



Plant DNA & RNA Purification

Filter and magnetic
bead-based purification kits

omegabiotek.com

 **omega**
BIO-TEK



Our goal is to offer high-quality DNA and RNA purification products to help improve your workflows.

Our technology, your advantages

Extracting high-quality DNA or RNA is the first crucial step in most workflows and is critical for determining the success of any downstream application. Our goal is to equip customers with high-quality products to improve their workflows and help them obtain faster, better results.



Diverse Portfolio

We offer 500+ products encompassing different extraction technologies including magnetic beads, silica spin columns, plates, and salting out. These methods are available as different kits and configurations to cover a wide range of sample types.



Quality

We are ISO 9001:2015 certified and we ensure that our products are properly assembled, tested, recorded, stored, and shipped.



Customer Support

We provide excellent pre- and post-sales support to enhance customer experience and satisfaction. We are available by phone, email or chat to ensure smooth adaptation of our product in customer workflows.



Exceptional Value

We offer cost-efficient, high-quality products. The end users will be benefited by the reduction in cost - either in reagent cost, time investment, or both.

Showcase

DNA

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**FREE
SAMPLE
KIT**

Request a free sample of any of the kits
online at www.omegabiotek.com

E.Z.N.A.[®] & E-Z 96[®] Plant DNA DS Kit

High-throughput DNA isolation of plant leaf & seed tissues using silica spin columns or 96-well plates

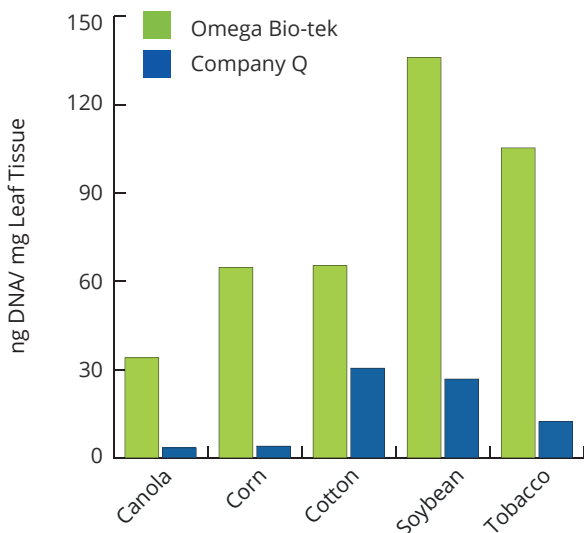
FREE
SAMPLE
KIT

- Robust CTAB lysis
- Homogenizer columns for efficient lysate clearance and faster sample processing
- No phenol/chloroform extractions

The E.Z.N.A. and E-Z 96 Plant DNA DS Kits are designed for the efficient recovery of genomic DNA from fresh, frozen, or dried plant tissue samples rich in polysaccharides, polyphenols, or those 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 96-well silica plate or spin column technology to purify inhibitor-free genomic DNA in a high-throughput format.

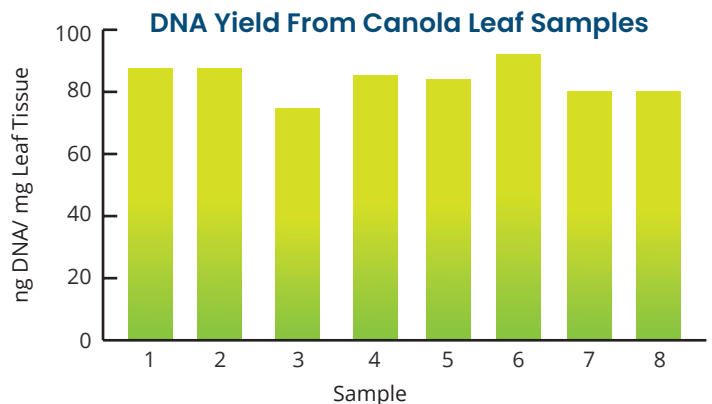
This procedure relies on the well-established properties of the cationic detergent cetyltrimethylammonium bromide (CTAB), in conjunction with our unique binding system to increase yields and provide high-quality DNA. The system eliminates the need for chloroform extractions traditionally associated with CTAB-based lysis methods. 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 was extracted in triplicate according to the manufacturer's recommended protocols and eluted in 100 μ L. DNA was analyzed with a 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
Processing Mode	Manual
Elution Volume	50-100 μ L
Throughput	1 - 24
DNA Binding Technology	HiBind DNA Mini Column (D2411) or silica 96-well plate (D1411)



50 mg of canola leaf tissue was extracted in triplicate according to manufacturer's recommended protocols and eluted in 150 μ L. Data was analyzed with a fluorescent DNA-based quantification method. Total yield was divided by total tissue amount to show ng of DNA per mg of leaf tissue.

