DNA & RNA Purification Kits

SILICA FILTER COLUMN TECHNOLOGY

omega BIO-TEK

omegabiotek.com

We deliver high-quality DNA and RNA purification products to help you improve your research results.

Showcase

Request your sample kit,
visit www.omegabiotek.com!

Experience

Better Performance

Most products offer performance advantages ranging from increased downstream sensitivity to faster processing times.

Application Support

Consultation, scripting and installation of automated methods onsite by our expert applications scientists. Demos and automated testing available on our in-house platforms.

Flexible Product Solutions

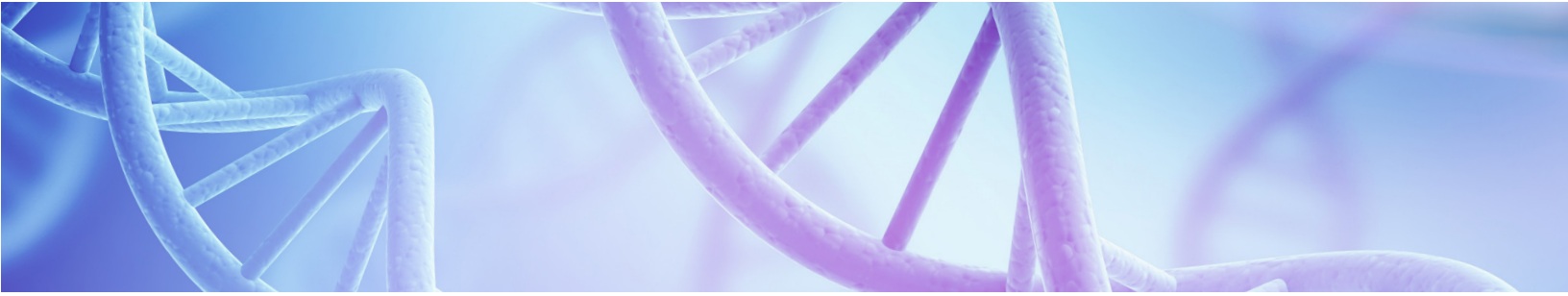
Product sizes that match customer needs, from individual components to customized kits.

Exceptional Value

Quality products and services delivered on time. The average Omega Bio-tek customer realizes a significant reduction in their consumable costs.

Quality

ISO 13485 and 9001 certified for quality manufacturing that allows product Lot traceability with rigorous quality and process controls.



Quality

We are committed to quality. Omega Bio-tek is **ISO 9001:2015** and **ISO 13485:2016** certified by NSF-ISR. We ensure that all products are properly assembled, tested, recorded, stored, and shipped. We perform rigorous quality checks of our products and thoroughly train our employees to ensure compliance. We also have several quality control steps within our processes to deliver the best consistent product.

NSF
NSF-ISR
Registered to ISO 9001 and ISO 13485

Lot Traceability

Our quality system allows for complete traceability from the incoming chemicals from our vendors all the way to Omega Bio-tek's customers' orders. This allows us to know every buffer, component, and even every chemical that is used within our products.

Quality Control

All Omega Bio-tek products have rigorous standards that must be met prior to leaving our door. Each product is checked multiple times in the production process to ensure proper function and packaging. Most of our products are quality controlled using similar methods to which you would be using in the lab. Are you performing qPCR from extracted plant DNA in your laboratory? Before releasing the product, we test the E.Z.N.A.® Plant DNA Kit components by extracting genomic DNA from plants and performing qPCR and gel electrophoresis.

Process Controls

All equipment used in our manufacturing process must be in calibration prior to use and there is full traceability between the finished product and all the equipment used during its manufacture. Employees are trained, and competency tested to ensure that their work is consistently completed in accordance with standard operating procedures. Our quality system ensures that changes made to the system are thoroughly validated prior to being implemented.

CE-IVD Certified Products

On May 26, 2022, In Vitro Diagnostic Regulation (IVDR 2017/746) became legally binding and requires that products used by laboratories doing genetic testing be either annually certified by the laboratory or be a certified IVDR product (CE-IVD marked). As an ISO 13485:2016 certified manufacturer of nucleic acid purification kits, Omega Bio-tek meets the requirements required to deliver CE-IVD marked products.

CE
IVD

Receiving IVDR certification is proof of compliance with current regulations and the standards that go with them. As the manufacturer of a CE-IVD marked product, Omega Bio-tek has validated and continues to validate our product for its intended use and takes actions to improve the product to ensure that they are safe and effective.

E.Z.N.A.® Tissue DNA Kit

Fast & reliable isolation of DNA from a wide variety of sample sources

REQUEST A SAMPLE

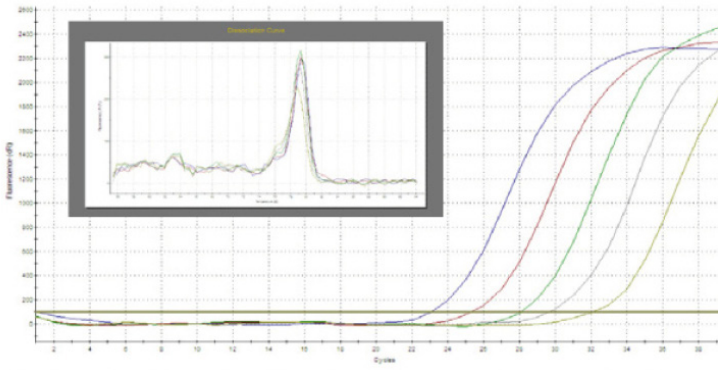
- DNA isolation in less than 20 minutes post-lysis
- Single kit for multiple sample types
- Optimized buffers for higher yields
- No phenol/chloroform extractions

The E.Z.N.A. Tissue DNA Kit offers a versatile and cost-effective method for the isolation of DNA from a wide variety of samples including fresh or frozen animal cultured cells and tissues, buccal swabs, whole blood, mouse tail snips, etc. The DNA purification process is simplified with Silica Mini Spin Column technology into four quick lyse, bind, wash, and elute steps and can be accomplished in less than 20 minutes post-lysis. This convenient spin-column format avoids time-consuming steps like alcohol precipitation, use of toxic compounds such as phenol and chloroform and allows for multiple samples to be processed in parallel. DNA purified using this kit is ready for most downstream applications such as PCR, sequencing, genotyping, southern blot analysis and restriction enzyme digestion.

Features	Specifications
Starting Material	Tissues, cultured cells, mouse tail snips, paraffin-embedded tissues, whole blood, body fluids, buccal swabs
Starting Amount	30 mg, or 5 x 10^6 cultured cells
Processing Time	<20 min (post-lysis)
Elution Volume	100 - 200 µL
Throughput	1 - 24
DNA binding technology	Silica Mini Spin Column
Downstream Application	PCR, sequencing, genotyping, southern blot analysis and restriction enzyme digestion

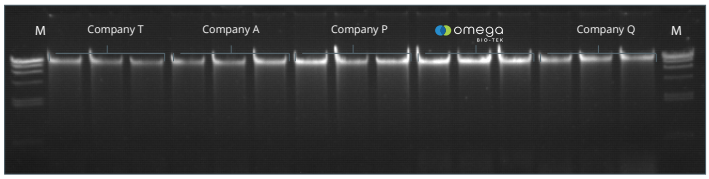
Product Description	Preps	Catalog No.
E.Z.N.A.® Tissue DNA Kit	5	D3396-00
	50	D3396-01
	200	D3396-02

Real-time PCR of Genomic DNA Isolation with E.Z.N.A. Tissue DNA Kit



Genomic DNA was isolated from 10 mg of rat kidney with Omega Bio-tek's E.Z.N.A. Tissue DNA Kit. Serial dilutions of recovered genomic DNA were used as templates for real-time PCR amplification of a 100 bp fragment of the GAPDH gene with SYBR® Green labeling. Each reaction was performed in triplicate. The fluorescence versus cycle number is plotted above and the 5 curves correspond to the input DNA template amounts of 10, 2, 0.4, 0.08, and 0.0016 ng.

Yield Comparison of E.Z.N.A. Tissue DNA Kit



Purified genomic DNA from 10 mg rat kidney tissue was isolated using kits from Company T, Company A, Company P, Company Q and the E.Z.N.A. Tissue DNA Kit following manufacturer's recommended protocols. 3% of eluted DNA was analyzed on a 0.8% agarose gel. M: Lambda-Hind III.

E.Z.N.A.® Total RNA Kit I

Isolation of total RNA from cultured eukaryotic cells & soft tissues

REQUEST A SAMPLE

- RNA extraction in 20 minutes or less
- No phenol/chloroform extractions
- Spin and vacuum formats available
- Purified RNA suitable for a variety of downstream applications

The E.Z.N.A. Total RNA Kit I provides a simple and rapid method for the isolation of up to 100 µg total RNA from cultured eukaryotic cells and soft tissues. Multiple samples of up to 1 x 10^7 eukaryotic cells or 30 mg of tissue can be processed in parallel in fewer than 20 minutes. Purified RNA can be used in many downstream applications such as RT-PCR, qRT-PCR, Northern blotting, nuclease protection assay, microarrays, *in-vitro* translation, and Next Generation Sequencing.

Features	Specifications
Starting Material	Cultured eukaryotic cells and soft tissues
Starting Amount	<1 x 10^7 cells or 30 mg tissue
Processing Mode	Manual (Centrifugation or Vacuum)
Elution Volume	40-70 µL
Throughput	1-24
RNA Binding Technology	Silica Mini Spin Column
Binding Capacity	100 µg
Downstream Application	PCR, qPCR, real-time RT-PCR, microarray, Northern blot, poly-A purification

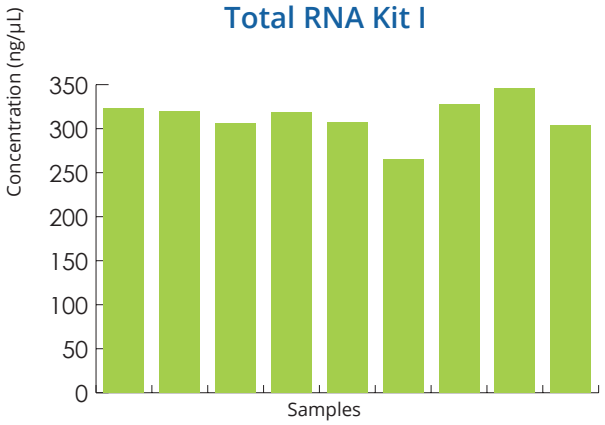
Product Description	Preps	Catalog No.
E.Z.N.A.® Total RNA Kit I	5	R6834-00
	50	R6834-01
	200	R6834-02

Expected RNA Yield from Various Samples

Source	Sample Size	RNA Yield (µg)
Brain	10 mg	10
Kidney	10 mg	30
Liver	10 mg	45
Heart	10 mg	5
Spleen	10 mg	33
Lung	10 mg	12
Pancreas	10 mg	40
Thymus	10 mg	20
IC-21	1x10^6 cells	12
HeLa	1x10^6 cells	15
HEK-293	1x10^6 cells	10
HIN3T3	1x10^6 cells	15

Expected RNA yields from tissue samples and cultured cell types with the E.Z.N.A. Total RNA Kit I.

