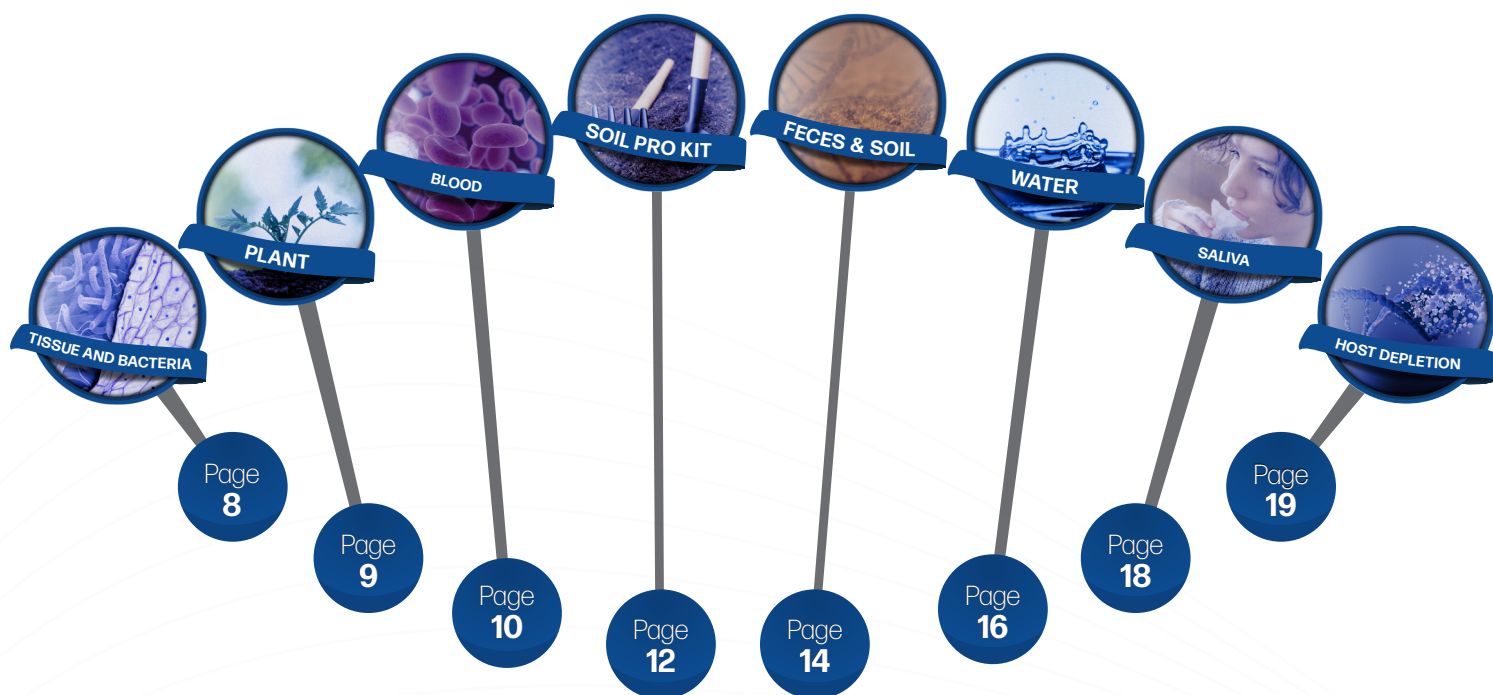


SPINeasy[®] **Extraction/ Purification Kits**

MP BIOMEDICALS

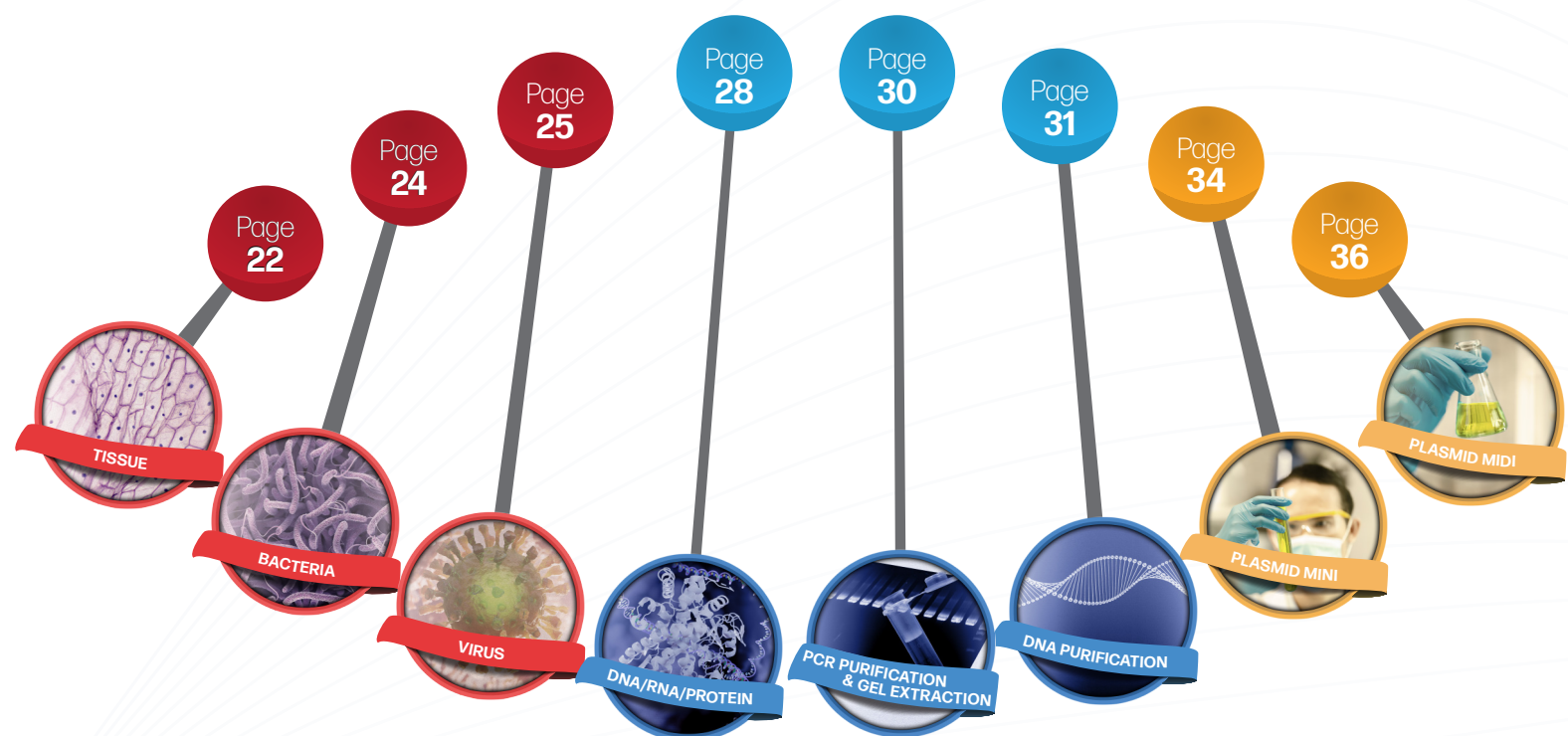
www.mpbio.com

