

# Mag-Bind<sup>®</sup> Products

Magnetic bead-based DNA and RNA Purification Kits

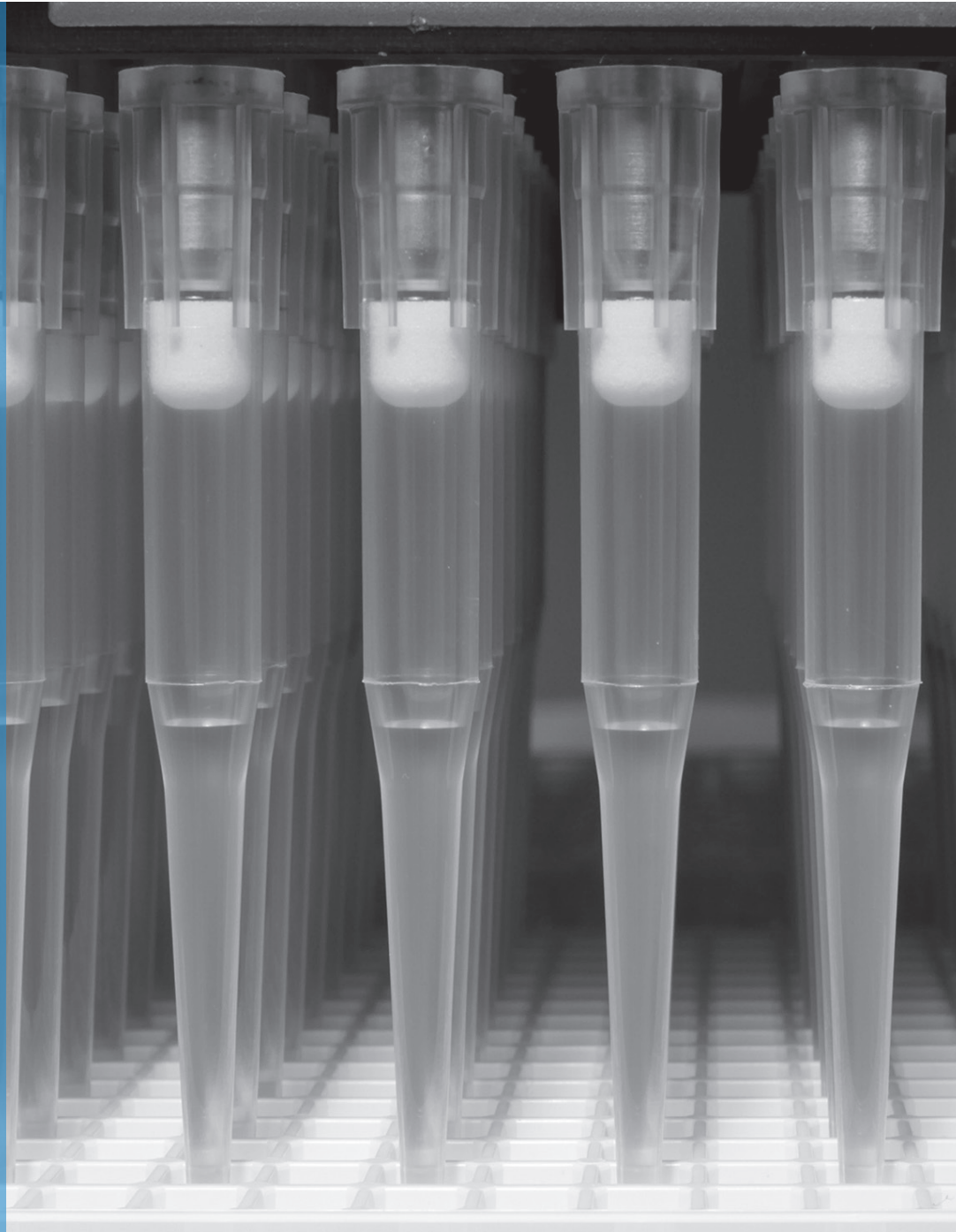
AUTOMATION

CUSTOMIZATION

COST SAVINGS

QUALITY

SUPPORT





## APPLICATION SUPPORT

Pre- and post-sales. Our automation team will discuss details with the customer before the project. Customers can send samples to Omega Bio-tek's facility for processing and to test the chemistry prior to purchasing instrument. After the project, our automation team will work on-site to assist with the method developed to ensure a smooth installation.



## CUSTOMIZED PRODUCTS

From simple to complex samples, we can tailor our reagent systems to the customers needs. We will work with the customer to customize our kits to adapt to their sample type or their workflow.



## COST SAVINGS

End users will see a reduction in the cost - either in the reagent cost, time investment or both.

## *Innovations in nucleic acid isolation*

With a diverse portfolio of over 500+ products, Omega Bio-tek has been at the forefront of the nucleic acid purification realm by providing innovative solutions for clinical and basic research, diagnostics, biotechnology and agricultural applications. Omega Bio-tek offers highly versatile DNA and RNA extraction kits covering a wide spectrum of sample types, employing either proprietary silica membrane-based or magnetic bead-based technologies, suitable for both manual and automated extractions. Our goal is to equip customers with quality products to improve their workflows and help them obtain faster, better results. We also offer individual components and customizable solutions to help customers reduce waste and increase productivity. Contact one of our specialists to see which product would best fit your application.

Our laboratory is equipped with liquid handlers such as Hamilton Microlab® STAR™/NIMBUS™, Beckman Coulter Biomek® FX, and Thermo KingFisher™ to support our customers in their product validations. 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 on 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*.

