

CleanAll RNA/DNA Clean-Up and Concentration Kit

Norgen's CleanAll RNA/DNA Clean-up and Concentration Micro Kit provides a rapid method for the purification, cleanup and concentration of RNA or DNA from different isolation methods or upstream applications. The kit can be used as an alternative to organic extraction and ethanol precipitation to clean up various enzymatic reactions. The CleanAll Kit purifies RNA from phenol/guanidine-based protocols or from various upstream enzymatic reactions such as DNase treatment, labeling and *in vitro* transcription. Furthermore, endotoxins can be removed from previously purified RNA solutions. The kit can be used to clean up DNA from digestions, ligations, PCR reactions, labeling reactions, DNA modification reactions and staining. The kit also provides a protocol for the rapid removal of endotoxins from previously purified DNA down to 0.1 EU/mg DNA or less.



Norgen's CleanAll Kit purifies nucleic acids based on the use of spin column chromatography. This kit purifies all sizes of RNA, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA). The RNA is preferentially purified from other reaction components such as proteins and nucleotides, without the use of phenol or chloroform. This kit also purifies all sizes of DNA, from small PCR products to native or linearized plasmids to genomic DNA. Also, by adjusting the binding conditions, the kit could be used for the cleanup of oligonucleotides and small DNA fragments. The purified DNA and RNA are of the highest quality, and can be used in a number of downstream applications.

Applications Requiring RNA Cleanup	Contaminants Removed
DNase treatment	DNase, salt
<i>In vitro</i> transcription	DNA template, nucleotides, enzymes, salts
RNA Probe Labeling (Radioactive, Fluorescent or Digoxigenin)	RNA polymerases, nucleotides, salts, label or coupling reagent
Organic-based RNA Isolation (such as Trizol-based lysate)	Phenol, chloroform

Applications Requiring DNA Cleanup	Contaminants Removed
Restriction Enzyme Digestion	Restriction enzymes, salt
DNA Modifications (Klenow, T4 nucleotide Kinase, Alkaline Phosphatase)	Poly- DNA modification enzymes, nucleotides, salts
PCR Reactions	DNA polymerases, nucleotides, salts, primers, mineral oils
DNA Probe Labeling (Radioactive, Fluorescent or Digoxigenin)	DNA modification enzymes or polymerase, nucleotides, label or coupling reagent, salts, primers
Ligation	Ligase, nucleotides, salts
Transfection, Microinjection	Endotoxin
DNA Staining (including CsCl-gradients)	Intercalating dyes such as ethidium bromide and SYBR Green, salts

CleanAll RNA/DNA Clean-Up and Concentration Kit

Kit Specifications			
Maximum Amount of Starting Material	50 µg of RNA	Size of RNA Purified	All sizes
	10 µg DNA	Size of DNA Purified	≥ 100 bp*
Maximum Column Loading Volume	600 µL	Average Recovery	≥90% for RNA
Minimum Elution Volume	20 µL		≥90% for DNA 100 bp - 10 kbp
Time to Complete 10 Purifications	20 minutes		≥75% for DNA ≥ 10 kbp

* Applicable to smaller fragments or oligonucleotides with alternative protocol

CleanAll RNA/DNA Clean-Up and Concentration Kit Benefits

Versatile performance	Both DNA and RNA can be cleaned and concentrated using the same kit. Clean-up nucleic acids from a variety of isolation methods and upstream enzymatic reactions.
Fast and easy processing	Rapid spin-column format allows for the processing of 10 samples in 20 minutes.
Suitable for all sizes of RNA	Purify all sizes of RNA, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA).
Suitable for all sizes of DNA	Purify all sizes of DNA, from small PCR products, native or linearized plasmids, to genomic DNA. Using an alternative protocol, even oligonucleotides and smaller DNA fragments can be purified.
Optional endotoxin removal	Optional protocol is provided for the rapid removal of endotoxins from previously purified RNA or DNA.
No phenol:chloroform extractions	Norgen's CleanAll RNA/DNA Clean-Up and Concentration Kit purifies RNA without the use of harmful chemicals such as phenol or chloroform.
Isolate all small RNA molecules	All small RNA species can be isolated including miRNA, siRNA, tRNA, and 5S rRNA.

