SOURCE 30S

Product Information

Cat#No#	SO-460C

Product Overview

Source 30S is a polymeric, strong cation exchanger designed for intermediate purification and large-scale polishing.

Description

SOURCE 30S is a synthetic high performance, preparative, chromatography resin, based on a 30 µm monosized, rigid polystyrene/divinyl benzene polymer matrix It is modified with sulphonate (S) strong cation exchange groups. SOURCE resins have excellent physical and chemical characteristics, allowing high flow rates and consistent performance at both laboratory and process scales.

Characteristic

Mono-sized 30 µm rigid beads gives low back pressure and high flow rates allowing for high productivity.
Strong cation exchanger designed for high resolution polishing purification of proteins, peptides and oligonucleotides.
High chemical stability allowing for wide range of working conditions with good resistance to cleaning conditions at high pH.

Maximum operating pressure

2000 cm/h, 1000 kPa, FineLine 100 column.

Ligand Coupling Method

long, hydrophilic spacer arms

Packing Column

1. Assemble the column (and packing reservoir if necessary).
2. Eliminate air from the column dead spaces by flushing the end piece and adapter with 20% ethanol. Make sure no air has been trapped under the column net. Close the column outlet leaving the net covered with 20% ethanol.
3. Resuspend SOURCE resin in its container by shaking (avoid stirring sedimented resin). A slurry

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.com
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

SOURCE 30S

concentration of up to 60% can be used for packing (in 20% ethanol).
4. Pour the slurry into the column in one continuous motion. Pouring the slurry into the packing glass tube in a slow motion will minimize the introduction of air bubbles.
5. Connect the end-piece to the packing tube, or the adapter and connect the column to a pump. Avoid trapping air bubbles under the adapter or in the inlet tubing.
6. Open the bottom outlet of the column and let SOURCE sediment by pumping 20% ethanol through the column at a flow rate generating a back pressure of 10 bar for a Tricorn 10/100 column.
7. When the resin bed is stabilized, close the bottom valve and stop the pump.
8. Carefully place the top filter on top of the bed before fitting the adapter.
9. With the adapter inlet disconnected, screw the adapter down approximately 2 mm into the resin bed, allowing the packing solution to flush the adapter inlet.
10. Connect the pump, open the bottom outlet and continue packing. The bed will be further compressed at this point forming a space between the bed surface and the adapter.
11. Disconnect the column inlet and lower the adapter approximately 2 mm into the resin bed. The column is now ready to use.

Matrix
Polystyrene/divinylbenzene
Ionic Exchanger Type
Strong cation exchanger
Average particle size
~30 µm
Ligand
Sulphonate group
Dynamic binding capacity
~ 80 mg Lysozyme/mL resin
Recommended flow rate
300 to 1000 cm/h

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.com
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

CREATIVE BIOMART®
Chromatography

SOURCE 30S

Recommended column height
10 cm
Chemical stability
Stable in common ion exchange buffers.
pH working range
2–13
CIP stability
1–14
Temperature stability
4˚C to 40˚C
Autoclavable
20 min at 121°C in H2 O, pH 7, 1 cycle.
Storage
4 to 30°C, 20% Ethanol + 0.2 M Sodium Acetate.
Shipping
20% ethanol and 0.2 M sodium acetate
Regeneration
Normally a separation cycle is followed by washing the column with a high ionic strength buffer (e.g., containing 1 to 2 M NaCl) and/or changing pH, to remove strongly adsorbed substances from the column.
Cleaning-in-place
Ionically bound substances: wash the column with 0.5 bed volumes of a 2 M NaCl at a flow velocity of 40 cm/h, contact time 10 to 15 minutes, reversed flow direction. Precipitated substances, hydrophobically bound substances and lipoproteins: wash the column with 1 M NaOH at a flow velocity of 40 cm/h, contact time 1 to 2 hours, reversed flow direction. Strongly hydrophobically bound proteins, lipoproteins and lipids from the column: wash with 70% ethanol or

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.com
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

SOURCE 30S

30% isopropanol at a flow velocity of 10 to 40 cm/h, reversed flow direction. Apply increasing gradients to avoid air bubble formation when using high concentrations of organic solvents.
Sanitization
Wash the column with 0.5 to 1.0 M NaOH at a flow velocity of approximately 40 cm/h, contact time 30 to 60 minutes.
Sterilization
For sterilization, dismantle the column and autoclave the resin at 121°C for 20 minutes.
Pack size
50 L
BioProcess resin
Yes
Maximum flow velocity
2000 cm/h
Functional group
R-O-CH2 -CHOH-CH2 -O-CH2 -CHOHCH2 -SO3 -

Tel: 1-631-559-9269 1-516-512-3133

Email:info@creative-biomart.com

Fax:1-631-938-8127

45-1 Ramsey Road, Shirley, NY 11967, USA