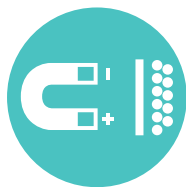
# Mag-Bind® cfDNA Kit

Rapid & efficient isolation of circulating, cell-free DNA from 0.5-4 mL plasma or serum samples



## 192 samples

192 samples in 2 hours\*  
\*1.0 mL sample on liquid handler



## Bead-Based

Scalable DNA purification  
500-4,000 µL input  
50 µL elution volume



## Quality

Minimal gDNA contamination  
High quality cfDNA suitable for PCR, NGS, etc.



## Automatable

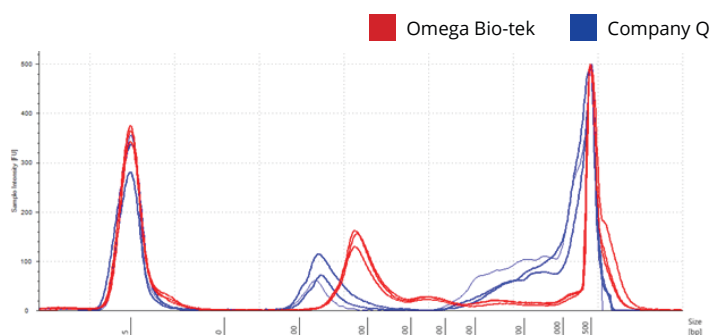
Adaptable on most open-ended liquid handlers

The Mag-Bind® cfDNA Kit is designed for the rapid and reliable isolation of circulating DNA from 500-4,000 µL plasma or serum samples. The Mag-Bind® cfDNA Kit can be processed manually or using automated platforms. The procedure eliminates the need for funnels and vacuum steps, providing hands-free operation in automated protocols. The uniquely formulated Binding buffer allows for large sample volumes to be processed in automated formats with 4 mL of serum or plasma being processed in 24-well plates. The magnetic properties of the Mag-Bind® Particles CH enable fast magnetic separation, even when using large volumes. The high Binding capacity of the beads allows for lower volumes of magnetic particles needed, thus reducing the final elution volume required. 4 mL of serum or plasma can be eluted in as low as 50 µL. The system combines the reversible nucleic acid-Binding properties of Mag-Bind® paramagnetic particles with a unique Binding system that targets smaller DNA fragments (150-400 bp) and minimizes the Binding of larger fragments, such as gDNA.

## Illustrated Protocol



## Electropherogram Overlay of Purified DNA from 4 mL Serum



4 mL of unspiked serum was purified using kits from Omega Bio-tek and Company Q following manufacturer's recommended protocols. Purified DNA was analyzed on Agilent's TapeStation® 2200.

Product Description	Preps	Catalog No.
	5	M3298-00
Mag-Bind® cfDNA Kit	50	M3298-01
	200	M3298-02

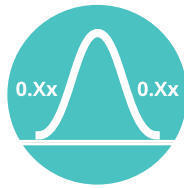
# Mag-Bind® TotalPure NGS

Bead-based purification of DNA & RNA for next-generation sequencing workflows



## No Protocol Change

Drop-in replacement



## Size Selection

Double-Sided Size Selection  
Use your current ratios



## DNA/RNA Clean-Up

PCR clean up  
cfDNA or RNA purification

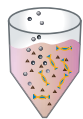


## Automatable

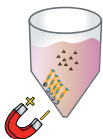
Adaptable on most open-ended liquid handlers

Mag-Bind® TotalPure NGS offers an easy-to-use, reliable solution for the purification of both DNA or RNA for next-generation sequencing workflows with high recovery rates. Mag-Bind TotalPure NGS is capable of selectively binding fragments depending on the reagent to sample ratio used, giving the user flexibility to perform left, right, or double-sided size selection. This product is designed for both manual or fully automated purification of DNA and RNA samples, as well as for the purification of PCR products. The system combines Omega Bio-tek's proprietary chemistries with reversible nucleic acid-binding properties of magnetic beads to selectively bind fragments larger than 100 bp and eliminate excess nucleotides, primers, and small, non-targeted products such as primer-dimers. Purified DNA and RNA is suitable for a variety of downstream applications such as NGS library preparation, microarrays, automated fluorescent sequencing, and restriction enzyme digestion.

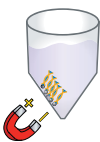
## Illustrated Protocol



Add Mag-Bind® TotalPure NGS and mix



Magnetize and remove supernatant

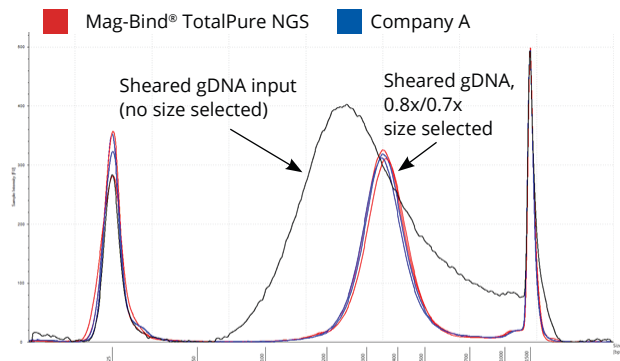


Wash twice with 70% ethanol



Dry and elute DNA

## Double-Sided Size Selection



Electropherogram overlay of the double-sided size selection on sheared gDNA at 0.8x/0.7x ratio set and using Omega Bio-tek's Mag-Bind® TotalPure NGS and a comparable product from Company A following manufacturer's recommended protocols. The DNA was eluted in 25 µL and analyzed on Agilent's TapeStation® 2200.

