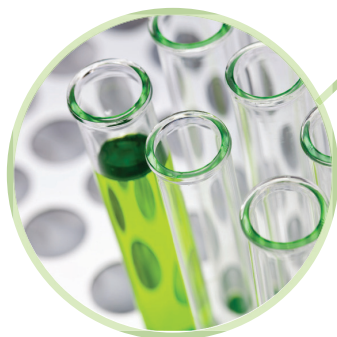


NUCLEIC ACID PURIFICATION KITS



FAST
SIMPLE
QUALITY
CONVENIENT
REPRODUCIBLE



OMEGA

bio-tek

Since its founding in 1998, Omega Bio-tek, Inc. has been at the forefront of nucleic acid purification by offering products for clinical and basic research, biotechnology and agricultural applications. DNA and RNA extraction is the first step for so many downstream analyses, and efficient and clean nucleic acid isolation is crucial. Our goal is to offer high quality products to help you improve your workflows. Our diverse product line ranges from RNA purification from plants to DNA extraction from dried blood spots. By offering over 900 products for nucleic acid isolation, we have a solution to almost any of your nucleic acid purification needs. Contact one of our specialists to see which product would best fit your application. With the ability to offer individual components and customize kits, we can help your lab reduce waste and increase productivity.



Quality is key to operations at Omega Bio-tek. We offer products for manual and automated processing and we support our customers by having Hamilton STAR®, Beckman Coulter Biomek® FX and Thermo KingFisher® instruments in house. In addition to offering nucleic acid purification products, we also offer next generation sequencing services utilizing Illumina platforms. We are ISO 9001:2008 certified and

we ensure that our 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 product. We firmly believe that quality in equals quality out.


THE OMEGA DIFFERENCE


Our diverse portfolio consists of 900+ products ranging from RNA isolation from plants to DNA extraction from dried blood spots. With the ability to offer individual components separately and to customize kits, we can help your lab reduce waste and increase productivity.


- **ECONOMICAL:**
On average, Omega Bio-tek's products cost 30% less than the competition.
- **INDIVIDUAL COMPONENTS:**
We sell kit components separately.
- **CUSTOMIZABLE:**
For large customers, we can generate custom packaging, kits, reagents, etc.
- **PRODUCT RANGE:**
Alternative options for almost all of your nucleic acid purification needs.

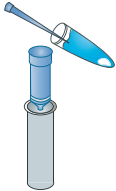
The E.Z.N.A.[®] Plasmid Mini Kit I is designed to isolate up to 30 µg of high quality plasmid DNA from 1-5 mL bacterial cultures in 30 minutes or less. This kit uses a modified alkaline lysis method to lyse the cells and separate genomic DNA from plasmid DNA. Plasmid DNA purification is further simplified by using our HiBind mini column technology in three quick steps: bind, wash and elute. Purified plasmid DNA is ready for a wide variety of downstream applications, including routine screening, restriction enzyme digestion, DNA sequencing, cloning, transformation and transfection. The E.Z.N.A.[®] Plasmid Mini Kit I is available in two different column formats: V-spin mini columns (with an attached cap) and Q-spin mini columns (without a cap).