Real-time PCR with corn-specific primers was performed on triplicates of undiluted, 10-fold and 100-fold dilutions of DNA. Omega Bio-tek's kit not only has significantly higher yields but also less qPCR inhibition when compared to that of Company Q's.

Extraction Method for Corn	Average Ct			Δ Ct	
	1x	10x	100x	(10x-1x)	(100x-10x)
Omega Bio-tek	23.88	26.324	29.978	2.935	3.654
Company Q	28.703	30.573	35.038	1.870	4.465

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

Product Description	Preps	Catalog No.
E-Z 96 [®] Plant DNA DS Kit	1 x 96	D1411-00
	4 x 96	D1411-01

Mag-Bind® Plant DNA DS 96 Kit

High-throughput DNA isolation of plant seed & leaf tissues using magnetic beads

FREE
SAMPLE
KIT

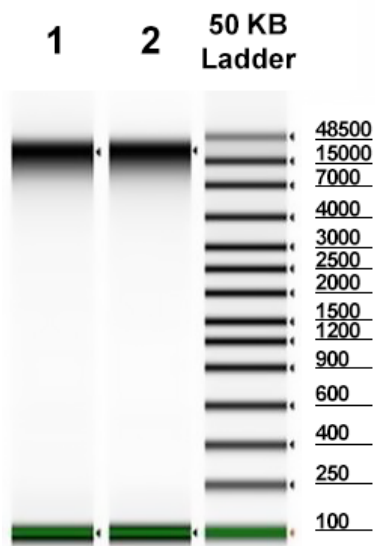
- 96 samples can be processed in less than 1 hour
- Robust lysis of a variety of plant samples
- Inhibitor-free DNA suitable for most downstream applications
- Adaptable on most open-ended liquid handlers

The Mag-Bind Plant DNA DS 96 Kit allows for rapid and reliable isolation of high-quality genomic DNA from plants and other tissues that are particularly difficult to lyse or very high in polysaccharides or polyphenols. The purification procedure relies on the well-established properties of the cationic detergent, cetyltrimethylammonium bromide (CTAB), in conjunction with magnetic bead technology to provide high-quality DNA. The system eliminates the need for chloroform extractions traditionally associated with CTAB-based lysis methods, reducing consumables and hands-on time to allow multi-sample processing. The lysis and binding buffers are uniquely formulated to eliminate polysaccharides, phenolic compounds, and enzyme inhibitors to yield high-quality DNA. Purified DNA is suitable for PCR, restriction digestion, next-generation sequencing, and hybridization applications.

Features	Specifications
Starting Material	Plants and other tissues that are particularly difficult to lyse or very high in polysaccharide content.
Starting Amount	50 mg wet tissue or 15 mg dry tissue
Processing mode	Automated or manual
Elution Volume	100-200 µL
Throughput	96
DNA binding technology	Magnetic Beads

DNA was extracted from approximately 50 mg of leaf sample using Omega Bio-tek Mag-Bind Plant DNA DS 96 Kit (M1130) and Company Q's kit following manufacturer's recommended protocols. Purified DNA was quantified using Promega's QuantiFluor® dsDNA system and normalized per mg of input plant material.

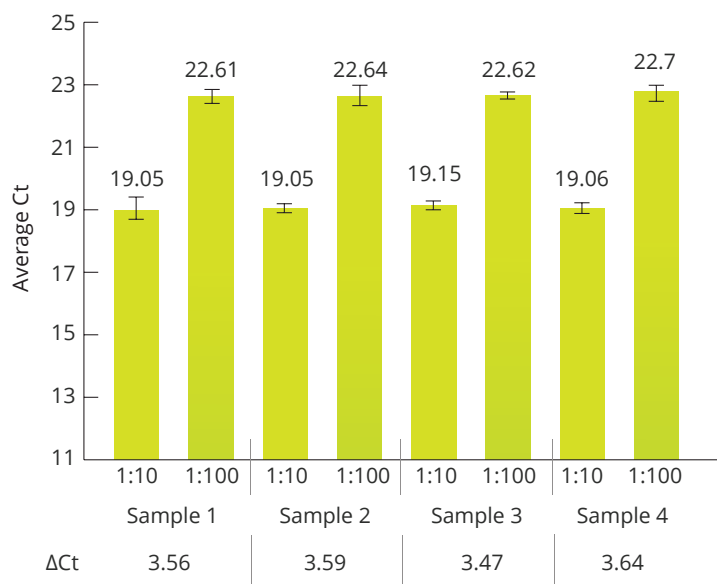
TapeStation Analysis of DNA Purified From Barley



TapeStation® analysis of genomic DNA purified from barley using Omega Bio-tek's Mag-Bind Plant DNA DS 96 kit (M1130). TapeStation analysis software estimates the molecular weight of the purified DNA to be ~30 kb.