Product Description	Preps	Catalog No.
	5 mL	M1378-00
Mag-Bind® TotalPure NGS	50 mL	M1378-01
	500 mL	M1378-02

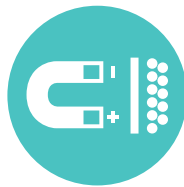
# Mag-Bind® SeqDTR

Removes unincorporated terminators from sequencing reactions



**No Protocol Change**

Drop-in replacement



**Bead-Based**

Scalable DNA purification  
96 well or 384 format



**Quality**

Read lengths averaging  
over 800 bp (Min Phred 20)

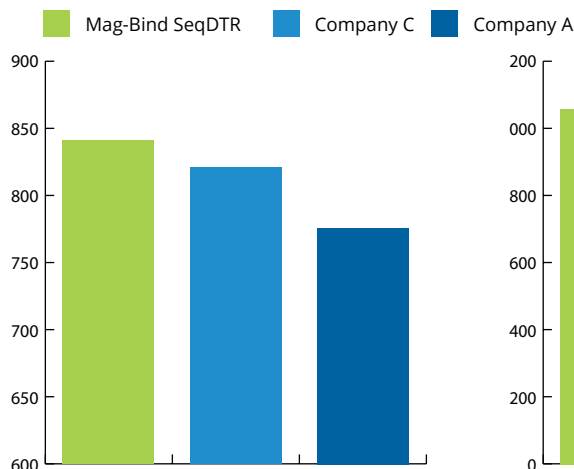


**Automatable**

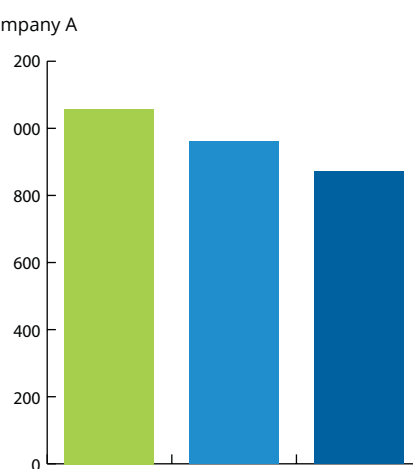
Adaptable on most open-ended liquid handlers

Mag-Bind® SeqDTR is designed to effectively and reliably remove unincorporated terminators from sequencing reactions. Sequencing products are mixed with the Mag-Bind SeqDTR magnetic particles which selectively Bind DNA. Two rapid wash steps eliminate trace contaminants such as nucleotides and primers to reduce background signal and therefore achieve higher QV scores. The high sensitivity of Mag-Bind SeqDTR's Binding ability allows for decreased concentrations of BigDye® chemistry to be used and longer continuous read lengths to be achieved. Mag-Bind SeqDTR can be processed in 96- and 384-well formats and is compatible with many liquid handling instruments including Hamilton Microlab® STAR™ & STARlet™, Beckman Coulter Biomek® FX & NX and Tecan Evo instruments. Up to 4 plates can be run in a 96-well format in less than 25 minutes.

## Continuous Read Lengths



## Signal Strength



Purified 1.8 kb PCR fragments were sequenced from each company using the recommended protocols. The median of 16 samples per company were used in the representations above. A 5 µL sequencing reaction was performed using a 1/32 dilution of Applied Biosystems Big Dye Terminator v3.1 chemistry. DNA was analyzed on an Applied Biosystems 3730 XL.

Product Description	Preps	Catalog No.
Mag-Bind® SeqDTR	5 mL	M1300-05
	50 mL	M1300-08
	500 mL	M1300-50

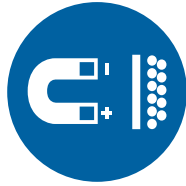
# Mag-Bind® EquiPure Library & gDNA Normalization Kits

Normalizes gDNA & purifies amplicons and DNA libraries from various DNA concentrations



## No Quant / Aliquot

Save time



## Bead-Based

High throughput normalization



## DNA Output

Concentrations +/- 10%



## Automatable

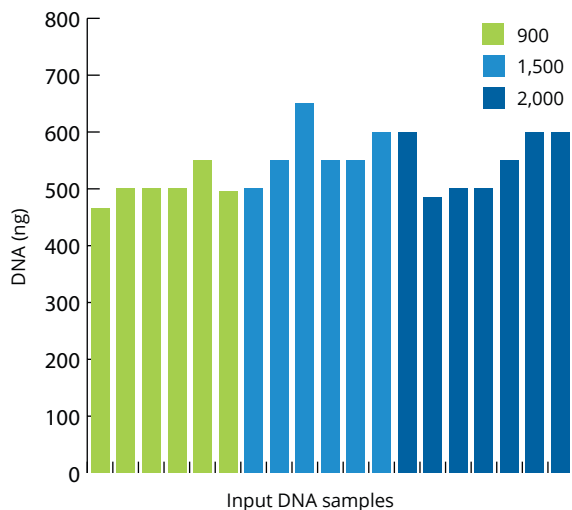
Adaptable on most open-ended liquid handlers

Many high throughput applications, such as sequencing and genotyping, require the input DNA concentration to be within a certain range for optimal results. Traditionally, a tedious process of quantification, calculation, and concentration adjustment must be carried out to normalize the DNA samples.

The Mag-Bind® EquiPure Normalizer Kits completely eliminate the need to quantify and aliquot DNA, saving time, quantification bias and tip cost. Using our proprietary Mag-Bind® normalizer beads and Binding buffer system, input DNA at different concentrations is simply bound, washed, and eluted to a final normalized product. The magnetic beads have a limited Binding capacity and therefore allow a predefined amount of DNA to be captured and eluted. An alternate protocol allows for unbound DNA to be recovered.