Total RNA Concentration Extracted Using E.Z.N.A. Total RNA Kit I



Total RNA was isolated from 2.5 x 10^6 HEK-293 cultured cells with Omega Bio-tek's E.Z.N.A. Total RNA Kit I with an elution volume of 50 µL. RNA concentrations were quantified with Thermo's NanoDrop 2000c.

E.Z.N.A.® HP Total RNA Kit

Fast and easy purification of RNA from tissue and cells

REQUEST A SAMPLE

- Rapid – RNA isolation in 25 minutes
- Versatile – Spin and vacuum formats available
- Specialized System – Sample Homogenization and gDNA elimination in one step
- Safe – No phenol/chloroform extractions
- High-quality – RNA is suitable for a variety of downstream applications

The E.Z.N.A. HP Total RNA Isolation Kit provides a rapid and easy method for RNA isolation from cultured cells or tissues. The kit includes RNA Homogenizer columns that integrate sample homogenization and genomic DNA elimination into one single step. The RNA purification process is simplified with HiBind® Mini Column technology and can be accomplished in 25 minutes. This convenient spin-column format requires no phenol or chloroform, avoids time-consuming steps such as CsCl gradient ultracentrifugation, precipitation with isopropanol or LiCl and allows for multiple samples to be processed in parallel. RNA purified using the E.Z.N.A.® HP Total RNA method is ready for applications such as RT-PCR, RT-qPCR, Northern blotting, next-generation sequencing, poly A+ RNA (mRNA) purification, nuclease protection, and in vitro translation.

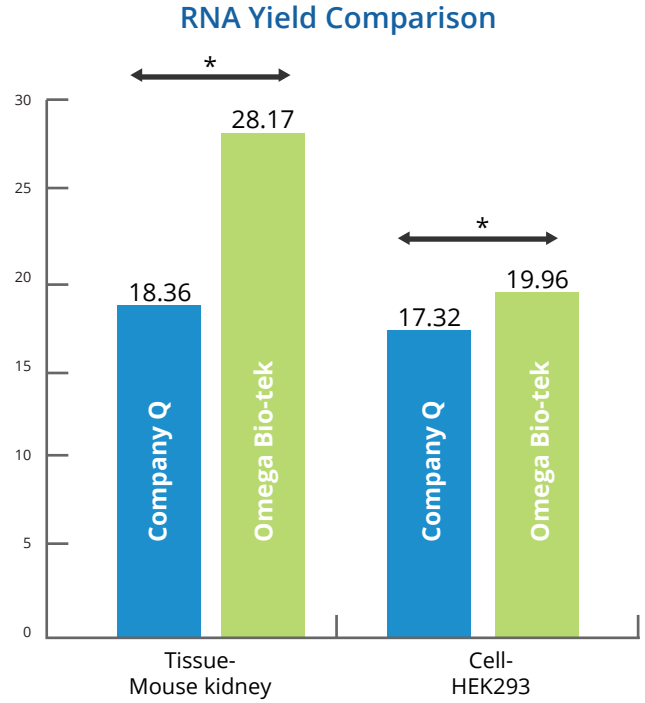


Figure 1. RNA yields obtained using the Omega and Company Q's kits with tissue samples and cultured cell samples. One-way ANOVA followed by Tukey's post-hoc analysis indicates that the RNA yield extracted using Omega Bio-tek's kit was significantly better than that of Company Q's ($p < 0.01$) for both the sample types tested.

Features	Specifications
Downstream Application	RT-PCR, RT-qPCR, Northern blotting, next-generation sequencing, poly A+ RNA (mRNA) purification, nuclease protection, and in vitro translation.
Starting Material	Cultured cells and tissues
Starting Amount	1 x 107 eukaryotic cells or 25-30 mg tissue
Elution Volume	40-70 µL
RNA Binding Technology	Silica Mini spin column
Processing Mode	Manual (centrifugation or vacuum)
Throughput	1 – 24
Final Purified Product	Total RNA (> 200 nt)
RNA Yield	Up to 100 µg
Processing Time	25 min
Special Notes	RNA Homogenizer Column that integrates sample homogenization and gDNA elimination into a single step

Product Description	Preps	Catalog No.
E.Z.N.A.® HP Total RNA Kit	5	R6812-00
	50	R6812-01
	200	R6812-02

E.Z.N.A.® FFPE DNA Kit

Fast and easy purification of DNA from FFPE tissue

REQUEST A SAMPLE

- Isolate DNA from FFPE samples using spin columns

The E.Z.N.A. FFPE DNA Kit is designed for fast and easy purification of DNA from formalin-fixed, paraffin-embedded (FFPE) tissue sections. Paraffin removal can be performed using a xylene and ethanol method or efficient heat treatment. Samples are incubated in a specialized lysis buffer along with Proteinase K to reverse crosslinking, effectively releasing short and long DNA fragments. After adjusting the binding conditions with ethanol, the lysate is applied to the MicroElute® DNA column to bind DNA. Cellular debris and proteins are effectively removed during the wash steps. High quality purified DNA is then eluted in elution buffer or water and is ready for applications such as PCR and next-generation sequencing.

Features	Specifications
Starting Amount	3-8 paraffin sections 5-10 µm thick
Starting Material	FFPE tissue
Elution Volume	50-75 µL
Technology	MicroElute® LE DNA Column
Processing Mode	Manual
Throughput	1-24

Product Description	Preps	Catalog No.
E.Z.N.A.® Plasmid Midi Kit	5	D3399-00
	50	D3399-01

Yield & Quality

Sample	A_{260}/A_{280}	A_{260}/A_{230}	Yield (µg)
O1	1.79	2.25	13.25
O2	1.79	2.18	13.32
O3	1.80	2.30	12.48
A1	1.80	2.31	9.53
A2	1.81	2.24	9.28
A3	1.82	2.27	6.71

Figure 1. Quality and yield of DNA with agarose gel analysis comparing Company A's FFPE Kit and Omega Bio-tek's E.Z.N.A.® FFPE DNA Kit. Analysis was completed on a 0.5% agarose gel. Lanes 1-3 represent Company A and lanes 4-6 represent Omega Bio-tek's E.Z.N.A.® FFPE DNA Kit. M: 1 kb marker. FFPE DNA tissue starting material was ~2 mg post-deparaffinization. An overnight digestion was completed at 55°C. Samples were eluted in 60 µL elution buffer. O.D. ratio and yield calculated using a Thermo Fisher NanoDrop® 2000c.

E.Z.N.A.® Plasmid DNA Mini Kit

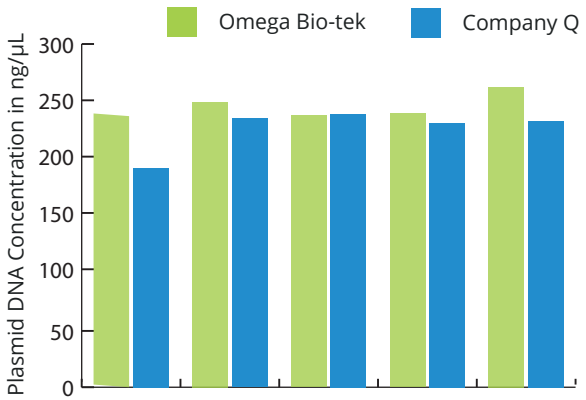
REQUEST A SAMPLE

Isolation of 25 µg high-quality plasmid DNA from 1-5 mL bacterial cultures

- Purification of plasmid DNA in less than 30 minutes
- No Phenol/chloroform extractions
- Spin and vacuum formats available
- Plasmid DNA is suitable for a variety of downstream applications

The E.Z.N.A. Plasmid DNA Mini Kit I is designed to isolate up to 25 µg of high-quality plasmid DNA from 1-5 mL of bacterial cultures in 30 minutes or less. Plasmid DNA purification follows the alkaline-lysis method and is simplified with Silica Mini Column technology into three quick steps: bind, wash, and elute. Purified plasmid DNA is ready for a wide variety of downstream applications, including routine screening, restriction enzyme digestions, DNA sequencing, cloning, transformation, and transfection.

Plasmid DNA Concentration Comparison



pGEM plasmid was purified from 4 mL DH5α cultures harboring the plasmid and eluted in 50 µL volume using kits from Omega Bio-tek and Company Q according to manufacturer's recommended protocols. Plasmid DNA concentration was determined by optical density measurements using Thermo Scientific's NanoDrop™ 2000c system.

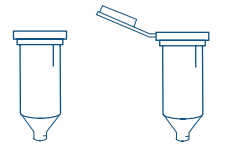
Product Description	Preps	Catalog No.
E.Z.N.A.® Plasmid DNA Mini Kit I (Q-spin, capless)	5	D6942-00
	50	D6942-01
	200	D6942-02

Product Description	Preps	Catalog No.
E.Z.N.A.® Plasmid DNA Mini Kit I (V-spin, attached cap)	5	D6943-00
	50	D6943-01
	200	D6943-02

Features	Specifications
Starting Material	Bacterial cultures
Starting Amount	1-5 mL LB culture
Processing Time	<30 minutes
Yield	15-25 µg for high copy-number; 0.1-5 µg for low copy-number
Throughput	1 - 24
DNA binding Technology	Silica Mini Spin Column
Downstream Application	Cloning, sequencing, transformation, PCR, restriction digestion, ligation, *in-vitro* transcription etc.
Processing Mode	Manual (Centrifugation or Vacuum)

Available Formats

The E.Z.N.A. Plasmid DNA Mini Kit I is available with 2 different types of columns: Q-spin columns are capless (D6942) , while V-spin columns have an attached cap (D6943). Either column can be used with both the vacuum or centrifugation protocols.



