

# RNA Columns and HPLC Buffers for Scalable Nucleic Acid Separations

ADS Biotec is your source for world-class columns and buffers for the scalable separation and purification of RNA and DNA. Our RNASep™ line of columns are comprised of uniform alkylated nonporous polystyrene-divinylbenzene (PS-DVB) copolymer microspheres providing high performance nucleic acid separations. Additionally, these versatile columns can be used with most HPLC\FPLC systems for many RNA & DNA separations. In parallel with traditional HPLC needs, our buffers are now in high demand for process development and clinical lot productions in large scale batches (nominally 400-900 liters).

## RNA Purification Columns

Item Number	Column Dimension	Resin	Use
RNA-99-3810	7.8x50mm	Non-porous PS-DVB	-Separation, purification and QC of RNA molecules
RPC-99-2110	21.2x100mm	Non-porous PS-DVB	- RNA purification intermediate scale-up
RPC-99-3015	30.0x150mm	Non-porous PS-DVB	<b>**NEW** - RNA purification for larger scale-up</b>
DNA-99-3510	4.6x50mm	Non-porous PS-DVB	-High Resolution ds\ssRNA and DNA Analysis - High Resolution RNA Analysis

## RNASep™ Prep Column (starter column)

Targeted for RNA purification for down-stream biological use

- ✓ RNA purity assessment
- ✓ Excellent sensitivity and resolution
- ✓ Useful for HPLC method validation prior to scale-up



### Item Number: RNA-99-3810

7.8 x 50 mm, non-porous PS\DVB resin matrix,  
Column capacity ~50 µg total RNA or 1000 ng of specific RNA.

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## RNA Purification Columns

### RNASeq™ Semi-prep Column

Highest capacity columns offering RNA purification for early process development and in vivo studies

- √ RNA purification scale-up for downstream therapeutic/biological use
- √ Compatible with LC based instruments
- √ High-loading capacity
- √ Ideal for 2-step purifications
- √ Automate with fraction collection



#### Item Number: **RPC-99-2110**

21.2 x 100 mm, non-porous PS\DVB resin matrix, column capacity ~600 µg total RNA.

### RNASeq™ Semi-Prep II Column

- √ RNA purity assessment scale-up for downstream therapeutic/biological use
- √ High-loading capacity
- √ Ideal for 2-step purifications
- √ Automate with fraction collection



#### Item Number: **RCP-99-3015**

30.0 x 150 mm, non-porous PS\DVB resin matrix, column capacity up to 2 mg total RNA.

## DNA Purification Column

### DNASep™ Column

- √ DNA and Oligo purity assesment
- √ Superior DNA sizing
- √ Excellent sensitivity and resolution
- √ Robust, long lifetime
- √ Hundreds of dHPLC literature references



#### Item Number: **DNA-99-3510**

4.6 x 50 mm, non-porous PS\DVB resin matrix, column capacity ~2.0 µg total DNA.

# RNA Columns and HPLC Buffers for Scalable Nucleic Acid Separations

## Optimized Buffers for HPLC and Prep Scale

Consistent, high-quality buffers are of paramount importance for RNA purification to ensure their efficacy for downstream application and therapeutic use. Separation and purification of nucleic acids is most commonly performed using ion-paired reversed phase chromatography. This technique provides ionic interaction between the nucleic acid and the stationary phase via its hydrophobic moiety.

ADS Biotec has over 20 years of experience producing the highest quality HPLC buffers available for nucleic acid separations. ADS Biotec offers 2 types of ion-pair buffers, 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 rigorous quality testing prior to buffer manufacture to ensure clean baselines, optimal resolution, and separation consistency. Our hexylammonium acetate (HAA) buffers were developed for superior resolution of sequence independent molecules; capable of resolving molecules of identical length but differing in sequence (weight).

ADS Biotec also offers custom, ready-to-use buffer solutions for your specific proprietary needs. All custom buffers are manufactured to your requirements and solvent concentration, assuring consistent lot to lot reproducibility - which produces consistent peak retention times for your production gradients.

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
<b>Custom Buffer Products</b>		
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	

*Increased Productivity with High Quality and Consistency*

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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 9001 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 a thousand liters, custom labeled 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.



## Contact Information



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