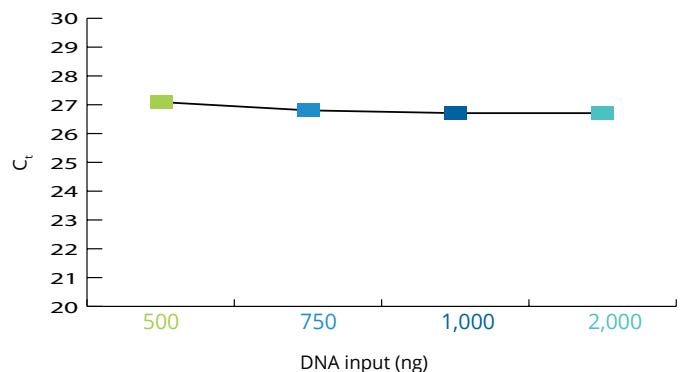
The Mag-Bind® EquiPure Normalizer Kits allow users to adjust the quantity of DNA that Binds to the magnetic beads and elution volumes can be adjusted to vary DNA concentrations to users needs.

### Normalization of 16S NGS Libraries



Varying amounts of 16S NGS libraries were prepared and normalized with the Mag-Bind® EquiPure Library Normalization Kit. DNA yield was quantified using Promega's QuantiFluor® dsDNA system.

### qPCR from Normalized gDNA



Genomic DNA was isolated from whole blood with the Mag-Bind® Blood & Tissue DNA HDQ 96 Kit. Varying amounts were inputted into the different reactions then normalized with the Mag-Bind® EquiPure gDNA Normalization Kit. DNA yield was quantified using Promega's QuantiFluor® dsDNA system.

Product Description	Preps	Catalog No.
Mag-Bind® EquiPure Library Normalization Kit	1 x 96	M6445-00
	4 x 96	M6445-01

Product Description	Preps	Catalog No.
Mag-Bind® EquiPure gDNA Normalization Kit	1 x 96	M6423-00
	4 x 96	M6423-01



# Mag-Bind® Ultra Pure Plasmid DNA Kit

High quality, endotoxin-free plasmid DNA in a high throughput format



## Quality

Endotoxins efficiently reduced (< 0.1 EU/μg)

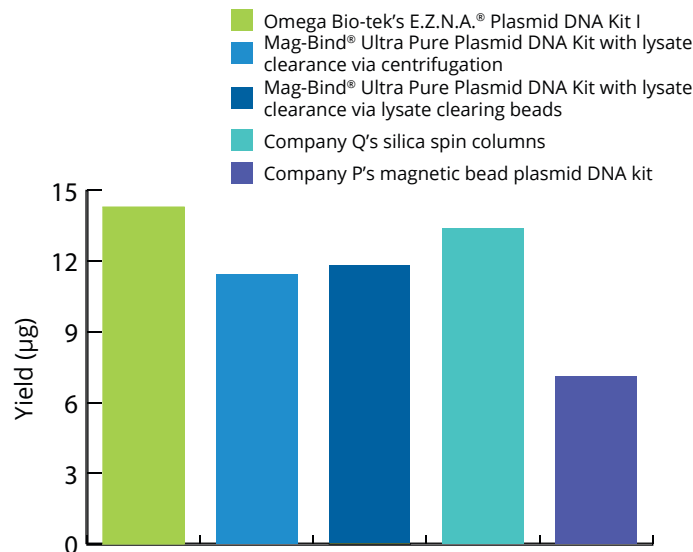


## Automatable

Manual or automation-friendly sample processing

The Mag-Bind® Ultra Pure Plasmid DNA Kit combines the power of Mag-Bind® technology with the innovative ETR technology to deliver high quality endotoxin-free plasmid DNA in a high throughput format. Two options are available to clear cellular debris after alkaline lysis: centrifugation or lysate clearing beads. The lysate clearing magnetic beads allow for fully automated processing after pelleting of the cells from culture. The purified plasmid can be used directly for automated fluorescent DNA sequencing, such as BigDye® sequencing chemistry, transfection, as well as for other standard molecular biology techniques, including restriction enzyme digestion.

## Plasmid DNA Yield Comparison



Plasmid DNA was isolated according to manufacturer's recommended protocols from 0.8 mL LB cultures grown for 24 hours. Each protocol was performed in triplicate with the average data shown above. DNA was quantified with Thermo Scientific's NanoDrop® 2000c.

Product Description	Preps	Catalog No.
Mag-Bind® Ultra Pure Plasmid DNA Kit	1 x 96	M1258-00
	4 x 96	M1258-01

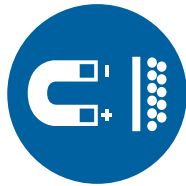
# Mag-Bind® Blood & Tissue DNA HDQ 96 Kit

High throughput DNA isolation from blood, buccal swabs, saliva & tissue using magnetic beads



## 384 samples

384 samples  
in 2 hours



## Bead-Based

Scalable DNA purification  
100-250 µL input



## Quality

High quality DNA suitable for  
qPCR, NGS, etc.