Plasmid Quality Assessment

Sample ID	A_{260}/A_{280}	Contiguous Read Length (CRL) on Sanger Sequencing	QV20+
1	1.87	911	920
2	1.89	899	908
3	1.91	888	884
4	1.88	897	908
5	1.85	899	900
6	1.85	906	911
7	1.86	900	911
8	1.87	904	914
9	1.87	895	907
10	1.87	895	910
11	1.89	891	899
12	1.87	909	917

pGEM plasmid DNA was purified using E.Z.N.A. Plasmid Mini Kit I and absorbance ratios were determined using Thermo Scientific's NanoDrop™ 2000c system. 5 µL of the purified plasmid DNA was used in Sanger sequencing reaction and it was analyzed on an Applied Biosystems 3730XL. Purified plasmid samples had an average CRL of 899.5 bp and an average of 907 bases with a Phred score greater than 20 (≤ 1% probability of error in base calling).

E.Z.N.A.® FastFilter Plasmid DNA Mini Kit

REQUEST A SAMPLE

Isolate high-quality plasmid DNA in just 9 minutes using an innovative lysate clearance column

- Rapid – 9-minute Processing time from a bacterial pellet
- Unique – Lysate Clearance and DNA Binding in 1 step
- Convenient – Lysate Clearance Column eliminates cellular debris pelleting and transfer step
- Versatile – Process up to 5 mL bacterial cultures with different plasmid types and culture medias

E.Z.N.A. FastFilter Plasmid DNA Mini Kit is designed for rapid purification of high-quality plasmid DNA from one simple centrifugation step. Following wash and elute steps, purified plasmid DNA is immediately ready for a wide variety of downstream applications such as routine screening, restriction enzyme digestion, transformation, PCR and DNA sequencing.

Features	Specifications
Starting Material	Bacteria harboring high-copy or low-copy plasmid in LB culture medium
Starting Amount	1-5 mL LB culture
Elution Volume	50-100 µL
Processing Mode	Manual (centrifugation or vacuum)
Throughput	1-24
DNA binding Technology	Silica Mini Spin Column
Processing Time	9 minutes
Downstream Applications	Routine screening, restriction enzyme digestion, transformation, PCR and DNA sequencing

Product Description	Preps	Catalog No.
E.Z.N.A.® FastFilter Plasmid DNA Mini Kit	10	D6944-00
	100	D6944-01
	300	D6944-02

Faster Processing without Sacrificing Yield and Quality

Condition	Culture Volume (mL)	Manufacturer	Yield (µg)	Average A260/A280	Average A260/A230
Minimum Volume Input	0.6	Company Z	2.18	1.92	2.20
		Omega Bio-tek	2.50	1.89	2.20
	1	Company Q	4.45	1.89	2.26
		Omega Bio-tek	4.29	1.88	2.23
Maximum Volume Input	3	Company Z	8.01	1.85	2.31
	5	Omega Bio-tek	18.11	1.85	2.33
	5	Company Q	20.00	1.86	2.28
		Omega Bio-tek	18.11	1.85	2.20

Versatility Using Different Plasmid Types and Culture Media

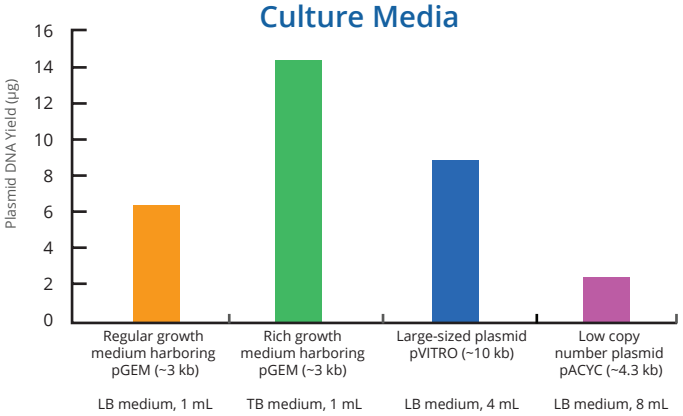


Figure 1. E.Z.N.A.® FastFilter Plasmid DNA Mini Kit is capable of handling diverse sample input conditions ranging from plasmid types, culture medium as well as input culture volume. The plasmid yield may vary based on these conditions.

Comparison of Processing Time

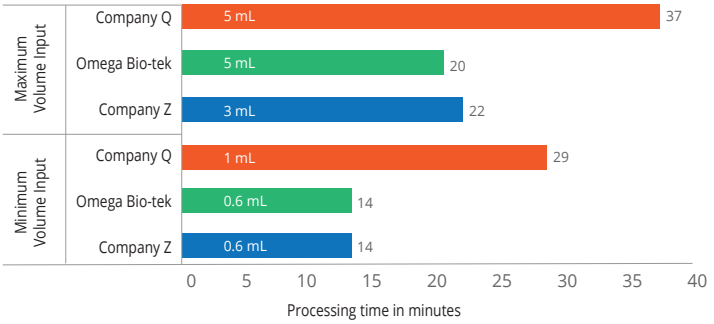


Figure 2. Comparison of Plasmid Purification times (n=4) using kits from Omega Bio-tek, Company Z, or Company Q. The processing time was comparable using kits from Omega Bio-tek and Company Z at minimum culture volume and was lower by 2 min for Omega Bio-tek at maximum volume. The processing times shown are actual timed extractions including all pipetting, centrifugation, and bacterial culture pelleting steps.

E.Z.N.A.® Plasmid Midi & Maxi Kits

REQUEST A SAMPLE

Purification of high-quality plasmid DNA using filter column technology

- Faster when using vacuum protocol
- Purification of plasmid DNA in < 60 min
- No phenol/chloroform extractions
- Spin and vacuum formats available

The E.Z.N.A. Plasmid Midi and Maxi Kits can isolate up to 250 µg and 1.2 mg of plasmid DNA from 50 mL and 200 mL bacterial cultures, respectively. These kits use a modified alkaline lysis method to lyse the cells and separate genomic DNA from plasmid DNA. Cellular debris are removed by centrifugation, and the protocol follows a simple bind, wash, and elute procedure to deliver high-quality plasmid DNA. The system not only eliminates the time-consuming isopropanol precipitation step required by gravity flow columns but also the need for expensive accessories. Purified plasmid DNA is suitable for automated fluorescent DNA sequencing (typical reads exceed 800 bp), restriction enzyme digestion, ligation, PCR, *in-vitro* transcription, transformation, and other applications.

Plasmid DNA Yields from E.Z.N.A. Kits

E.Z.N.A. Plasmid DNA Midi Kit				
Sample	Culture Size (mL)	A_{260}/A_{280}	A_{260}/A_{230}	Yield (µg)
1	50	1.89	2.31	192.9
2	50	1.90	2.40	189.0
3	50	1.90	2.39	190.0
4	50	1.90	2.39	187.4
E.Z.N.A.® Plasmid DNA Maxi Kit				
1	250	1.90	2.29	715.2
2	250	1.90	2.34	697.0
3	250	1.90	2.35	706.5
4	250	1.90	2.32	701.3

DH5α cells were transformed with pGEM vector, and replicate bacterial cultures were grown in either 50 mL or 250 mL of LB broth for 24 hours. The E.Z.N.A. Plasmid Midi Kit was used to isolate plasmid DNA from the 50 mL cultures and the E.Z.N.A. Plasmid Maxi Kit was used to isolate plasmid DNA from the 250 mL cultures. Yield was determined by optical density measurements with the NanoDrop 2000c.

Midi Kit

Features	Specifications
Starting Material	20-50 mL LB culture with OD600 between 2 and 3; or equivalent
Plasmid Type	High-copy, low-copy, cosmid DNA
Processing Time	<60 minutes
Processing Mode	Manual (centrifugation or vacuum)
Yield	100-250 µg for high-copy number; 10-50 µg for low-copy number
Throughput	1 - 24
DNA binding Technology	Silica Midi Spin Column
Lysate clearance Method	Centrifugation
Downstream Application	Cloning, sequencing, transformation, PCR, restriction digestion, ligation, *in-vitro* transcription etc.

Product Description	Preps	Catalog No.
E.Z.N.A.® Plasmid Midi Kit	2	D6904-00
	25	D6904-03
	100	D6904-04

Maxi Kit

Features	Specifications
Starting Material	50-200 mL LB culture with OD600 between 2 and 3; or equivalent
Plasmid Type	High-copy, low-copy, cosmid DNA
Processing Time	<60 minutes
Processing Mode	Manual (centrifugation or vacuum)
Yield	600-1200 µg for high-copy number; 50-300 µg for low-copy number
Throughput	1 - 24
DNA Binding Technology	Silica Maxi Spin Column
Lysate clearance method	Centrifugation
Downstream Application	Cloning, sequencing, transformation, PCR, restriction digestion, ligation, *in-vitro* transcription etc.