Type	Company Q (ng/ mg)	Omega Bio-tek (ng/mg)
Tobacco	12.3	19.4
Peanuts	6.3	52.9
Sunflowers	41.8	89.1
Oranges	4.6	31.2
Switchgrass	21.9	7.9
Peppers	6.9	111.0
Sugarcane	10.5	93.1
Oats	18.4	270.0
Wheat	0.5	152.3
Barley	9.6	198.1
Canola	3.4	59.0
Tomatoes	2.6	120.2
Grapes	1.9	212.4
Alfalfa	17.9	85.2
Corn	4.0	29.8
Sugar beets	20.2	34.0
Soybeans	26.8	25.4
Cotton	30.5	63.5
Potatoes	30.0	206.5

PCR Analysis of Purified DNA



Genomic DNA was extracted from 30 mg canola leaf using the Mag-Bind Plant DNA DS 96 Kit (n=4). Real-time PCR with canola-specific primers was performed on triplicates of 10-fold and 100-fold dilutions of DNA. The Δ Ct value between 100-fold and 10-fold was \sim 3.3 for all the samples, demonstrating good PCR efficiency without inhibition.

Product Description	Preps	Catalog No.
Mag-Bind® Plant DNA DS 96 Kit	1 x 96	M1130-00
	4 x 96	M1130-01

E.Z.N.A.[®] & E-Z 96[®] Plant RNA Kits

Isolates total RNA from a variety of plant samples

FREE
SAMPLE
KIT

- All contaminants, including polysaccharides and phenolic compounds, effectively removed
- Spin column and 96-well plate formats available
- Purified RNA is suitable for a variety of downstream applications

Our E.Z.N.A. and E-Z 96 Plant RNA Kits provide a convenient and rapid method for the isolation of total RNA from a variety of plant samples. These kits provide a homogenizer column or plate for homogenization and filtration of viscous plant cell lysate by centrifugation in combination with HiBind RNA columns for RNA purification. All of the contaminants, including polysaccharides and phenolic compounds, are effectively removed. Purified RNA can be used for most downstream applications such as RT-PCR, qPCR, Northern blot analysis, differential display, microarray analysis and poly A+ RNA selection.

Total RNA was isolated from 100 mg of *Arabidopsis thaliana* leaf tissue according to manufacturer's recommended protocols. 1/10 of eluate was analyzed on a denaturing agent agarose gel. OD values calculated with Thermo Scientific's NanoDrop 2000c.

Company	Yield (µg)	A _{260/280}
Omega Bio-tek	16.45	2.02
	20.63	2.08
	19.11	1.96
Company Q	17.43	2.02
	18.05	1.95
	16.71	2.05

Features	Specifications
Starting material	Plant tissue
Starting Amount	<100 mg
Processing Mode	Spin column (R6827) & 96-well plate (R1027)
Yield	Up to 100 µg, >200 nt
Throughput	1 - 24
RNA Binding Technology	Silica technology
Downstream Application	PCR, qPCR, real-time RT-PCR, microarray, Northern blot, and poly A+ RNA selection

Plant Samples Validated with the E.Z.N.A.[®] Plant RNA Kit

<i>Arabidopsis thaliana</i>	<i>Oryza sativa</i>
<i>Humulus lupulus</i>	<i>Hordeum vulgare</i>
<i>Beta vulgaris</i>	<i>Lycopersico esculentum</i>
<i>Fragraria virginia</i>	<i>Malus spp.</i>
<i>Clarkia spp.</i>	<i>Solum tuberosum</i>
<i>Daucus carota</i>	<i>Spinacia oleracea</i>
<i>Ornithogalum thyrsoides</i>	<i>Surfinia spp.</i>
<i>Dendranthema spp.</i>	<i>Triticum aestivum</i>
<i>Euglena graciis</i>	<i>Vetis spp.</i>
<i>Nicotiana tabacum</i>	<i>Zea mays</i>

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

Product Description	Preps	Catalog No.
E-Z 96 [®] Plant RNA Kit	2 x 96	R1027-00
	50	R1027-01

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