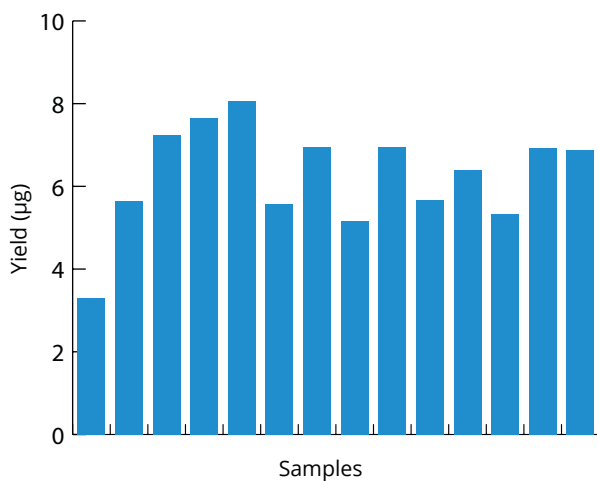


## Automatable

Adaptable on most open-  
ended liquid handlers

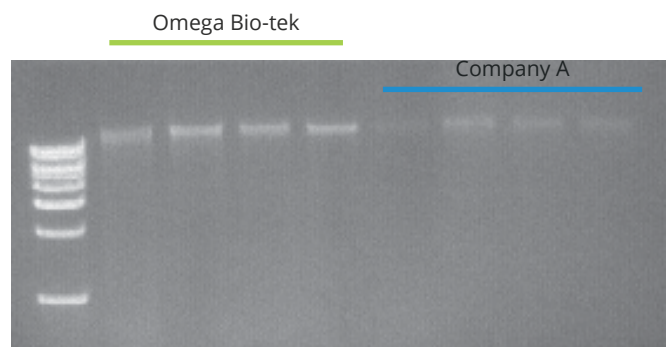
The Mag-Bind® Blood & Tissue DNA HDQ 96 Kit is designed for the rapid and reliable isolation of high quality genomic DNA from 100-250 µL of blood samples, saliva, swabs, mouse tails, dried blood spots, tissues, or 5 x 10<sup>6</sup> cultured cells. Mag-Bind® Particles HDQ provide quick magnetic response times, thereby reducing overall processing time. This system combines the reversible nucleic acid-Binding properties of Mag-Bind® paramagnetic particles with the proven efficiency of Omega Bio-tek's blood and tissue DNA isolation system to provide a rapid and robust method for the isolation of DNA from a variety of biological samples. The system yields high quality DNA that is suitable for direct use in most downstream applications such as amplification, NGS, and enzymatic reactions.

## DNA Yield from 200 µL Whole Blood



DNA yield from 200 µL whole blood extracted using the Mag-Bind® Blood & Tissue DNA HDQ 96 Kit on the Applied Biosystems' MagMAX® 96 instrument. DNA yield was determined by PicoGreen® quantification.

## Buccal Swab DNA Extraction Comparison

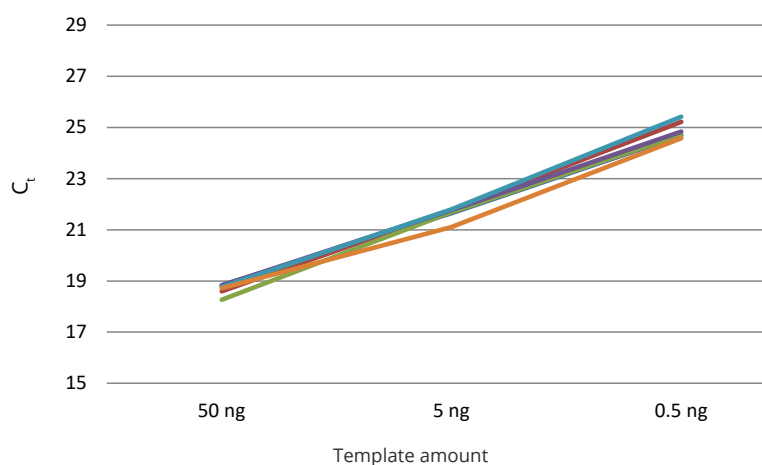


Genomic DNA was extracted from buccal swab samples using Omega Bio-tek's Mag-Bind® Blood & Tissue DNA HDQ 96 Kit and Company A's genomic DNA extraction kit. 10% of DNA extracted from each sample was analyzed on a 0.8% agarose gel.



## Whole Blood DNA Isolation from 1,500 $\mu$ L

Sample ID	Nucleic Acid Conc. (ng/ $\mu$ L)	$A_{260}/A_{280}$	$A_{260}/A_{230}$	Yield ( $\mu$ g)
1	118.4	1.82	2.09	59.2
2	90.8	1.84	2.9	45.4
3	80.5	1.85	2.83	40.3
4	127.2	1.81	2.19	63.6
5	73.1	1.75	1.18	36.5
6	162.9	1.83	2.48	81.4



Genomic DNA was extracted from 1,500  $\mu$ L whole blood using Omega Bio-tek's Mag-Bind® Blood & Tissue DNA HDQ 96 Kit. DNA was analyzed on Thermo Scientific's NanoDrop® 2000c. 50 ng of DNA was diluted 10- and 100-fold and used as a template in a 20  $\mu$ L SYBR® qPCR reaction. The  $C_t$  values increased by only 3 cycles per 10-fold dilution, which demonstrates that the template DNA is free of inhibition.

Product Description	Preps	Catalog No.
Mag-Bind® Blood & Tissue DNA HDQ 96 Kit	1 x 96	M6399-00
	4 x 96	M6399-01

## Sample Types Processed



Cultured cells



Buccal swabs



Whole blood



Mouse tails



Tissues

# E-Z 96<sup>®</sup> Spin-Out System

Fast & easy processing of buccal swabs, forensic samples, etc. in high throughput workflows

E-Z 96<sup>®</sup> Spin-Out Baskets provide a fast and convenient way to process buccal swabs, dried blood spots, and other solid forensic samples in high throughput DNA workflows. The unique three-piece design not only reduces the overall processing time, but also enables complete recovery of lysates for optimal DNA yields.

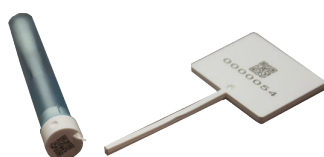
Samples are placed into individual basket tubes which are inserted into the E-Z 96<sup>®</sup> Spin-Out plate adaptors, which array the samples in a 96-well SBS format. When the plate adaptor is in the lowered position, the samples are submerged in the lysis buffer allowing for the incubation and lysis of the sample. The hinged arms of the plate adaptor are then raised and locked into position, which raises the samples above the liquid level. The E-Z 96<sup>®</sup> Spin-Out basket is then centrifuged to recover all the lysate within the buccal swab (or other sample type) to maximize DNA yields.