Product Description	Preps	Catalog No.
E.Z.N.A.® Plasmid Maxi Kit	5	D6922-01
	20	D6922-02
	100	D6922-04

E.Z.N.A.® FastFilter Plasmid Midi & Maxi Kits

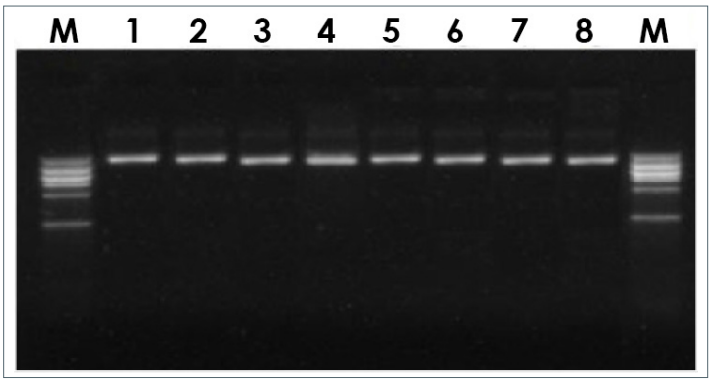
REQUEST A SAMPLE

Isolation of high-quality plasmid DNA in less than 40 minutes

- Cost and time savings compared to anion exchange technology
- Spin and vacuum formats available
- Lysate Clearance Syringes to rapidly clear bacterial lysates post-lysis

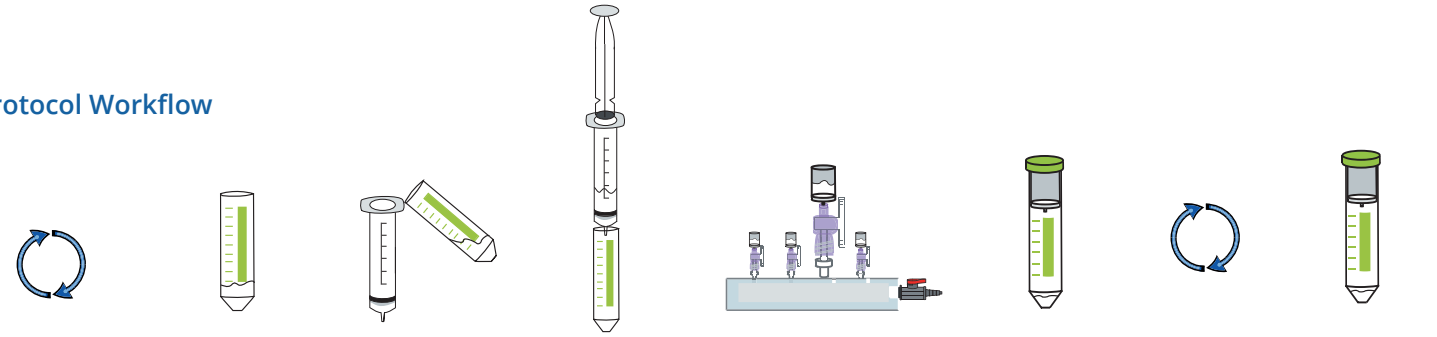
The E.Z.N.A. FastFilter Plasmid Midi Kit combines the convenience of spin columns with the speed of syringe filters to ease large-scale plasmid preparations. The system utilizes Lysate Clearance Filter Syringes instead of centrifugation to rapidly clear bacterial lysates post-alkaline lysis and follows a simple bind, wash, and elute procedure to deliver high-quality plasmid DNA. The system uses centrifugation or vacuum technology for plasmid purification and eliminates the time-consuming alcohol precipitation required by gravity flow columns. Purified plasmid DNA is suitable for automated fluorescent DNA sequencing (typical reads exceed 800 bp), restriction enzyme digestion, ligation, PCR, *in-vitro* transcription, transformation, and other applications.

Agarose Gel Electrophoretic Analysis of Purified Plasmid



Plasmid DNA was isolated from eight 30 mL bacterial cultures grown 16 hours in LB medium using the E.Z.N.A. FastFilter Plasmid Midi Kit and eluted in 300 µL elution buffer. Plasmid DNA (1% of total purified DNA) was analyzed on a 0.8% agarose gel. Lanes 1-8 represent plasmid DNA from 8 different bacterial cultures and Lane M represents the 1 kb DNA ladder.

Protocol Workflow



Pellet bacterial cells by centrifugation

Resuspend Lyse Neutralize

Add Binding Buffer, Transfer lysate into Lysate Clearance Syringe

Clear lysate with Lysate Clearance Syringe

Pass lysate through DNA column with vacuum maniufold

Wash 3 times

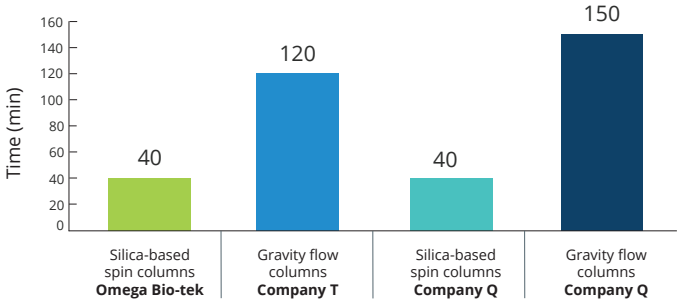
Centrifuge to dry

Elute by centrifugation

Product Description	Preps	Catalog No.
E.Z.N.A.® FastFilter Plasmid Midi Kit	2	D6905-00
	25	D6905-03
	100	D6905-04

Product Description	Preps	Catalog No.
E.Z.N.A.® FastFilter Plasmid Maxi Kit	2	D6924-00
	25	D6924-03

Processing Time of Plasmid DNA Isolation Kits



Total time in minutes required for plasmid DNA isolation from pelleting the bacterial cultures to eluting the plasmid using Omega Bio-tek E.Z.N.A. FastFilter Plasmid Maxi Kit and comparable products from other competitors.

E.Z.N.A.® Universal Pathogen Kit

REQUEST A SAMPLE

Isolation of pathogenic DNA and viral nucleic acids from a variety of sample sources

- Elute in as low as 15 µL
- Prefilled Disruptor Tubes for faster sample homogenization
- No Phenol/chloroform extractions
- High-quality DNA suitable for a variety of downstream applications

The E.Z.N.A. Universal Pathogen DNA Kit allows for rapid and reliable isolation of high-quality host genomic DNA, gram-positive and gram-negative bacterial DNA, fungal spore DNA, yeast DNA, viral DNA and viral RNA from tissues, blood, urine, serum, whole blood, and stool samples.

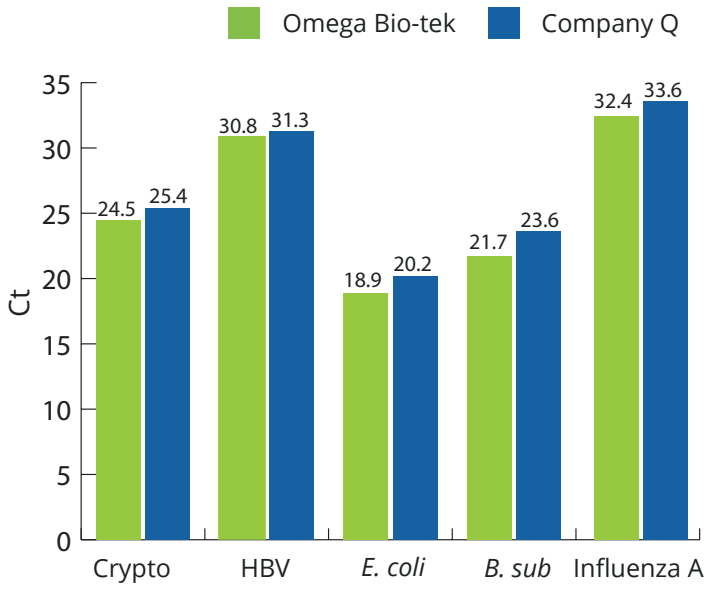
This kit incorporates Omega Bio-tek's Disruptor Tubes prefilled with glass beads for faster and easier processing. The Disruptor Tubes allow for simultaneous homogenizaton and lysis of the samples and aid in effective disruption of difficult samples. No detergents are present in the initial lysis buffer, which eliminates foaming issues and provides optimal conditions for homogenization.

This unique buffer system does not require alcohol to bind nucleic acids, allowing for recovery of high-quality DNA/RNA free of PCR inhibitors. Omega Bio-tek's MicroElute LE Spin Columns are used, which support elution volumes as low as 15 µL to obtain high concentration of the eluate.

Features	Specifications
Starting Material	Tissue, urine, serum, and stool sample
Starting Amount	25-30 mg tissue 250 µL stool sample/serum/urine/blood
Processing Mode	Manual (Centrifugation or Vacuum)
Elution Volume	15-100 µL
DNA Binding Technology	Silica MicroElute Spin Column
Note	Host genomic DNA, gram positive and negative bacterial DNA, fungal spore DNA, and viral DNA and RNA

Product Description	Preps	Cat. No.
E.Z.N.A.® Universal Pathogen Kit	5	D4035-00
	50	D4035-01

qPCR Comparison from Different Extraction Methods



Human stool samples suspended in PBS solution were spiked with corresponding organisms. Stool samples were then processed according to each manufacturer's recommended protocols. qPCR was performed in triplicate for each sample using primers specific for the target organisms. Data shown are averages of triplicate reactions.

E.Z.N.A.® Viral RNA Kit

REQUEST A SAMPLE

Isolation of viral RNA from plasma, serum, urine, swabs, cell culture supernatant, and saliva

- Viral RNA/DNA purification from wide variety of sample types
- Can be used to clean-up samples in Trizol
- No organic extractions

The E.Z.N.A. Viral RNA Kit is designed for the isolation of viral RNA and DNA from plasma, serum, cell culture supernatant and urine, swabs, and saliva. The procedure completely removes contaminants and enzyme inhibitors making viral RNA isolation fast, convenient and reliable. The purified nucleic acids are ready for direct use in downstream applications such as qPCR, RT-qPCR and more.

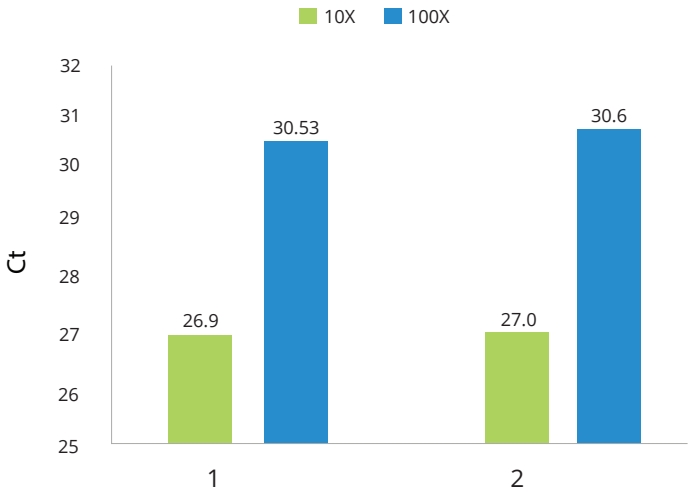
Features	Specifications
Starting Material	Plasma, serum, urine, swabs, cell culture supernatant, and saliva
Starting Amount	150 µL
Processing Mode	Manual (Centrifugation or Vacuum)
Elution Volume	20-50 µL
Throughput	1-24
Nucleic Acid Binding Technology	Silica Mini Spin Column

Some of the viruses* detected using our viral kits.