CleanAll RNA/DNA Clean-Up and Concentration Kit

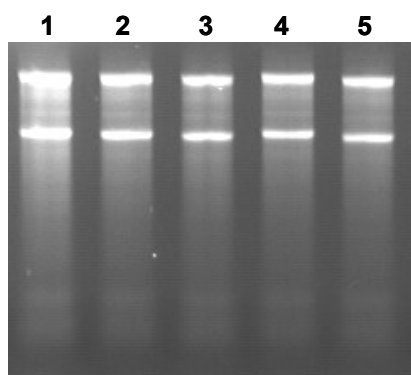


Figure 1. Clean-Up of RNA with High Recovery

Norgen's CleanAll RNA/DNA Clean-Up and Concentration Kit can be used to clean up various enzymatic reactions including DNase treatment. In Figure 1 above, Lane 1 is the RNA input, while lanes 2-5 contain the RNA that has been cleaned using Norgen's CleanAll Kit. It can be seen that in all cases the recovery is high, and the purified RNA is intact and of a high quality.

CleanAll RNA/DNA Clean-Up and Concentration Kit Contents

1. Binding Buffer H
2. Wash Solution K
3. Elution Buffer L
4. Micro Spin Columns
5. Collection Tubes
6. Elution tubes (1.7 mL)
7. Product Insert

Customer-Supplied Reagents and Equipment

- Benchtop microcentrifuge
- 96-100% ethanol
- β -mercaptoethanol (RNA Clean-up)
- Isopropanol (Endotoxin Removal)
- 70% ethanol (RNA Clean-up from phenol/chloroform)

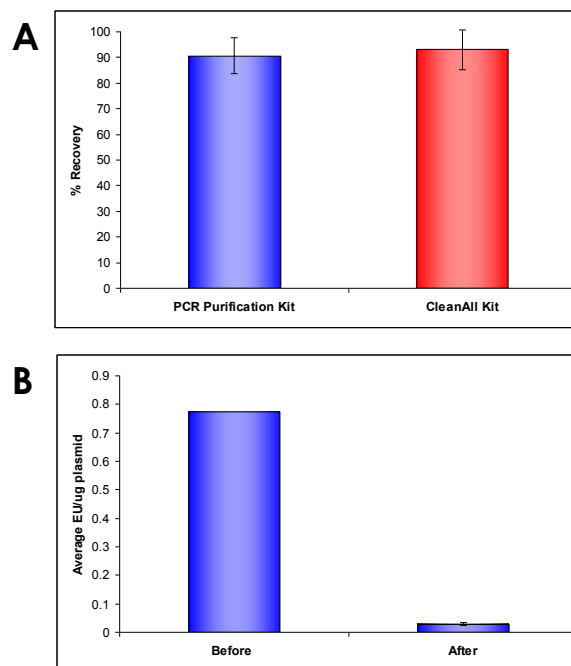


Figure 2. High Recoveries and Efficient Endotoxin Removal

High recoveries of DNA can be seen when using the CleanAll kit, and these high recoveries are not compromised even during endotoxin removal. In Panel A, it can be seen that the percent recovery for DNA cleaned with the CleanAll kit is over 90%, which is comparable to the recoveries obtained with Norgen's PCR Purification Kit. In Panel B, the endotoxin level of a plasmid DNA sample was greatly reduced using the CleanAll Kit. Therefore, the kit allows for high recoveries coupled with exceptional cleanup.

Storage Conditions

All solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for 1 year in their unopened containers.

Shipping Conditions

The CleanAll RNA/DNA Clean-Up and Concentration Micro Kit is shipped at room temperature.

Cat #	Description	Quantity
23800	CleanAll RNA/DNA Clean-Up and Concentration Kit	50 preps