13	PhyTip® Strong Cation 200 µL column, 5 µL resin, MEA	96
PTR-91-40-52	PhyTip® C4 Reverse Phase 300 Å 1 mL column, 40 µL resin, MEA	96	PTR-92-20-13	PhyTip® Strong Cation 200 µL column, 20 µL resin, MEA	96
PTR-91-80-52	PhyTip® C4 Reverse Phase 300 Å 1 mL column, 80 µL resin, MEA	96	Weak Cation Resin		
PTR-91-16-52	PhyTip® C4 Reverse Phase 300 Å 1 mL column, 160 µL resin, MEA	96	PTR-91-10-14	PhyTip® Weak Cation 1 mL column, 10 µL resin, MEA	96
PTR-91-32-52	PhyTip® C4 Reverse Phase 300 Å 1 mL column, 320 µL resin, MEA	96	PTR-91-20-14	PhyTip® Weak Cation 1 mL column, 20 µL resin, MEA	96
PTR-92-05-52	PhyTip® C4 Reverse Phase 300 Å 200 µL column, 5 µL resin, MEA	96	PTR-91-40-14	PhyTip® Weak Cation 1 mL column, 40 µL resin, MEA	96
PTR-92-20-52	PhyTip® C4 Reverse Phase 300 Å 200 µL column, 20 µL resin, MEA	96	PTR-91-80-14	PhyTip® Weak Cation 1 mL column, 80 µL resin, MEA	96
Desalting Column					
PDR-91-20-06 Desalting column, 5K, 1000 µL, 200 µL 96					
PDR-91-60-06 Desalting column, 5K, 1000 µL, 600 µL 96					
PDR-91-20-17 Desalting column, 10K, 1000 µL, 200 µL 96					
PDR-91-60-17 Desalting column, 10K, 1000 µL, 600 µL 96					

Learn more at phymexus.com

Your Complete Partner for Effective Chemistry

Biotage is a worldwide supplier of instruments and accessories designed to facilitate the work of laboratory and process chemists. With our deep knowledge of the industry, academic contacts and in-house R&D teams, we can deliver the best solutions to your challenges. We take great pride in our flexibility and ability to meet our customer's individual needs. With strong foundations in both analytical, organic and process chemistry, we can offer the widest range of solutions available on the market.

EUROPE

Main Office: +46 18 565900
Toll Free: +800 18 565710
Fax: +46 18 591922
Order Tel: +46 18 565710
Order Fax: +46 18 565705
order@biotage.com
Support Tel: +46 18 56 59 11
Support Fax: + 46 18 56 57 11
eu-1-pointsupport@biotage.com

NORTH & LATIN AMERICA

Main Office: +1 704 654 4900
Toll Free: +1 800 446 4752
Fax: +1 704 654 4917
Order Tel: +1 704 654 4900
Order Fax: +1 434 296 8217
ordermailbox@biotage.com
Support Tel: +1 800 446 4752
Outside US: +1 704 654 4900
us-1-pointsupport@biotage.com

JAPAN

Tel: +81 3 5627 3123
Fax: +81 3 5627 3121
jp_order@biotage.com
jp-1-pointsupport@biotage.com

CHINA

Tel: +86 21 68162810
Fax: +86 21 68162829
cn_order@biotage.com
cn-1-pointsupport@biotage.com

KOREA

Tel: + 82 31 706 8500
Fax: + 82 31 706 8510
korea_info@biotage.com
kr-1-pointsupport@biotage.com

INDIA

Tel: +91 22 4005 3712
india@biotage.com

Distributors in other regions are listed on www.biotage.com

Literature Number: PPS583

© 2019 Biotage. All rights reserved. No material may be reproduced or published without the written permission of Biotage. Information in this document is subject to change without notice and does not represent any commitment from Biotage. E&OE. A list of all trademarks owned by Biotage AB is available at www.biotage.com/legal. Other product and company names mentioned herein may be trademarks or registered trademarks and/or service marks of their respective owners, and are used only for explanation and to the owners' benefit, without intent to infringe.