Influenza A	Hepatitis E	Sheep pox virus
Influenza B	Infectious Bronchitis virus	Murine norovirus 1
West Nile virus	Porcine reproductive and respiratory syndrome Virus (PRRSV)	Canine distemper virus
Middle East Respiratory Syndrome Corona-virus (MERS-CoV)	Insect-specific flaviviruses, mononegaviruses, and totiviruses	Rabies virus
Zika virus (ZIKAV)	orf virus (ORFV)	Rotavirus
SIV	Porcine circovirus type 2 (PCV2)	Coxsackievirus B3
HIV	Arboviruses	Coxsackievirus A6
Influenza A (H1N1)	Dengue virus	Avian leukosis virus subgroup J
Hepatitis A virus types 1 and 3	GB virus C	Avian Encephalomyelitis Virus
Hepatitis B virus	Bovine Viral Diar-rhea Virus (BVDV)	Crimean-Congo hemorrhagic fever virus
SARS-CoV-2		

*References available upon request

Inhibitor-free Viral RNA Extraction Using E.Z.N.A.® Viral RNA Kit



25 µL of Zeptomatrix Influenza A/B Positive Control was spiked into 125 µL serum samples and then viral RNA was extracted using the E.Z.N.A. Viral RNA Kit. 2 µL of eluted RNA was used as a template in a 20 µL SYBR qPCR reaction. The ΔCt between 100-fold and 10-fold dilution is ~3.3 demonstrating good PCR efficiency without inhibition.

Product Description	Preps	Catalog No.
E.Z.N.A.® Viral RNA Kit	5	R6874-00
	50	R6874-01
	200	R6874-02

E.Z.N.A.® Cycle Pure Kit

REQUEST A SAMPLE

Rapid purification of single- or double-stranded DNA from PCR or other enzymatic reactions

- Purification of PCR products in less than 10 minutes
- No Phenol/chloroform extractions
- Spin and vacuum formats available
- High-quality DNA suitable for a variety of downstream applications

The E.Z.N.A. Cycle-Pure Kit is designed for the rapid purification of single or double-stranded DNA from PCR and other enzymatic reactions. The system follows a bind, wash, and elute procedure and completely removes primers, nucleotides enzymes, salts, and other impurities from a DNA sample. This convenient spin-column format eliminates the need for expensive resins or toxic organic compounds such as phenol and chloroform, thereby making it possible to process multiple samples in parallel. Purified DNA can be used in T-A ligations, sequencing, restriction enzyme digestion, and various other labeling reactions.

Features	Specifications
Starting Material	ssDNA, dsDNA, PCR products
Processing Mode	Manual (Centrifugation or Vacuum)
Processing Time	<10 minutes
Elution Volume	30-50 µL
Throughput	1-24
DNA Binding technology	Silica Mini Spin Column
DNA Recovered	>90% recovery, 100 bp to 10 kb
Downstream Application	T-A ligations, sequencing, restriction enzyme digestion, and various other labeling reactions

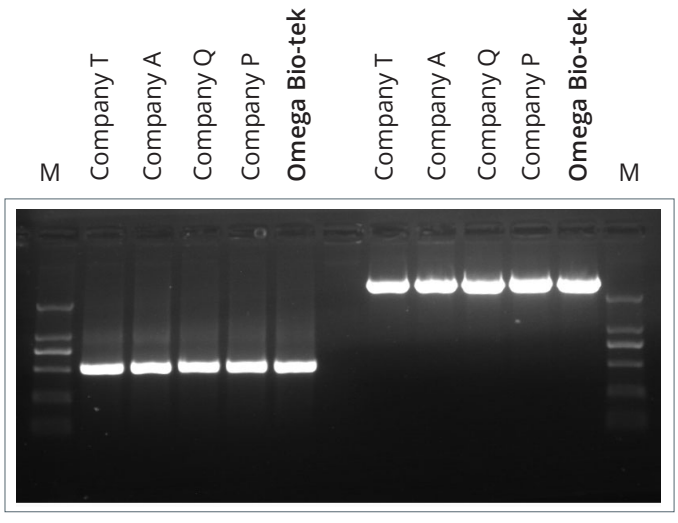
Quality Assessment through Sanger Sequencing

Sample	Contiguous Read Length	Average Signal Intensity
1	446	4583
2	446	4543.25
3	472	2768
4	445	3748.25
5	446	4397.25
6	446	4205
7	473	3329.50
8	454	2562.25

500 bp amplicon was purified with the E.Z.N.A. Cycle Pure Kit was used in a 5 µL Sanger sequencing reaction. DNA was analyzed on an Applied Biosystem 3730XL.

Product Description	Preps	Catalog No.
E.Z.N.A.® Cycle Pure Kit (V-spin, attached cap)	5	D6492-00
	50	D6492-01
	200	D6492-02

Omega Bio-tek's E.Z.N.A. Cycle Pure Kit vs. the Competition



500 bp and 5 kb DNA fragments were purified with 4 different competitor's kits and Omega Bio-tek's E.Z.N.A. Cycle Pure Kit. 10% of eluted product was analyzed on a 0.8% agarose gel and run with a DL2000 DNA ladder.

E.Z.N.A.® Gel Extraction Kit

Rapid recovery of DNA fragments > 100 bp from agarose gels in 15 minutes

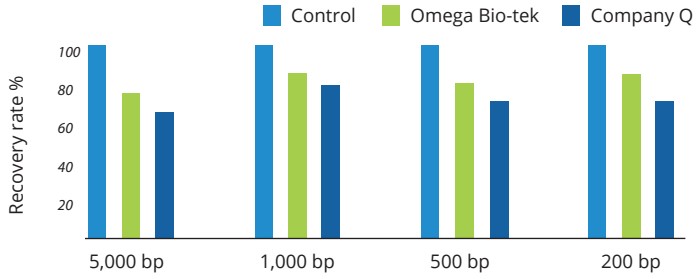
REQUEST A SAMPLE

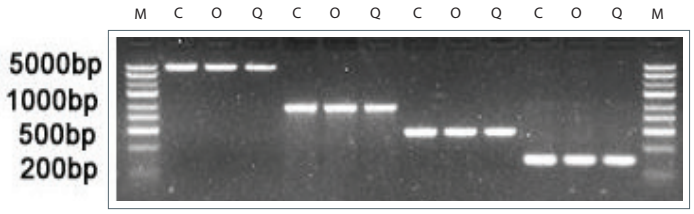
- DNA recovery from an agarose gel in 15 min
- Visual determination of optimum DNA binding for higher yields
- No phenol/chloroform extractions
- Spin and vacuum formats available
- High-quality DNA suitable for a variety of downstream applications

The E.Z.N.A. Gel Extraction Kit uses spin-column technology to purify DNA fragments ranging from 100 bp to 10 kb from all grades of agarose gels with high recovery (> 80%). The kit uses a specialized binding buffer system that not only dissolves the gel slice and binds to the spin column but also includes a pH indicator for a visual representation of optimal pH for DNA binding. The bind step is followed by three rapid wash steps and DNA is eluted with deionized water or elution buffer. Purified DNA is ready for a variety of downstream applications such as ligations, PCR amplification, restriction enzyme digestion, cloning, and various labeling reactions.

Features	Specifications
Starting Material	Agrose gel slice
Starting Amount	Up to 25 µg DNA
Processing Mode	Manual (Centrifugation or Vacuum)
Processing Time	<15 minutes
Elution Volume	30-50 µL
Throughput	1-12
DNA binding Technology	Silica Mini Spin Column
DNA Recovered	>80% recovery, 100 bp to 10 kb
Downstream Application	Cloning, *in-vitro* Transcription, Nucleic Acid Labeling, PCR, Real-Time Quantitative PCR (qPCR), Sequencing, Southern Blotting

Product Description	Preps	Catalog No.
E.Z.N.A.® Gel Extraction Kit	5	D2500-00
	50	D2500-01
	200	D2500-02





DNA ladder and 4 different fragment sizes (200 bp, 500 bp, 1 kb, and 5 kb) were recovered using Omega Bio-tek's E.Z.N.A. Gel Extraction Kit and a comparable kit from Company Q following manufacturer's recommended protocols. DNA was analyzed on a 2% TBE agarose gel with the respective companies eluate being compared to the original amount used in the gel extraction procedure. M: size marker; C: control; O: Omega Bio-tek; Q: company Q. The concentration of the recovered DNA was determined by optical density measurements using Thermo Scientific's NanoDrop™ 2000c system. The purified DNA normalized to input amount is shown above.

E.Z.N.A.® Plant DNA DS Kits

REQUEST A SAMPLE

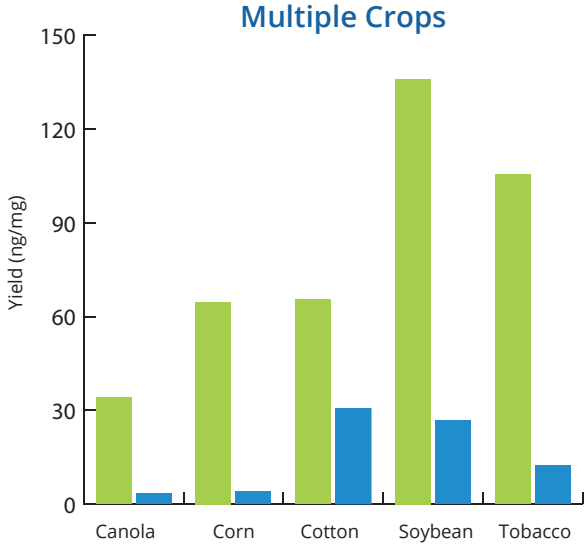
Isolation of genomic DNA from plant samples with high amounts of polysaccharides & polyphenols

- Homogenizer Columns allow for faster processing
- Reliable results from variety of sample types
- No organic extractions
- High-quality DNA suitable for most applications

The E.Z.N.A. Plant DNA DS Kit is designed for the efficient recovery of genomic DNA up to 30 kb in size from fresh, frozen or dried plant tissue samples rich in polysaccharides, polyphenols, or those with a lower DNA content. Up to 50 mg wet tissue (or 15 mg dry tissue) can be processed in less than 1 hour. These systems combine the reversible nucleic acid-binding properties of the matrix with the speed and versatility of spin column technology to eliminate polysaccharides, phenolic compounds, and enzyme inhibitors from plant tissue lysates. Purified DNA is suitable for PCR, restriction enzyme digestion and hybridization applications.

