SpinOUT™ G-Acryl

Polyacrylamide Resin Columns for Desalting & Buffer Exchange for Peptide & Protein Samples

SpinOUT™ G-Acryl 100: Cat. # 786-1609 to 786-1615, SpinOUT™ G-Acryl 600: Cat. # 786-1618 to 786-1625, SpinOUT™ G-Acryl 1200: Cat. # 786-1630 to 786-1634

INTRODUCTION 3
ITEMS SUPPLIED 3
STORAGE CONDITIONS 4
SPECIFICATIONS 4
SPINOUT™ G-ACRYL 100 4
SPINOUT™ G-ACRYL 600 4
SPINOUT™ G-ACRYL 1200 4
IMPORTANT INFORMATION 5
SAMPLE LOAD VOLUME 5
ADDITIONAL ITEMS NEEDED 5
PREPARATION BEFORE USE 5
PROTOCOL: PROTEIN DESALTING 5
PROTOCOL: BUFFER EXCHANGE 6
RELATED PRODUCTS 7

INTRODUCTION

The SpinOUT™ G-Acryl columns are versatile, spin-format columns for the desalting and buffer exchange of peptide and protein and other macromolecule solutions ranging from 5µl through to 3ml sample volumes. The SpinOUT™ columns are available in three MWCO sizes for >1,800, >6,000 or >20,000 dalton peptides or proteins and are suitable for samples containing as little as 20µg peptide or protein/ml.

The SpinOUT™ G-Acryl columns consist of porous polyacrylamide beads that are extremely hydrophilic and essentially free of charge. The resin is compatible with the following reagents:

- Dilute Organic Acids
- Urea [8M]
- Guanidine-HCl [6M]
- Chaotropic Agents
- Reducing Agents (DTT, 2-mercaptoethanol)
- Detergents (SDS, CHAPS, Triton® X-100, etc)
- Alcohols (<20%)
- Formamide

The SpinOUT™ G-Acryl columns are simply to use as the peptide or protein solution is applied and then centrifuged to recover protein with the column retaining >95% of the salts and small molecules (<100Da for SpinOUT™ G-Acryl 100, <1,000Da for SpinOUT™ G-Acryl 600 and <1,500 for SpinOUT™ G-Acryl 1200).

ITEMS SUPPLIED

Cat. #	Description	# Supplied	Resin Bed Volume (ml)	Sample Load Volume (ml)
786-1609	SpinOUT™ G-Acryl 100, 0.1ml	25	0.1	0.005-0.03
786-1610	SpinOUT™ G-Acryl 100, 1ml	10	1	0.03-0.3
786-1611	SpinOUT™ G-Acryl 100, 3ml	10	3	0.3-0.9
786-1612	SpinOUT™ G-Acryl 100, 3ml	50	3	0.3-0.9
786-1613	SpinOUT™ G-Acryl 100, 5ml	5	5	0.75-1.5
786-1614	SpinOUT™ G-Acryl 100, 5ml	50	5	0.75-1.5
786-1615	SpinOUT™ G-Acryl 100, 10ml	5	10	1-3
786-1618	SpinOUT™ G-Acryl 600, 0.1ml	25	0.1	0.005-0.03
786-1619	SpinOUT™ G-Acryl 600, 1ml	10	1	0.03-0.3

Cat. #	Description	# Supplied	Resin Bed Volume (ml)	Sample Load Volume (ml)
786-1620	SpinOUT™ G-Acryl 600, 1ml	50	1	0.03-0.3
786-1621	SpinOUT™ G-Acryl 600, 3ml	10	3	0.3-0.9
786-1622	SpinOUT™ G-Acryl 600, 3ml	50	3	0.3-0.9
786-1623	SpinOUT™ G-Acryl 600, 5ml	5	5	0.75-1.5
786-1624	SpinOUT™ G-Acryl 600, 5ml	50	5	0.75-1.5
786-1625	SpinOUT™ G-Acryl 600, 10ml	5	10	1-3
786-1630	SpinOUT™ G-Acryl 1200, 0.1ml	25	0.1	0.005-0.03
786-1631	SpinOUT™ G-Acryl 1200, 1ml	10	1	0.03-0.3
786-1632	SpinOUT™ G-Acryl 1200, 3ml	10	3	0.3-0.9
786-1633	SpinOUT™ G-Acryl 1200, 5ml	5	5	0.75-1.5
786-1634	SpinOUT™ G-Acryl 1200, 10ml	5	10	1-3

STORAGE CONDITIONS

The columns are shipped at ambient temperature. Upon arrival, store the columns at 4˚C. If stored and handled correctly the columns have a shelf-life of 1 year.

