RNASep™ Prep Column

Column Care Information

Catalog Number: RNA-99-3810

The ADS Biotec RNASep™ 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 ~2500-3000 psi. The typical detection system uses UV absorbance @ 260nm or 254 nm.

PHYSICAL CHARACTERISTICS

Dimensions: 7.8 mm X 50 mm
Packing Material: Alkylated PS-DVB beads, C18
Ionic Form: NA
pH Range: 0-14
Column Volume ~ 2.4 mL
Column Void Volume ~ 1.7 mL

INSTALLATION

-Before installing the column, thoroughly flush the HPLC system with 100 % Solution D (for 20 minutes @ 1.0 mL/min). Ensure the column is oriented with the flow direction as indicated by the arrow on the column.
-Install the column and turn on the column oven to 45 °C (or other desired method conditions).
-Set Flow Rate to 1.0 mL/min.
-Equilibrate the column with 38% Buffer B for at least 20 min before analysis

COLUMN STORAGE

Be sure to flush RNASep™ Prep column with 100% Solution D @ 1.0 mL/min for at least 30 minutes 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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MOBILE PHASE

ADS Biotec columns were designed for optimal separation using ADS Biotec buffers, with more than 20 years' manufacturing experience producing the highest quality HPLC buffers available, built upon the solid foundation of our flagship WAVE HPLC system.

2 types of ion-pair buffers are available, one using triethylammonium acetate (TEAA) suitable for common nucleic acid separations and the second made using hexylammonium acetate (HAA) for challenging separations. Both ion-pairing reagents undergo quality testing prior to buffer manufacture to ensure clean baselines, optimal resolution, and separation consistency. Additionally, ADS Biotec offers custom buffer solutions ready to use small or large volumes in several packaging formats: bottles, drums and HDPE containers.

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

COLUMN REGENERATION PROCEDURE

To prolong the life of the RNASep™ Prep Column it may be necessary to regenerate using Solution D (75% acetonitrile).

1. Reverse the flow direction of the column.
2. Set oven temperature to 80 °C.
3. Flush column with 100% Solution D @ 0.5 mL/min for 30 minutes.
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 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 @ 0.5 mL/min for at least 30 minutes at the targeted oven temperature.

COLUMN PRECAUTIONS

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

- Use only HPLC grade acetonitrile, <0.005 AU (UV absorbance) at 260 nm. ADS Biotec acetonitrile and/or ADS Biotec Buffers 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)