These procedures rely on the well-established properties of the cationic detergent, cetyltrimethyl ammonium bromide (CTAB), in conjunction with the unique binding system to increase yields and provide high-quality DNA. The system eliminates the need for chloroform extractions traditionally associated with CTAB-based lysis methods. Samples are homogenized and lysed in a high salt buffer containing CTAB and with binding conditions optimized, DNA is purified using a DNA mini column. Salts, proteins, and other contaminants are removed to yield high-quality genomic DNA.

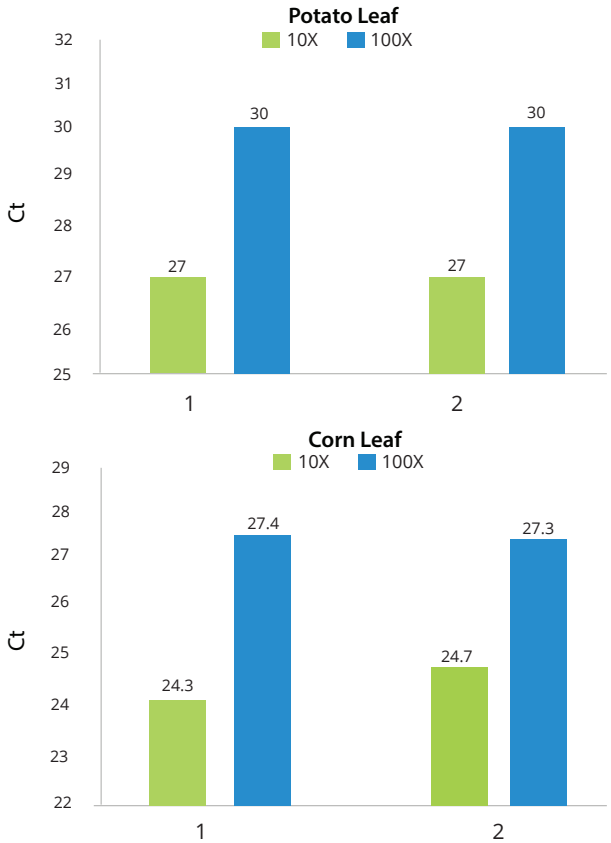
Comparison of DNA Yields from Multiple Crops



40-50 mg of respective leaf tissue was extracted in triplicate according to the manufacturer's recommended protocols and eluted in 100 µL. DNA was analyzed using fluorescent DNA-based quantification method. Total yield was divided by total tissue amount to show ng of DNA per mg of leaf tissue.

Features	Specifications
Starting Material	Fresh, frozen, or dried plant tissue samples rich in polysaccharides, polyphenols, or those having a lower DNA content
Starting Amount	Up to 50 mg wet tissue or 15 mg dry tissue
Elution Volume	50-100 µL
Throughput	1 - 24
DNA binding Technology	Silica Mini Spin Column

qPCR Analysis of Purified DNA at 10-fold and 100-fold Dilutions



Genomic DNA was extracted from 50 mg potato leaf and 30 mg corn leaf powder using the E.Z.N.A. Plant DNA DS Kit. 2 µL of eluted DNA was diluted 10- and 100-fold and used as a template in a 20 µL SYBR qPCR reaction. The ΔCt between 100-fold and 10-fold dilution is ~3 demonstrating good PCR efficiency without inhibition.

Product Description	Preps	Catalog No.
E.Z.N.A.® Plant DNA DS Kit	5	D2411-00
	50	D2411-01

E.Z.N.A.® Plant & Fungal DNA Kit

Isolate DNA from plant or fungal samples using filter columns

REQUEST A SAMPLE

- Rapid – DNA isolation under 60 minutes
- Reliable – Optimized buffer system ensure the reproducible results
- Safe – No organic extractions
- High-quality – Purified DNA suitable for most downstream applications

The E.Z.N.A. Plant & Fungal DNA Kit allows for the rapid and reliable isolation of high-quality total cellular DNA from a wide variety of plant or fungal species and tissues. Up to 200 mg wet tissue (or 50 mg dry tissue) can be processed in less than 1 hour. The system combines the reversible nucleic acid-binding properties of Omega Bio-tek's HiBind® matrix with the speed and versatility of spin column technology to eliminate polysaccharides, phenolic compounds, and enzyme inhibitors from plant and fungal tissue lysates. Purified DNA is suitable for PCR, restriction digestion, and hybridization applications. There are no organic extractions thus reducing plastic waste and hands-on time to allow multiple samples to be processed in parallel.

If using the E.Z.N.A. HP Plant & Fungal DNA Kit for the first time, please read the Protocol Manual to become familiar with the procedures. This procedure relies on the well established properties of the cationic detergent, cetyltrimethyl ammonium bromide (CTAB), in conjunction with the selective DNA binding of Omega Bio-tek's HiBind® matrix, to purify high-quality DNA. Samples are homogenized and lysed in a high salt buffer containing CTAB and extracted with chloroform to remove polysaccharides and other components that interfere with many routine DNA isolations and downstream applications. Binding conditions are adjusted and DNA is further purified using HiBind ® DNA Mini Columns. In this way, salts, proteins, and other contaminants are removed to yield high-quality genomic DNA suitable for downstream applications such as endonuclease digestion, thermal cycle amplification, and hybridization.

Features	Specifications
Starting Amount	Up to 50 mg wet tissue
Starting Material	Fresh, frozen, or dried plant tissue samples rich in polysaccharides, polyphenols, or those having a lower DNA content
Elution Volume	50-100 µL
Technology	HiBind® DNA Mini Column
Processing Mode	Manual
Throughput	1-24
Note	SDS lysis

Product Description	Preps	Catalog No.
E.Z.N.A.® Plant & Fungal DNA Kit	5	D3485-00
	50	D3485-01
	200	D3485-02

E.Z.N.A.® Plant RNA Kit

Isolate total RNA from plant samples using spin columns

REQUEST A SAMPLE

E.Z.N.A. Plant RNA Kit provides a convenient and rapid method for the isolation of total RNA from a variety of plant samples. This kit provides a homogenizer column for filtration and homogenization of viscous plant cell lysate by centrifugation in combination with the HiBind RNA spin column for RNA purification. All the contaminants including polysaccharides and phenolic compounds are effectively removed. Purified RNA can be used for most downstream applications such as RT-PCR, Northern blot analysis, differential display, and poly A+ RNA selection.

Yield & Quality

Sample	Kit	A_{280}/A_{280}	Yield (µg)
1	Omega Bio-tek	2.02	16.45
2		2.08	20.63
3		1.96	19.11
4	Company Q	2.02	17.43
5		1.95	18.05
6		2.05	16.71

Figure 1. Omega Bio-tek's yield vs. Company Q's yield. Total RNA was isolated from 100 mg of Arabidopsis thaliana leaf tissue according to manufacturer's recommended protocols. One tenth of eluate was analyzed on a denaturing agent agarose gel. O.D. values calculated with Thermo Scientific's NanoDrop® 2000c.

Features	Specifications
Downstream Application	PCR, qPCR, real-time RT-PCR, microarray, Northern blot, poly-A purification
Elution Volume	50-100 µL
Starting Material	Plant tissue
Starting Amount	<100 mg
RNA Yield	Up to 100 µg, >200 nt
Processing Mode	Spin column
Throughput	1 – 24
RNA Binding Technology	Silica technology
Binding Capacity	100 µg

Product Description	Preps	Catalog No.
E.Z.N.A.® Plant RNA Kit	5	R6827-00
	50	R6827-01
	200	R6827-02

E.Z.N.A.® Bacterial DNA Kit

Isolate DNA from gram-positive and negative bacteria using filter columns

REQUEST A SAMPLE

- Reliable – Reproducible DNA purification from a variety of sample sources
- High yield – Glass beads and enzymatic digestion for cell lysis

The E.Z.N.A. Bacterial DNA Kit allows the rapid and reliable isolation of high-quality total cellular DNA from a wide variety of gram-positive and negative bacterial species. This kit uses an optimized lysis condition and up to 1 x 10^9 bacterial cells can be processed for each column. There are no organic extractions, thus reducing plastic waste and hands-on time to allow multiple samples to be processed in parallel. Bacterial cells are grown to log-phase and harvested. The cell wall is removed by lysozyme digestion and bead beating, followed by protease digestion. Following lysis, binding conditions are adjusted and the sample is applied to a HiBind DNA spin-column. Two rapid wash steps remove trace salts and protein contaminants, and DNA is finally eluted in water or Elution Buffer. Purified DNA can be directly used in downstream applications without the need for further purification.

Features	Specifications
Starting Amount	1 x 109 cells
Starting Material	Bacterial cells
Yield	30 µg
Elution Volume	50-100 µL
Technology	HiBind® DNA Mini Column
Processing Mode	Manual
Throughput	1-24

Product Description	Preps	Catalog No.
E.Z.N.A.® Bacterial DNA Kit	5	D3350-00
	50	D3350-01
	200	D3350-02

Yield & Quality

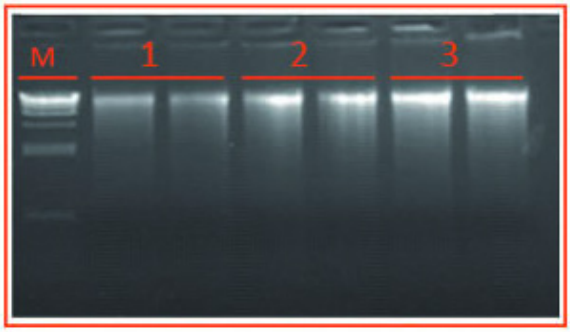


Figure 1. Genomic DNA purified using the E.Z.N.A.® Bacterial DNA Kit. Purified genomic DNA from various bacteria were isolated with the E.Z.N.A.® Bacterial DNA Kit. DNA was extracted in duplicate from each of the following samples: sample 1 from S. aureus, sample 2 from B. subtilis and sample 3 from P. aeruginosa. Genomic DNA (5% of total purified DNA) was analyzed on a 1% agarose gel to demonstrate yield and quality of the DNA.