PLASMID KIT PROTOCOL

 Pellet cells by centrifugation

 Resuspend
Lyse
Neutralize

 Clear Lysate

 Transfer cleared lysate to HiBind[®] Mini Column

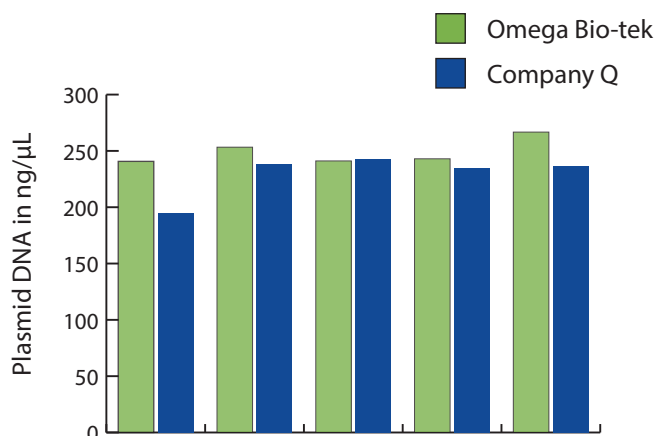
 Bind

 Wash 3x

 Dry

 Elute

DNA CONCENTRATION COMPARISON



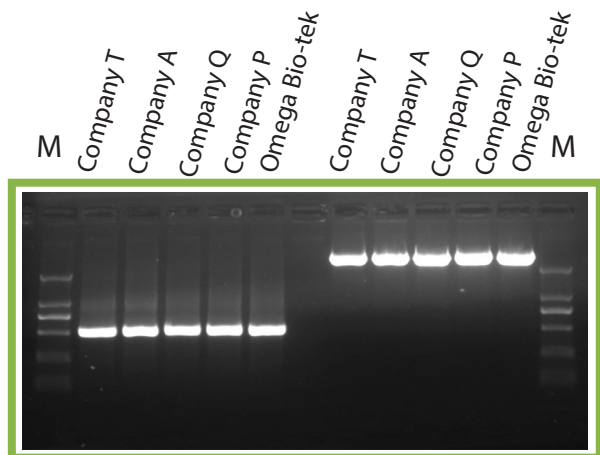
DNA Concentration Comparison. 4 mL DH5* cultures transformed with pGEM vector were performed according to manufacturer's recommended protocols. Plasmid DNA concentration determined by optical density measurements with NanoDrop 2000c. Total elution volume used was 50 µL.

Omega Part No.	VWR Cat. No.	Preps
Q-spin (no cap)		
D6942-00	101318-868	5
D6942-01	101318-908	50
D6942-02	101318-896	200
V-spin (cap attached)		
D6943-00	101318-870	5
D6943-01	101318-910	50
D6943-02	101318-898	200

E.Z.N.A.[®] CYCLE PURE KIT

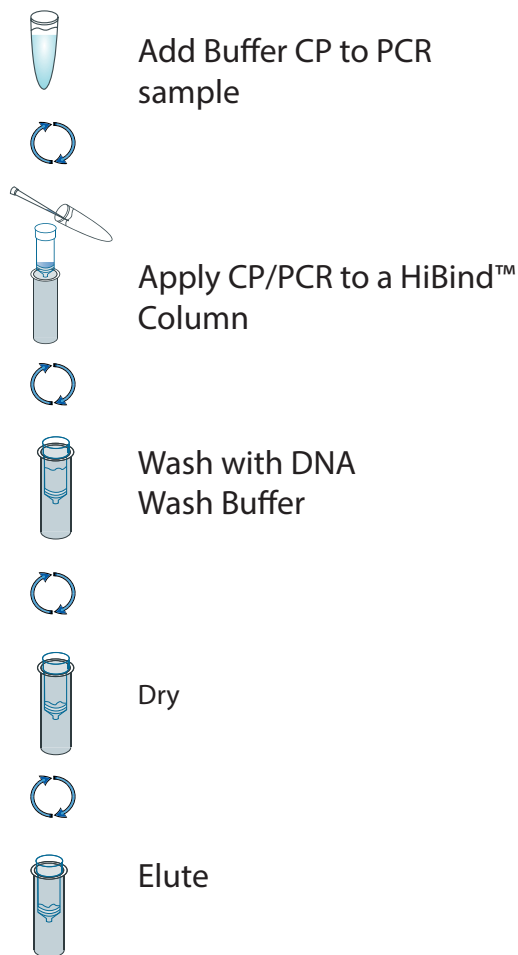
The E.Z.N.A.[®] Cycle Pure Kit is designed for the rapid purification of single- or double-stranded DNA from PCR or other enzymatic reactions. The purification procedure completely removes primers, nucleotide enzymes, salts and other impurities from the DNA sample. The DNA sample is simply mixed with buffer and spun through the HiBind DNA column. The DNA bound to the HiBind matrix is washed and the clean, concentrated DNA is eluted with deionized water or elution buffer. 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 digestions and various other labeling reactions.

OMEGA BIO-TEK'S CYCLE PURE KIT VS. THE COMPETITION



PCR products in two sizes (500 bp and 5 kb) were purified with four different competitor's kits and Omega Bio-tek's E.Z.N.A.[®] Cycle Pure Kit. Ten percent of eluted product was analyzed on a 0.8% agarose gel and run with a DL2000 marker.

CYCLE PURE PROTOCOL



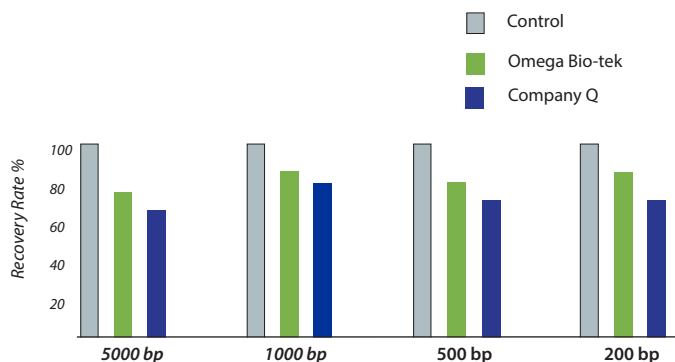
Omega Part No.	VWR Cat. No.	Preps
D6492-00	101319-112	5
D6492-01	101318-906	50
D6492-02	101318-892	200

