RNASep™ Semi-Prep Column

Column Care Information

Catalog Number: RPC-99-2110

The ADS Biotec RNASep™ Semi-Prep Column contains nonporous polystyrene-divinylbenzene (PS-DVB) copolymer beads that are approximately 2µm in size and are alkylated with C-18 chains. The polymer packing is designed for the separation of RNA. The column should be installed and used in accordance with the following instructions.

GENERAL

Each column is shipped with an attached label identifying column type, serial number, and flow direction. Be sure this tag is kept on the column in case further details are needed about this specific column. Before installing the column, the entire system should be flushed with the mobile phase to be used. The mobile phase should be passed through a 0.2µm filter and thoroughly degassed. Maximum pressure on this column should not exceed 3500 psi.
The typical detection system uses UV absorbance @ 260nm.

PHYSICAL CHARACTERISTICS

Dimensions: 21.2 x 100 mm
Packing Material: Alkylated PS-DVB beads, C18
Ionic Form: NA
pH Range: 0-14
Column Volume: ~ 35 mL
Column Void Volume: ~ 24 mL

MOBILE PHASE

The RNASep™ Semi-Prep column was designed for optimal separation using ADS Biotec WAVE Optimized® Buffer system.

TEAA Buffer A – (PN: 553421) 0.1M Triethylammonium Acetate (TEAA) pH 7.0
TEAA Buffer B – (PN: 553422) 0.1M TEAA, 25% Acetonitrile pH 7.0
Column Wash Solution D – (PN: 553423) 75% Acetonitrile

INSTALLATION

-Before installing the column, thoroughly flush the HPLC system with 100 % Solution D ~ 1.1 void volumes (40 mL, 20 minutes @ 2.0 mL/min). Best results will be obtained with the flow direction as indicated by the arrow on the column.
-Securely attach the column and turn on the column oven to desired purification temperature.
-Set Flow Rate to 3.0 – 4.0 mL/min. depending on system pressure.
-Equilibrate the column with 38% Buffer B for at least 30 min before loading RNA sample.

COLUMN STORAGE

Be sure to flush RNASep™ Semi-Prep column with 100% Solution D @ 3.0 mL/min for at least 30 minutes (~ 2.5 column volumes) before removing column for storage. The column must be stored in Solution D. Prior to storage, seal the column using the column end-plugs before storing at room temperature.

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ADS Biotec Limited | 40 Watt Road | Hillington Park | Hillington, Glasgow | UK G52 4RY | +44 (0) 141 892-8800
Registered in England and Wales. Registered office: Birketts LLP, 22 Station Road, Cambridge, CB1 2JD
Company Registration No. 03257373 VAT Registration No. GB682479101

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REGENERATION PROCEDURE

To prolong the life of the RNASep™ Semi-Prep Column it may be necessary to regenerate using Solution D.

1. Reverse the flow direction of the column.
2. Set oven temperature to 80 °C (or lower than 80 °C as column heater allows).
3. Flush column with 100% Solution D @ 3.0 mL/min for 30 minutes (~ 2.5 column volumes).
4. Set oven temperature to 50 °C.
5. Reverse the flow direction of the column- back to normal direction. NOTE: Column will be HOT.
6. To prepare the column for storage, continue with Solution D until column has cooled to 50 °C (or lower) before removing.
7. To prepare column for a new sample, typically equilibrate first with 50% Buffer A, 50% Buffer B @ 2.0 - 4.0 mL/min (analysis gradient flow rate) for a minimum of 2 column volumes at the desired column temperature.

COLUMN PRECAUTIONS

No warranty exists for this specialized column. Please note the following precautions in using the RNASep™ Semi-Prep column:

- Use only HPLC grade acetonitrile, <0.005 AU (UV absorbance) at 260 nm. ADS Biotec Buffers and\or acetonitrile are recommended.
- Use only HPLC grade water that has a resistivity of at least 18 MΩ purity with < 15 ppb T.O.C. (total organic carbon) and must not be autoclaved.
- Do not inject the following materials:
    - Bovine Serum Albumin
    - Autoclaved Water
    - Mineral Oil
    - Formamide
    - Proteinase K
    - High Molecular weight stabilizers such as polyethylene glycol (1% max)
    - Detergents such as Triton X100, NP40, Tween 20 and SDS/SLS (1% max)
    - Glycerol (2% max)
    - DMSO (10% max)
    - Betaine (1.25-2.5M max)

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Custom Buffer Manufacture

Contact us for your custom needs for mobile phase manufacturing of ready-to-use buffer solutions to be produced within our proven ISO 13485 Quality System. ADS Biotec can provide storage and global drop shipments of custom mobile phases as well. We offer unparalleled mixing precision for aqueous and non-aqueous solutions from single liters to 1000 L, custom labelled and packaged to meet your requirements. Our flexible manufacturing facility is equipped with dedicated mixing tanks and calibrated equipment in production suites in a controlled, HEPA-filtered clean-room environment.

Custom blended buffers (solvent optimization) are very useful for running "flatter" gradients for the RNA Prep and Semi-Prep Columns. ADS Biotec offers custom blends for larger scale uses.

HPLC Buffer Order Information

Product Description	Size	Catalogue Numbers
Mobile Phase for Nucleic Acid Analysis – Buffer A (0.1 M TEAA in water)	4 x 2.5 L	553421
Mobile Phase for Nucleic Acid Analysis – Buffer B (0.1 M TEAA in 25 % Acetonitrile)	4 x 2.5 L	553422
Column Wash Solution D (75 % acetonitrile)	4 x 2.5 L	553423
Mobile Phase for Nucleic Acid Analysis – Buffer HA A (0.1 M HAA in 10% Acetonitrile)	4 x 2.5 L	553424
Mobile Phase for Nucleic Acid Analysis – Buffer HA B (0.1 M HAA in 50% Acetonitrile)	4 x 2.5 L	553425
2 M TEAA Solution	6 x 200 mL	SP5890
2 M HAA Solution	6 x 200 mL	SP5892
Custom Volume – Mobile Phase for Nucleic Acid Analysis - Buffer A (0.1 M TEAA in water)	*	553421-L
Custom Volume – Mobile Phase for Nucleic Acid Analysis- Buffer B (0.1 M TEAA in 25% Acetonitrile)	*	553422-L
Custom Volume – Column Wash Solution D (75 % Acetonitrile)	*	553423-L
Custom Volume – 2 M TEAA Solution	*	553303-L
Custom Volume – 2 M HAA Solution	*	552303-L

* Customer specified packing and volume

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