SPECIFICATIONS

SpinOUT™ G-Acryl 100

- Particle size: 45-90µm
- Flow Rate: 5-10cm/hr
- Exclusion limit (M_r): 1,800

SpinOUT™ G-Acryl 600

- Particle size: 90-1800µm
- Flow Rate: 15-20cm/hr
- Exclusion limit (M_r): 6,000

SpinOUT™ G-Acryl 1200

- Particle size: 90-180µm
- Flow Rate: 15-20cm/hr
- Exclusion limit (M_r): 20,000

The polyacrylamide resins are autoclavable at pH5.5-6.5 in a suitable buffer (50mM HEPES, MES or citrate) at 120°C for 15-30 mins.

IMPORTANT INFORMATION

Sample Load Volume

The recommended load volumes (see table) are a guideline. The actual volumes used will be dependent on your sample, the concentration of salts and contaminants to be removed and the recovered purity desired. For optimal removal of contaminants, we recommend using a sample volume of <20% of the resin bed volume.

NOTE: *Loading more than the recommended load volume will result in a higher level of contaminating salts and other molecules.*

ADDITIONAL ITEMS NEEDED

- Variable speed centrifuge
- 1.5-2ml microcentrifuge collection tubes for the 0.1ml spin columns
- 15ml collection tubes for the 3ml and 5ml spin columns
- 50ml collection tubes for the 10 ml spin columns
- Buffer for buffer-exchange

PREPARATION BEFORE USE

1. Mark one side of the column and ensure in all centrifugations the mark is facing outwards during centrifugation.
2. Prepare the SpinOUT™ column by centrifuging the SpinOUT™ columns at 1,000g for 1 minute to compact the resin.
3. Remove the top and then bottom caps. Place into an appropriate collection tube.
4. Centrifuge the column at 1,000g for 2 minutes to remove the storage buffer.

PROTOCOL: PROTEIN DESALTING

1. Equilibrate the column with the buffer of choice by applying at least 5 column volumes of buffer in batches of 1-2 column volumes. Centrifuge the column at 1,000g for 2 minutes to remove the buffer after each application.
2. Place the column in a new collection tube and remove the cap.
3. Slowly, apply the protein solution to the center of the SpinOUT™ resin.

   NOTE: *See the table above and Important Information for the recommended volumes to apply to the column.*
4. Centrifuge the column at 1,000g for the indicated times in the table below to collect the desalted protein solution. Discard the column.

Column size	Centrifugation Time (mins)
0.1ml column	4
1ml column	4
3ml column	6
5ml column	8
10ml column	10

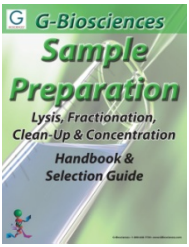
Table 1: Centrifugation times for optimal sample recovery.

PROTOCOL: BUFFER EXCHANGE

1. Place the column in a new collection tube and remove the cap.
2. Add the buffer to be exchanged into to the column
    a. For 0.1ml column, use 75µl buffer
    b. For 1ml column, use 0.5ml buffer
    c. For 3ml column, use 1.5ml buffer
    d. For 5ml column, use 2.5ml buffer
    e. For 10ml column, use 5ml buffer
3. Centrifuge the column at 1,000g for 2 minutes to remove the buffer.
4. Repeat steps 2 and 3, a further five more times, ensuring the buffer is discarded after each centrifugation.
5. Place the column in a new collection tube and remove the cap.
6. Slowly, apply the protein solution to the center of the SpinOUT™ resin.
   NOTE: *See the table above and Important Information for the recommended volumes to apply to the column.*
7. Centrifuge the column at 1,000g for the indicated times shown in Table 1 to collect the protein solution. Discard the column.

RELATED PRODUCTS

Download our Sample Preparation Handbook



http://info.gbiosciences.com/complete-protein-sample-preparation-handbook/

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