The E-Z 96<sup>®</sup> Spin-Out plate adaptors are compatible with multiple 96-well deep well plates, including Thermo Scientific KingFisher™ 96-Deep Well Plates and Nunc 96-Deep Well Plates with Shared Well Technology, thus eliminating a transfer step from 96-well plates to the plates used by your liquid handler or magnetic processor.

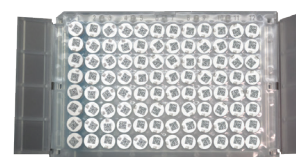
## Illustrated Workflow



Swab patient with 2-D Spin-Out swab and insert swab back into basket.



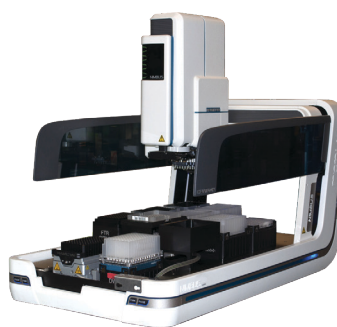
Break flag off of basket. The barcode on the flag will match the barcode on the cap on the basket. Send back to laboratory.



Arrange baskets into E-Z 96<sup>®</sup> plate adaptor in lowered position. Scan barcodes to identify well location.



Raise E-Z 96<sup>®</sup> Spin-Out plate adaptor and centrifuge to separate lysis buffer (containing DNA) and swab. Swabs and plate adaptor may be discarded.



Perform DNA extraction using Omega Bio-tek's Mag-Bind<sup>®</sup> Blood & Tissue DNA HDQ 96 Kit. Chemistry is compatible with a wide range of liquid handlers and magnetic processors.

Product Description	Preps	Catalog No.
E-Z 96 <sup>®</sup> Spin-Out swabs	100	AC7076


Product Description	Preps	Catalog No.
E-Z 96 <sup>®</sup> Spin-Out plate adaptors	10 x 96	AC7088

# Mag-Bind® FFPE DNA 96 Kit

Isolates DNA from formalin-fixed, paraffin-embedded tissue samples

The Mag-Bind® FFPE DNA Kit is designed for the rapid and reliable isolation of DNA from formalin-fixed, paraffin-embedded (FFPE) tissue samples. The specially formulated buffers reverse crosslinking and release short and long DNA fragments. Mag-Bind® particles allow for automation-friendly extraction from FFPE tissue in under 6 hours. Purified DNA is suitable for downstream applications including SNP analysis, sequencing, and genotyping. This system is fully compatible on Hamilton Microlab® STAR™, Beckman Coulter Biomek® FX, Biomek® 2000, Tecan Freedom EVO®, Thermo KingFisher™ Flex, and other workstations.

Product Description	Preps	Catalog No.
Mag-Bind® FFPE DNA 96 Kit	1 x 96	M6958-00
	4 x 96	M6958-01

		Samples	Yield (µg/section)	A <sub>260 / 280</sub>	A <sub>260 / 230</sub>
		1	8.28	1.79	1.45
		2	8.74	1.74	1.37
		3	1.81	1.66	0.68
		4	8.25	1.69	1.26
		<b>Average</b>		<b>6.77</b>	<b>1.72</b>
Company A		1	4.98	1.83	1.64
		2	5.08	1.56	0.95
		3	2.56	1.70	0.91
		4	7.27	1.74	1.98
		<b>Average</b>		<b>4.97</b>	<b>1.71</b>

Comparison of Company A's silica spin column method for FFPE DNA purification vs. Omega Bio-tek's Mag-Bind® FFPE DNA Kit. Both protocols were performed according to manufacturer's recommended protocols. Samples were quantitated using Thermo Scientific's NanoDrop® 2000c.

# Mag-Bind® FFPE RNA 96 Kit

Isolates RNA from formalin-fixed, paraffin-embedded tissue samples

The Mag-Bind® FFPE RNA Kit is designed to isolate total RNA from formalin-fixed, paraffin-embedded (FFPE) tissue sections. This kit uses Mag-Bind® technology for the efficient isolation of total RNA along with optimized buffers that are designed to minimize the effects of formaldehyde modification. Two options are available for paraffin removal: a heat treatment or a xylene treatment. Samples can be processed manually or on the Hamilton Microlab® STAR™, Beckman Coulter Biomek® FX, Biomek® 2000, Tecan Freedom EVO®, Thermo KingFisher™ Flex, and other workstations.

Product Description	Preps	Catalog No.
Mag-Bind® FFPE RNA 96 Kit	1 x 96	M2551-00
	4 x 96	M2551-01

Source		RNA Yield (µg)		Increase
Sample Type	Number	Company A	Omega Bio-tek	%
Human Breast Tissue	1	5.8	13.9	139%
	2	12.1	30.1	150%
	3	9.4	26.4	181%
	4	5.4	18.3	236%
Human Kidney	1	5.7	28.4	402%
	2	9.1	26.5	193%
Rat Liver	1	28.3	42.8	51%
	2	15.1	28.6	89%
	3	26.7	32.5	22%
	4	8.2	9.4	15%