E.Z.N.A.[®] GEL EXTRACTION KIT

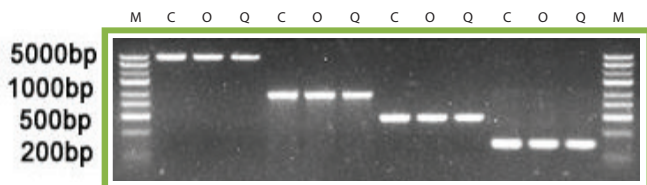
Omega Bio-tek's E.Z.N.A.[®] Gel Extraction Kit uses HiBind DNA mini column technology to recover DNA bands from 100 bp to 20 kb in size. This kit can be used with all concentrations and types of agarose gels, including TBE and TAE gels with a maximum recovery rate of 85%.

The DNA band of interest is excised from the gel, dissolved in binding buffer and applied to a DNA HiBind mini column. Following three wash steps, DNA is eluted with elution buffer and is ready for downstream applications such as ligation, PCR amplification, restriction enzyme digestion and various labeling reactions. The E.Z.N.A.[®] Gel Extraction Kits can also be used to purify DNA fragments from PCR products and other enzymatic reactions.

RECOVERY RATE OF EXCISED DNA VS COMPANY Q



Omega Part No.	VWR Cat. No.	Preps
D2500-00	101318-968	5
D2500-01	101318-970	50
D2500-02	101318-972	200



Percent recovery of 4 different sizes of DNA bands from a 2% agarose gel with the E.Z.N.A.[®] Gel Extraction Kit (O, green) and a comparable kit from Company Q (Q, blue) according to manufacturer's recommended protocols. The original input amounts of DNA (C, black) were normalized to 100% and the amount of DNA recovered was determined by optical density measurements with the NanoDrop 2000c.

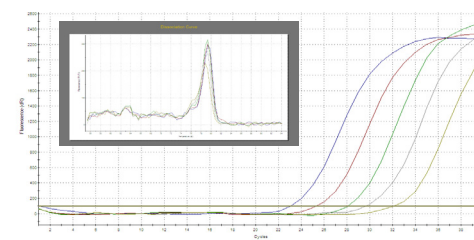


E.Z.N.A.[®] TISSUE DNA KIT

The E.Z.N.A.[®] Tissue DNA Kit offers a simple, rapid and cost effective method for the isolation of DNA from a wide variety of sample sources including fresh and frozen tissues, animal cells, buccal swabs and FFPE tissue samples. After cell lysis, the DNA purification process can be completed in less than 30 minutes. Up to 30 mg of tissue can be used, and multiple samples can be simultaneously processed with this spin column-based kit. There is no need for time consuming steps such as phenol/chloroform extractions or isopropanol/ethanol precipitations. DNA purified using the E.Z.N.A.[®] Tissue DNA Kit is ready for most downstream applications such as PCR, Southern blotting, microarrays, SYBR or probe-based qPCR and restriction enzyme digestion.

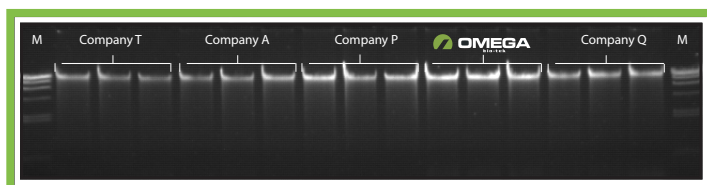
Sample	Sample Size	Range of Yield (µg)
Whole blood	200 µL	4-8
Buffy coat	200 µL	30-40
Cultured cells	1 x 10 ⁶	5-6
Buccal swabs	1 swab	2-4
Saliva	200 µL	6-10

REAL-TIME PCR OF GENOMIC DNA ISOLATED 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 five curves correspond to the input DNA template amounts of 10, 2, 0.4, 0.08 and 0.0016 ng.

YIELD COMPARISON OF OMEGA BIO-TEK'S TISSUE DNA KIT



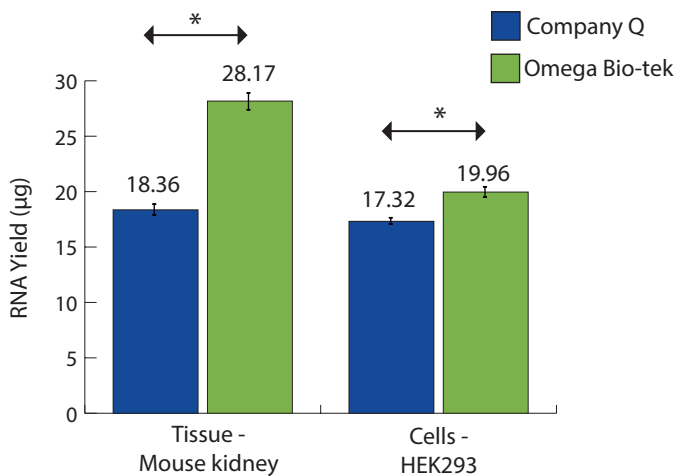
Purified genomic DNA from 10 mg rat kidney tissue was isolated with Company T, Company A, Company P, Omega Bio-tek's Tissue DNA Kit and Company Q's genomic DNA extraction kits following the manufacturer's recommended protocols. Three percent of eluted DNA was analyzed on a 0.8% agarose gel. M: Lambda-Hind III.