E.Z.N.A.® Bacterial RNA Kit

REQUEST A SAMPLE

Isolate high-quality RNA from gram-positive or gram-negative bacterial species using silica filter columns

The E.Z.N.A. Bacterial RNA Kit is designed for the isolation of high-quality total RNA from a variety of bacterial strains. Up to 1 x 10^9 log-phase bacterial cells can be processed. This kit uses an improved lysis procedure to ensure the complete lysis of bacterial cells. Purified RNA is suitable for downstream applications such as RT-PCR and hybridization techniques.

Features	Specifications
Downstream Application	PCR, qPCR, real-time RT-PCR, microarray, Northern blot, poly-A purification
Elution Volume	50-100 µL
Starting Material	Bacteria
Starting Amount	Up to 3 mL culture, 1 x 109 cells
RNA Yield	up to 100 µg
Processing Mode	Manual, centrifugation/vacuum
Throughput	1 – 24
RNA Binding Technology	Silica Mini spin column
Binding Capacity	100 µg

Product Description	Preps	Catalog No.
E.Z.N.A.® Bacterial RNA Kit	5	R6950-00
	50	R6950-01

Yield & Quality

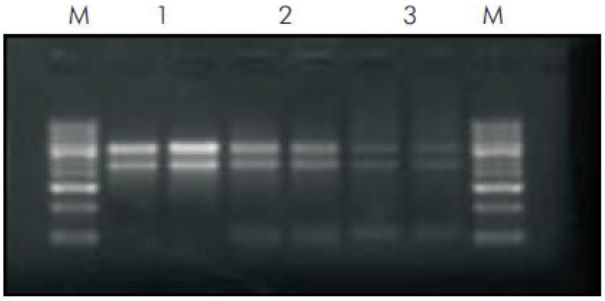


Figure 1. Total RNA purified using the E.Z.N.A.® Bacterial RNA Kit. RNA was extracted from 2 mL bacterial samples as follows: sample 1 from Pseudomonas arginosa, sample 2 from Enterococcus faecalis, and sample 3 from Staphylococcus aureus. Total RNA (10% of total purified RNA) was analyzed on a 1% agarose gel to demonstrate yield and quality of the RNA. M: CL5000 DNA Marker.

Yield & Quality from E.coli

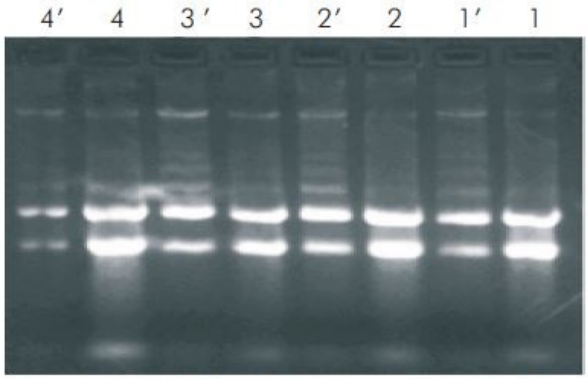


Figure 2. Total RNA purified using the E.Z.N.A.® Bacterial RNA Kit. RNA was extracted from lag phase E. coli cultures as follows: sample 1 from 0.5 mL culture, sample 2 from 1.0 mL culture, sample 3 from 2 mL culture, and sample 4 from 3 mL culture. Lanes 1-4 represent the first 100 µL elution. Total RNA (50% of total purified RNA) was analyzed on a denaturing formaldehyde agarose gel to demonstrate yield and quality of the RNA. M: CL5000 DNA Marker.

E.Z.N.A.® Stool DNA Kit

Rapid and reliable isolation of DNA samples from fresh frozen stool

REQUEST A SAMPLE

- Reliable – Reproducible DNA purification from a variety of sample sources
- High-quality – Inhibitor removal technology provides efficient PCR inhibitor removal
- High yield – Efficient purification of DNA from even specialized samples

The E.Z.N.A. Stool DNA Kit allows rapid and reliable isolation of high-quality total DNA from fresh and frozen stool samples. Up to 200 mg of stool samples can be processed in less than 60 minutes. The system combines the reversible nucleic acid-binding properties of the HiBind matrix with the speed and versatility of spin column technology to eliminate humic acid, polysaccharides, phenolic compounds, and enzyme inhibitors from stool samples. Purified DNA is suitable for PCR, restriction digestion, and hybridization technique.

Features	Specifications
Starting Amount	Up to 200 mg
Starting Material	Stool
Yield	100 µg
Elution Volume	50-100 µL
Technology	HiBind® DNA Mini Column
Processing Mode	Manual
Throughput	1-24

Product Description	Preps	Catalog No.
E.Z.N.A.® Stool DNA Kit	5	D4015-00
	50	D4015-01
	200	D4015-02

Yield & Quality

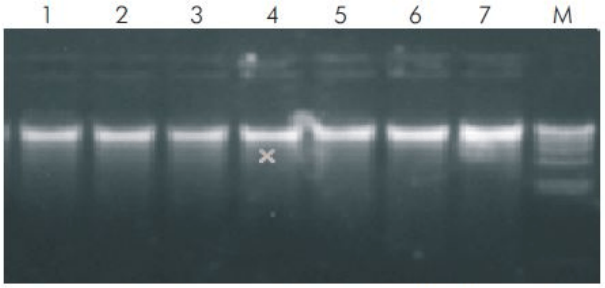


Figure 1. Purified genomic DNA from 7 different 0.1 g stool samples was extracted with the E.Z.N.A.® Stool DNA Kit. Genomic DNA (10% of total purified DNA) was analyzed on a 1% agarose gel to demonstrate yield and quality of the DNA. M: Lambda Hind III DNA Marker.

Yield & Quality from E.coli

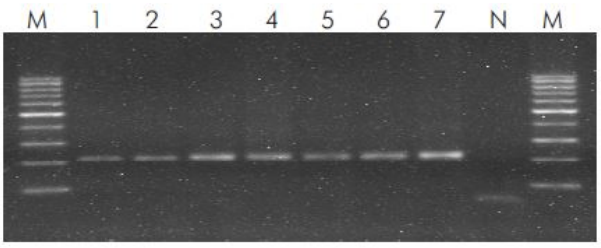


Figure 2. A total of 2 µL of each eluate was amplified with a PCR mastermix and bacterial 16S RNA primers 225 bp to determine whether inhibitors were present in the eluted DNA. Each lane contains 10% of PCR product separated on a 1.5% agarose gel. M: CL5000 DNA Marker. N: Negative control.

E.Z.N.A.® Soil DNA Kit

Rapid and reliable isolation of DNA from soil samples

REQUEST A SAMPLE

- Reliable – Reproducible DNA purification from a variety of sample sources
- High quality – Ready-to-use DNA eliminating PCR inhibitors using proprietary inhibitor removal technology
- Yield – Efficient purification of DNA from even specialized samples
- Ease of use – Contains glass beads pre-filled in 2 mL vials

The E.Z.N.A. Soil DNA Kit allows rapid and reliable isolation of high-quality genomic DNA from various soil samples. This kit can isolate microbial DNA from yeast, fungi, and grampositive or negative bacteria that inhabit a range of samples including clay, sandy, peaty, chalky, or loamy soil samples. This kit not only includes Disruptor Tubes prefilled with glass beads for efficient sample homogenization but also features a unique inhibitor removal reagent (cHTR Reagent) for effective removal of humic acid and other PCR inhibitors from eluted DNA. The extraction methodology combines the reversible nucleic acid-binding properties of HiBind® matrix with the speed and versatility of spin column technology for DNA purification. Up to 250 mg soil samples can be processed in 60 minutes or up to 1g soil samples in 2.5 hours. Purified DNA is suitable for PCR, restriction digestion, and next-generation sequencing.

Features	Specifications
Starting Amount	Up to 1 g
Starting Material	Soil
Yield	Dependent upon sample
Elution Volume	50-100 µL
Technology	HiBind® DNA Mini Column
Processing Mode	Manual
Throughput	1-24

Product Description	Preps	Catalog No.
E.Z.N.A.® Soil DNA Kit	5	D5625-00
	50	D5625-01
	200	D5625-02

qPCR Comparison

Extraction Method	1:10	1:100	AC_t
Company M	22.47	25.83	3.36
Company M	22.85	26.26	3.41
Company M	23.52	27.10	3.58
Company M Average	**22.95**		
Omega Bio-tek	22.25	25.04	2.79
Omega Bio-tek	22.04	25.82	3.78
Omega Bio-tek	22.40	26.38	3.98
Omega Bio-tek Average	**22.23**		

Figure 2. Comparison of Ct values. 20 µL SYBR Green qPCR reaction. 50 µL ZymoBIOMICS™ Microbial Community Standard was added to 200 mg soil samples and DNA was extracted using manufacturer's recommended protocols. DNA was eluted in 100 µL for both manufacturers.

Comparison of DNA Yields from Multiple Crops

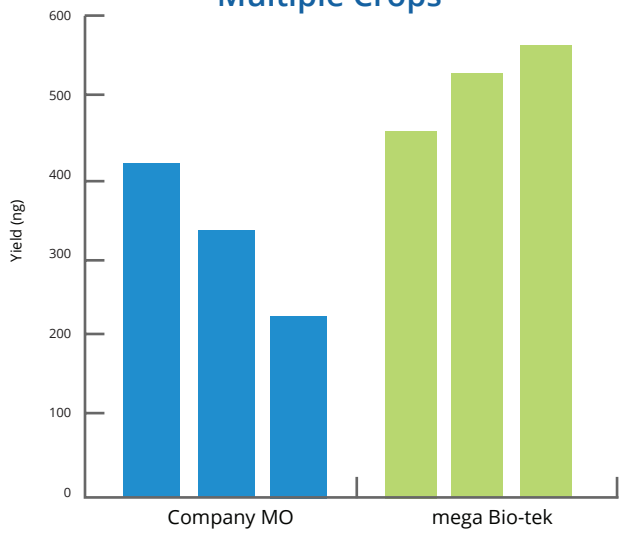


Figure 1. Comparison of DNA extraction method from soil samples. DNA yield determined with fluorescence-based dye quantification. 50 µL ZymoBIOMICS™ Microbial Community Standard was added to 200 mg soil samples and DNA was extracted using manufacturer's recommended protocols. DNA was eluted in 100 µL for both manufacturers.