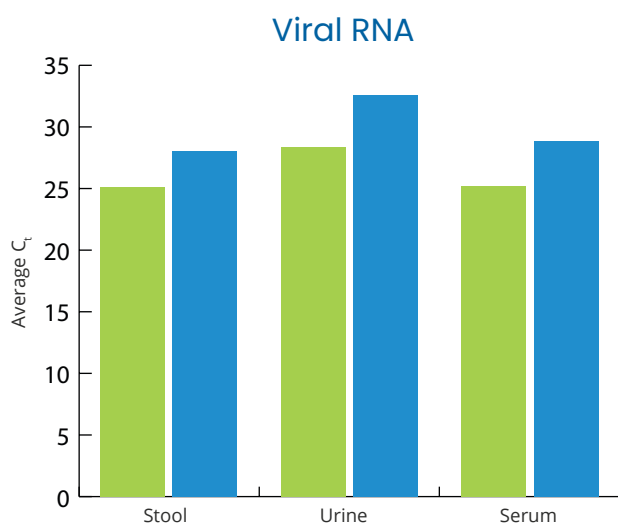
RNA yield from various sample types using the Mag-Bind® FFPE RNA Kit vs. Company A on Thermo KingFisher™ Flex. Both protocols were performed according to manufacturer's recommended protocols. The Omega Bio-tek system provides better sensitivity for gene expression profiling.

# Mag-Bind® Universal Pathogen Kit

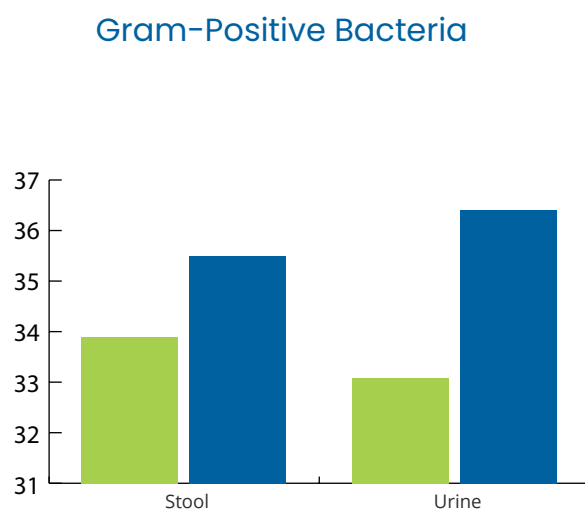
High throughput DNA & viral RNA isolation from a variety of sample sources

Mag-Bind® Universal Pathogen DNA Kit allows rapid and reliable isolation of high quality host genomic DNA, Gram-positive and -negative bacterial DNA, fungal spore DNA, and viral DNA and viral RNA from tissue, urine, serum, and fecal samples. The extraction system allows for automation after sample lysis via Hamilton Microlab® STAR™, Thermo KingFisher™ Flex, Applied Biosystems' MagMAX™ 96, Qiagen BioSprint® 96, and other liquid handling instruments. Typical automated processing time is 1 hour for 96 samples.

This novel system combines the rapid magnetic response time of Mag-Bind® technology with the uniquely formulated RBB Buffer to eliminate the isolation of PCR-inhibiting compounds along with the nucleic acids of interest. No organic extractions are involved, reducing plastic waste and hands-on time, making it amenable for high throughput applications. Purified DNA is suitable for a variety of applications including NGS, PCR, restriction digestion, etc.



HBV viruses were added to corresponding sample types and isolated with the Mag-Bind® Universal Pathogen Kit. 20 µL SYBR® qPCR were performed in triplicate on primers specific for the target organism. Average of triplicate data is shown.



Group B strep cultured samples were added to corresponding sample types and isolated with the Mag-Bind® Universal Pathogen Kit. 20 µL SYBR® qPCR were performed in triplicate on primers specific to the target organism. Average of triplicate data is shown.

Product Description	Preps	Catalog No.
Mag-Bind® Universal	1 x 96	M4029-00
Pathogen Kit	4 x 96	M4029-01

# Mag-Bind® Viral DNA/RNA 96 Kit

High throughput total nucleic acid isolation from bodily fluids

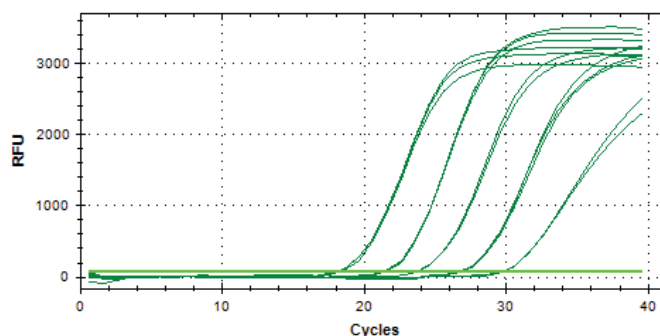
Mag-Bind® Viral DNA/RNA 96 Kit isolates DNA and RNA from serum, plasma, swabs, cell culture supernatants, urine, and other acellular bodily fluids. This kit uses a unique system to efficiently lyse viral samples. The high Binding ability and sensitivity of the magnetic particle technology allows efficient isolation from low titers or large sample sizes.

The samples are lysed in a specially formulated buffer containing detergent. Binding conditions are adjusted to enable the nucleic acid to Bind to the Mag-Bind® particles. After proteins and cellular debris are efficiently washed away, pure DNA and RNA is eluted in nuclease-free water or elution buffer. This system can be adapted to several automated platforms including Hamilton Microlab® STAR™, Beckman Coulter Biomek® FX, Thermo KingFisher™ Flex, and other instruments.

## C<sub>t</sub> Values of Recovered RNA

RNA Template	C <sub>t</sub> Value
	19.90
1x10 <sup>7</sup> viral particles/μL	19.88
	19.98
	23.09
1x10 <sup>6</sup> viral particles/μL	23.09
	22.99
	25.48
1x10 <sup>5</sup> viral particles/μL	25.53
	25.08
	28.64
1x10 <sup>4</sup> viral particles/μL	28.56
	28.66
	31.23
1x10 <sup>3</sup> viral particles/μL	31.59
	31.58

## Real-Time PCR Detection of Hepatitis B Virus



Real-time PCR detection of Hepatitis B virus that was isolated using the Mag-Bind® Viral DNA/RNA 96 Kit. A 10-fold dilution series of the recovered RNA was used in a SYBR® Green-based real-time PCR reaction. Each reaction was performed in triplicate.