Omega Part No.	VWR Cat. No.	Preps
D3396-00	101414-382	5
D3396-01	101319-016	50
D3396-02	101319-018	200

E.Z.N.A.[®] HP TOTAL RNA KIT

The E.Z.N.A.[®] HP Total RNA Kit provides a rapid and easy method for RNA isolation from a small amount of cultured eukaryotic cells or tissues. This kit allows single or simultaneous processing of multiple samples in less than 40 minutes. Normally, 1×10^7 eukaryotic cells or 25-30 mg tissue can be used in a single experiment. Omega Bio-tek's unique homogenizer columns simultaneously homogenize and remove genomic DNA from samples. RNA purified using the E.Z.N.A.[®] HP Total RNA method is ready for applications such as RT-PCR, RT-qPCR, Northern blotting, poly A+ RNA (mRNA) purification, nuclease protection, *in vitro* translation and next-generation sequencing.

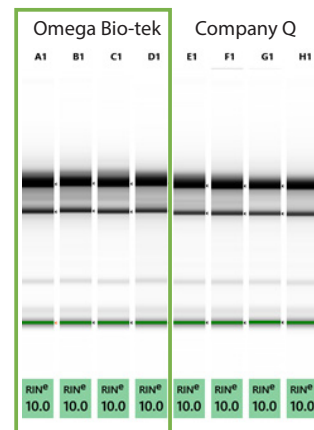
RNA YIELD COMPARISON



PERCENT gDNA CONTAMINATION OF ISOLATED RNA

Sample Type	Company	% gDNA Contamination
Tissue - Mouse kidney	Company Q	4.52
	Omega Bio-tek	4.79
Cells - HEK293	Company Q	4.52
	Omega Bio-tek	4.79

RNA INTEGRITY ANALYSIS



RNA integrity analysis - cultured cells.
 a) Representative electropherogram - Company Q.
 b) Representative electropherogram - Omega Bio-tek.

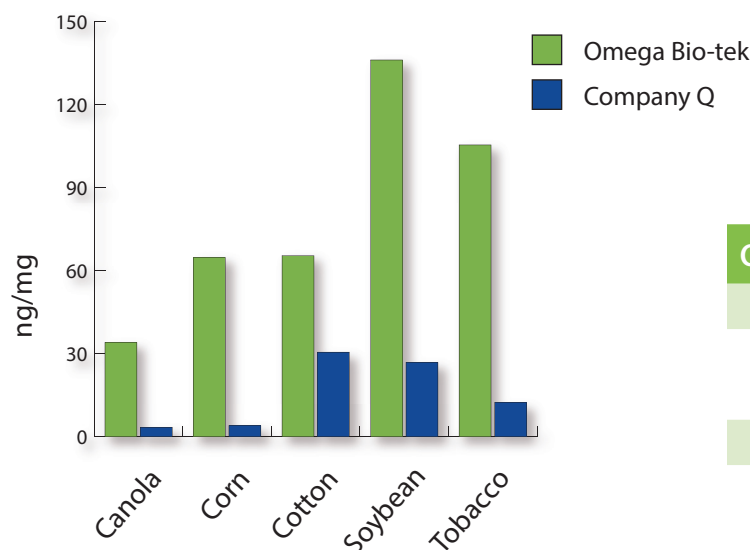
Omega Part No.	VWR Cat. No.	Preps
R6812-00	101414-848	5
R6812-01	101414-850	50
R6812-02	101414-852	200

E.Z.N.A.[®] PLANT DNA DS KIT

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 having a lower DNA content. Up to 50 mg of wet tissue can be processed in less than 1 hour. The system combines the reversible nucleic acid-binding properties of the HiBind[®] 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 digestion and hybridization applications.

This procedure relies 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, binding conditions are adjusted and DNA is purified using a HiBind[®] DNA mini column. 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 applications.

COMPARISON OF DNA YIELD FROM MULTIPLE CROPS



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

Omega Part No.	VWR Cat. No.	Preps
E.Z.N.A. [®] Plant DNA DS Kit		
D2411-00	10017-798	5
D2411-01	10017-800	50
E-Z 96 [®] Plant DNA DS Kit		
D1411-00	75802-892	1 x 96
D1411-01	75802-894	4 x 96

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