



# RNA/DNA Columns and HPLC Buffers

**For Scalable Nucleic Acid Separations**

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Increased Productivity with High Quality and Consistency

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# RNA/DNA Columns and HPLC Buffers

## For Scalable Nucleic Acid Separations



ADS Biotech is your source for world-class columns and buffers for the scalable separation and purification of RNA and DNA

## RNA/DNA Columns

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 and DNA separations.

### RNASep™ Prep RNA Purification Column (starter column)

- ✓ Targeted for RNA Purification for downstream biological use
- ✓ Create mRNA vaccines and other drugs
- ✓ RNA purity assessment
- ✓ Excellent sensitivity and resolution
- ✓ Useful for HPLC method validation prior to scale-up

**Catalogue Number: RNA-99-3810**  
**7.8 x 50 mm, non-porous PS\DVB resin matrix**  
**Column capacity: ~50 µg total RNA**



### RNASep™ Semi-Prep - High Capacity RNA Purification Column

- ✓ RNA purification scale-up for downstream therapeutic/biological use
- ✓ Create mRNA vaccines and other drugs
- ✓ High-loading capacity
- ✓ Ideal for 2-step purifications
- ✓ Automate with fraction collection

**Catalogue Number: RPC-99-2110**  
**21.2 x 100 mm, non-porous PS\DVB resin matrix**  
**Column capacity: ~600 µg total RNA**



## RNAsep™ Semi-Prep - Ultra High Capacity RNA Purification Column

- ✓ RNA purity assessment scale-up for downstream therapeutic/biological use
- ✓ Create mRNA vaccines and other drugs
- ✓ High-loading capacity
- ✓ Ideal for 2-step purifications
- ✓ Automate with fraction collection

**Catalogue Number: RPC-99-3015**  
**30 x 150 mm, non-porous PS\DVB resin matrix**  
**Column capacity: up to 2 mg total RNA**



## OligoSep™ Cartridge - Oligonucleotide Analysis Columns

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

**Catalogue Number: NUC-99-3550**  
**4.6 mm x 50 mm, non-porous PS\DVB resin matrix**  
**Column capacity: up to 200 µg**



## OligoSep™ Prep HC Cartridge - High Capacity Oligonucleotide Purification Column

- ✓ Targeted for DNA and RNA purification
- ✓ RNA purity assessment
- ✓ Excellent sensitivity and resolution
- ✓ Useful for method development and validation prior to scale up
- ✓ High capacity

**Catalogue number: NUC-99-3860**  
**7.8 x 50 mm, macro-porous PS\DVB resin matrix**  
**Column capacity: ~5000 µg**



## OligoSep™ HC Cartridge - High Capacity Oligonucleotide Separation Column

- ✓ Targeted for oligo QC
- ✓ Excellent sensitivity and resolution
- ✓ Robust, long lifetime
- ✓ Accurate oligo sizing

**Catalogue number: NUC-99-3560**

**4.6 x 50 mm, macro-porous PS\DVB resin matrix**

**Increased capacity as compared with similar size columns**



## DNASep™ Cartridge DNA Separation Column

- ✓ DNA\Oligo purity assessment
- ✓ Excellent sensitivity and resolution
- ✓ Superior DNA sizing
- ✓ Robust, long lifetime
- ✓ Hundreds of literature references with WAVE™ dHPLC system

**Catalogue Number: DNA-99-3510**

**4.6 x 50 mm, non-porous PS\DVB resin matrix**

**Column capacity: ~2.0 µg total DNA**



## DNASep™ HT Cartridge - High Throughput DNA Separation Column

- ✓ DNA\Oligo purity assessment
- ✓ Excellent sensitivity and resolution
- ✓ Superior DNA sizing
- ✓ Robust, long-lifetime
- ✓ Hundreds of literature references with Wave™ dHPLC system

**Catalogue Number: DNA-99-3710**

**6.5 mm x 37 mm, macro-porous PS\DVB resin matrix**

**Column capacity: ~4 µg**



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## HPLC Buffers

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. In parallel with traditional HPLC needs, our buffers are now in high demand for process development and clinical lot productions in large scale batches (1,000's liters). Undergoing rigorous quality testing prior to manufacture, we ensure our buffers have clean baselines, optimal resolution, and separation consistency.

We offer two types of ion-pairing HPLC buffers:

- ✓ Triethylammonium acetate (TEAA) suitable for common nucleic acid separations.
- ✓ Hexylammonium acetate (HAA) for challenging separations. Developed for superior resolution of sequence independent molecules; capable of resolving molecules of identical length but differing in sequence (weight).

## 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 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.



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## Column Order Information

Product Description	Use	Column Dimensions	Catalogue Numbers
RNASeq™ Prep - RNA Purification Column	Separation, purification and QC of RNA molecules	7.8 x 50 mm	RNA-99-3810
RNASeq™ Semi-Prep High Capacity RNA Purification Column	RNA purification for intermediate scale-up	21.2 x 100 mm	RPC-99-2110
RNASeq™ Semi-Prep - Ultra High Capacity RNA Purification Column	RNA purification for large scale-up	30.0 x 150 mm	RPC-99-3015
OligoSep™ Cartridge - Oligonucleotide Analysis Column	High resolution ds/ssDNA analysis, sizing, and mutation detection	4.6 mm x 50 mm	NUC-99-3550
OligoSep™ Prep HC Cartridge - High Capacity Oligonucleotide Purification Column	Oligo purification and high performance nucleic acid separations	7.8 mm x 50 mm	NUC-99-3860
OligoSep™ HC Cartridge - High Capacity Oligonucleotide Separation Column	High resolution oligo analysis and method developments and high performance nucleic acid separations	4.6 mm x 50 mm	NUC-99-3560
DNASeq™ Cartridge - DNA Separation Column	High resolution ds/ssRNA and DNA analysis High resolution RNA analysis	4.6 x 50 mm	DNA-99-3510
DNASeq™ HT Cartridge - High Throughput DNA Separation Column	Rapid Mutation detection and DNA analysis, sizing, mutation detection, oligonucleotide analysis and purification, and RNA analysis and purification	6.5 mm x 37 mm	DNA-99-3710

## 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
Triethylammonium Acetate (TEAA) Buffer Trial Pack	1x2.5L Buffer A, 1x2.5L Buffer B, 1x2.5L Solution D	SP2038
Hexylammonium Acetate (HAA) Buffer Trial Pack	1x2.5L HAA Buffer A, 1x2.5L HAA Buffer B, 1x2.5L Column Wash Solution D	SP2039