Serum was separated from a human blood sample containing 1x10<sup>7</sup> Hepatitis B viral particles/μL. A 10-fold dilution series of the serum was performed and 50 μL of each dilution was used in the Mag-Bind® Viral DNA/RNA 96 Kit to isolate viral RNA. 2 μL RNA was used as the template.

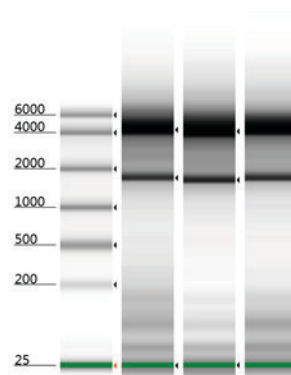
Product Description	Preps	Catalog No.
Mag-Bind® Viral DNA/RNA 96 Kit	1 x 96	M6246-01
	4 x 96	M6246-02
	12 x 96	M6246-03

# Mag-Bind® Total RNA 96 Kit

Isolates high quality total cellular RNA from a variety of cells & tissues

Mag-Bind® Total RNA Kit provides a novel technology for high quality total RNA isolation from a wide variety of cells and tissues. Total RNA can be purified from 5-10 mg of tissue or 1x10<sup>6</sup> cultured cells. The system combines the efficient reversible nucleic acid-Binding properties of Mag-Bind® particles with our RNA buffer chemistry to provide superior quality RNA. Unlike column-based systems, the Binding of nucleic acids to magnetic particles occurs in solution resulting in increased Binding kinetics and Binding efficiency. Particles are also completely re-suspended during the wash steps or the purification protocol, which improves removal of contaminants and increases nucleic acid purity. The Mag-Bind® Total RNA procedure can be fully automated on most robotic workstations.

## RNA Integrity



RIN<sup>e</sup> 9.1 RIN<sup>e</sup> 9.4 RIN<sup>e</sup> 9.3

Total RNA was extracted from 3x10<sup>6</sup> cells using the Mag-Bind® Total RNA Kit and analyzed on Agilent's TapeStation® 2200.

## RNA Yield Comparison

	Tissue (mg)	NanoDrop® (ng/μL)	NanoDrop® Yield (μg)	RIN <sup>e</sup>
Company Q	9	329.7	16.485	7.9
	10	187.8	9.39	8.1
	8.5	198.2	9.91	8.3
	10	416.2	20.81	7.6
Omega Bio-tek	10	348.4	34.84	6.9
	9	329.4	32.94	7.8
	8	263.6	26.36	8
	12	355.7	35.57	7.5

Product Description	Preps	Catalog No.
Mag-Bind® Total RNA96 Kit	1 x 96	M6731-00
	4 x 96	M6731-01
	12 x 96	M6731-02

# Mag-Bind® PX Blood RNA 96 Kit

*Fast & convenient RNA extraction solution for samples stored in PAXgene or Tempus tubes*

The Mag-Bind® PX Blood RNA Kit provides a convenient and fast RNA extraction solution for samples stabilized in PAXgene™ blood RNA tubes or Applied Biosystems' Tempus™ blood RNA tubes. This system combines Mag-Bind® particles and HiBind® silica column technology for purification of total RNA from up to 2.5 mL preserved blood samples.

The blood sample is spun down and the crude RNA/DNA pellet is collected and washed. The pellet is then resuspended and digested with Proteinase K. The lysate is applied to a filter plate to remove genomic DNA. This procedure completely removes inhibitors and sample stabilization reagents to allow for reliable downstream analysis. High quality purified RNA can be used for downstream applications such as qRT-PCR, RT-PCR, and microarray analysis.

Product Description	Preps	Catalog No.
Mag-Bind® PX Blood RNA 96 Kit	1 x 96	M7763-00
	4 x 96	M7763-01
	12 x 96	M7763-02



# Mag-Bind® Plant DNA DS 96 Kit

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



## 96 samples

96 samples can be processed less than 1 hour



## Robust Lysis

Highly diverse plant samples processed with ease



## High-Yielding DNA

Suitable for most downstream applications



## Automatable

Adaptable on most open-ended liquid handlers

Mag-Bind® Plant DNA DS Kit allows rapid and reliable isolation of high quality genomic DNA from plants and other tissues that are particularly difficult to lyse or very high in polysaccharide content. The lysis and Binding buffers are specifically designed to minimize co-purification of polysaccharides and polyphenols. Up to 96 samples of 50 mg wet tissue (or 15 mg dry tissue) can be processed in parallel in less than 1 hour. The system combines CTAB-based lysis, which eliminates the need for organic solvents, with the convenience of Mag-Bind® particles to eliminate polysaccharides, phenolic compounds, and enzyme inhibitors from plant tissue lysates. This kit is designed for manual or fully automated high throughput preparation of genomic, chloroplast, and mitochondrial DNA. Purified DNA is suitable for PCR, restriction digestion, next-generation sequencing, and hybridization applications. There are no organic extractions, thereby reducing consumables and decreasing hands-on time to allow multiple samples to be processed in parallel.

## DNA Yield Comparison from Different Plant Types

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
<b>Average</b>	<b>14.8</b>	<b>94.7</b>

DNA was extracted from approximately 50 mg leaf samples following manufacturer's recommended protocols. DNA concentration was determined via fluorescence-based nucleic acid quantification. DNA quantification confirmed via SYBR® qPCR (data not shown). Amount of DNA per mg of leaf sample is shown above.

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

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