Bacterial Yield Comparison

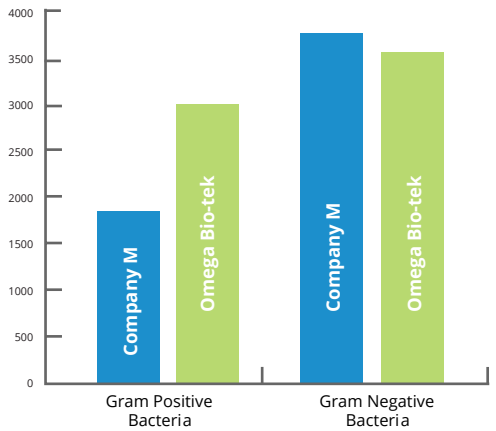


Figure 3. DNA yield by bacterial classes. DNA yield determined with fluorescence-based dye quantification. 0.5 mL cultured Gram-positive and Gram-negative bacteria were added to corresponding 200 mg soil samples and DNA was extracted using manufacturer's recommended protocols.

E.Z.N.A.® Water DNA Kit

Isolate DNA from water samples containing humic acid and inhibitor

REQUEST A SAMPLE

- Reliable – Reproducible DNA purification from variety of sample sources
- High quality – Inhibitor Removal Technology provides efficient PCR inhibitor removal
- High yield – Efficient purification of DNA from even specialized samples

The E.Z.N.A. Water DNA Kit is formulated to isolate high-purity cellular DNA from water samples typically containing humic acid and inhibitors of PCR. This kit uses a novel and proprietary method to isolate genomic DNA from variety of environmental samples. This kit has been successfully used to isolate DNA from tough-to-lyse bacteria, fungi, and algae that inhabit a range of samples including tap water, lake water, river water, and sewage samples. Isolated DNA can be used for most downstream applications including PCR, Southern blot, and SNP analysis.

Features	Specifications
Starting Material	Environmental Water
Yield	100 µg
Elution Volume	50-100 µL
Technology	HiBind® DNA Mini Column
Processing Mode	Manual
Throughput	1-24

Product Description	Preps	Catalog No.
E.Z.N.A.® Water DNA Kit	5	D5525-00
	50	D5525-01

Yield & Quality

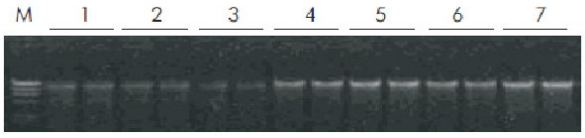


Figure 1. Purified genomic DNA from 7 different water sources was isolated with the E.Z.N.A.® Water DNA Kit. DNA was extracted in duplicate from water samples as follows: sample 1 from 20 L tap water, sample 2 from 5 L air conditioner water, sample 3 from 3 L spring water, sample 4 from 2 L sanitary waste water, sample 5 from 5 L lake water, sample 6 from 6 L pool water, and sample 7 from 3 L industrial sewage water. Genomic DNA (30% of total purified DNA) was analyzed on a 1% agarose gel to demonstrate yield and quality of the DNA. M: Lambda Hind III DNA Marker.

E.Z.N.A.® Mollusc & Insect DNA Kit

Isolate DNA from molluscs and insects using filter columns

REQUEST A SAMPLE

- Rapid – DNA isolation under 20 minutes following lysis
- Reliable – Optimized buffer system guarantee pure DNA every time
- High-quality – Purified DNA suitable for any application
- Flexible – Optimized buffer system can isolate DNA from a wide range of samples

The E.Z.N.A. Mollusc & Insect DNA Kit is designed for efficient recovery of genomic DNA from molluscs, insects, arthropods, roundworms, flatworms, and other invertebrate tissue samples rich in mucopolysaccharides. This kit can also be used with formalin preserved material or invertebrates frozen or preserved in alcohol or DNE solution.

The procedure relies on the well established properties of the cationic detergent, cetyltrimethyl ammonium bromide (CTAB), in conjunction with the selective DNA binding technology of Omega Bio-tek's HiBind® matrix. Samples are homogenized and lysed in a high salt buffer containing CTAB and extracted with chloroform to remove mucopolysaccharides. Following a rapid alcohol precipitation step, DNA is bound to the HiBind® DNA Mini Column upon adjustment of binding conditions and further purified through multiple wash steps. In this way, salts, proteins and other contaminants are removed to yield high-quality genomic DNA suitable for downstream applications such as endonuclease digestion, thermal cycle amplification, and hybridization techniques.

Features	Specifications
Starting Amount	50 mg
Starting Material	Molluscs, insects, arthropods, roundworms, flatworms, and other invertebrate tissue samples rich in mucopolysaccharides
Yield	100 µg
Elution Volume	50-100 µL
Technology	HiBind® DNA Mini Column
Processing Mode	Manual
Throughput	1-24

Product Description	Preps	Catalog No.
E.Z.N.A.® Mollusc & Insect DNA Kit	5	D3373-00
	50	D3373-01
	200	D3373-02

Yield & Quality

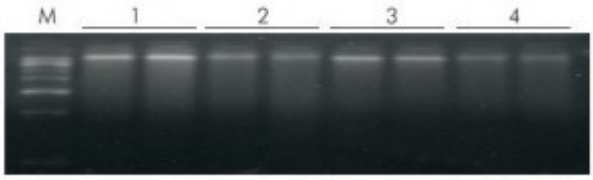


Figure 1. Genomic DNA purified using the E.Z.N.A.® Mollusc & Insect DNA Kit. Purified genomic DNA from various mollusc tissue was isolated with the E.Z.N.A.® Mollusc & Insect DNA Kit. DNA was extracted from 30 mg mollusc tissue as follows: sample 1 from oyster sticking muscle, sample 2 from oyster muscle, sample 3 from mussel muscle, and sample 4 from river snail. Genomic DNA (10% of total purified DNA) was analyzed on a 1% agarose gel to demonstrate yield and quality of the DNA. M: CL5000 DNA Marker.

PCR Analysis

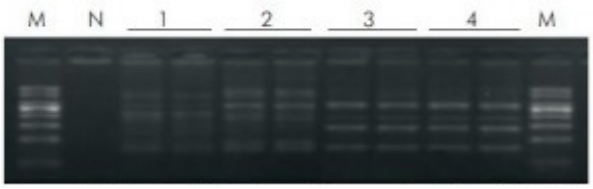


Figure 2. Amplification of genomic DNA isolated from 4 mollusc tissue samples using the E.Z.N.A.® Mollusc & Insect DNA Kit. DNA from mollusc tissue samples was isolated with the E.Z.N.A.® Mollusc & Insect DNA Kit as follows: sample 1 from oyster sticking muscle, sample 2 from oyster muscle, sample 3 from mussel muscle, and sample 4 from river snail. DNA was purified from 4 types of mollusc tissue samples. A total of 2 µL of each eluate was amplified with a PCR master mix and SSR primers to determine whether inhibitors were present in the eluted DNA. Each lane contains 20% PCR product separated on a 2% agarose gel. M: DL2000 DNA Marker. N: Negative control.

MagBinder® Fit^{24} Nucleic Acid Purification System

REQUEST A DEMO

New Standard for High-Volume, Cost-Effective Nucleic Acid Purification

- Flexible purification of 1 to 24 high or low volume samples
- Easy-to-use with programmable interface
- Process a wide range of sample types using any Mag-Bind kit
- Faster setup using pre-filled MB Fit24™ cartridges

Elevate your laboratory experience with the MagBinder® Fit^{24} Nucleic Acid Purification System. Efficiency, affordability, precision, and reliability, all in one powerful instrument. Order yours now and unlock the future of automated nucleic acid purification!

Research and IVD Ready

The MagBinder® Fit^{24} is not just an instrument, it is your solution to more efficient, automated workflows, specifically designed for nucleic acid purification for research applications, and in countries that accept CE-IVD, in vitro diagnostic applications. Tailored for use in laboratories that cannot justify a high-throughput solution, it brings efficiency to your research protocols.

Simple and Efficient

Experience efficient nucleic acid purification with the MagBinder® Fit^{24} Nucleic Acid Purification System. Our affordable, state-of-the-art instrument utilizes 24 magnetic rods coordinated to pick-up, transfer, and release magnetic particles within reagent cartridge wells, ensuring a reliable and streamlined process for DNA and RNA purification. Accommodating 1 to 24 samples simultaneously, the MagBinder® Fit^{24} is compatible with a range of sample types, thanks to Omega Bio-tek's line of magnetic bead-based nucleic acid extraction cartridges and kits.

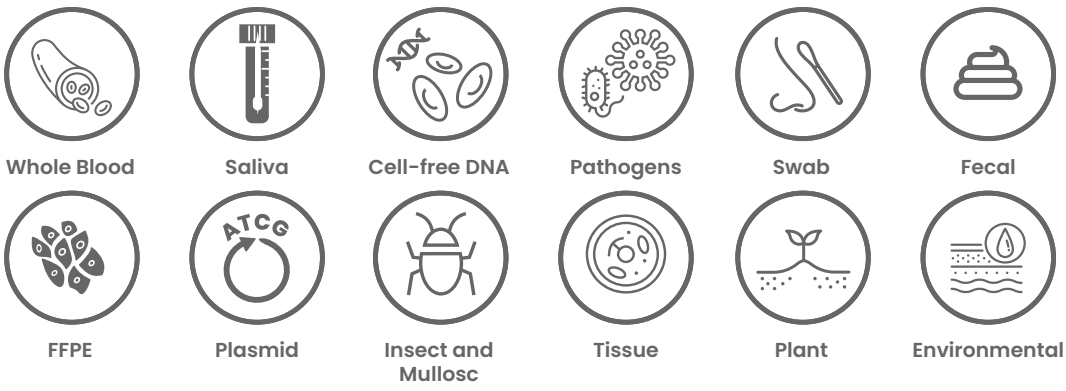
Turnkey Solution

Get to processing samples faster with seamless integration of specially designed MB Fit24™ cartridges. The MagBinder® Fit^{24} comes complete with validated, pre-loaded scripts for MB Fit24™ cartridges, allowing faster set-up time and less manual intervention.

Flexibility at its Finest

Designed to work seamlessly with Omega Bio-tek Mag-Bind kits, the MagBinder® Fit^{24} presents a flexible, programmable platform. The user-friendly interface empowers effortless programming on new protocols directly on the instrument. A more turnkey solution can be achieved using our optimized or customized protocols for any Mag-Bind kit, supported by our Field Application Scientists.

Process a variety of Sample types



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