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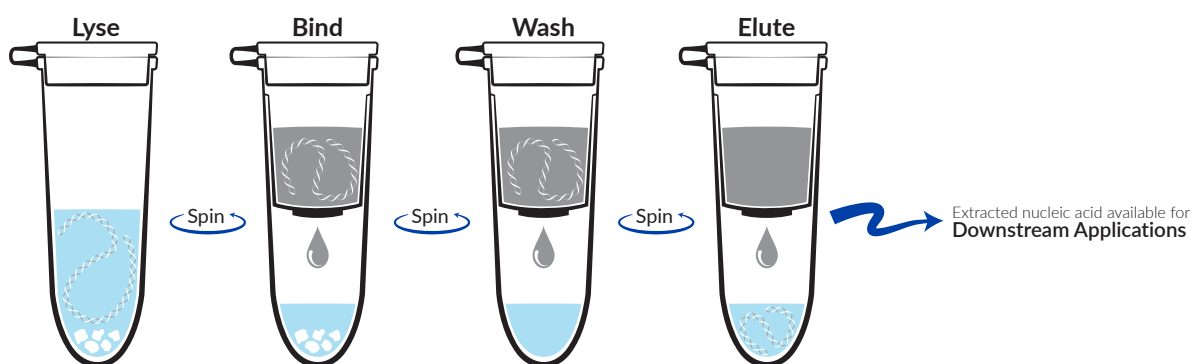
Premium SPINeasy[®] DNA/RNA Extraction/Purification Kits

SPINeasy[®] nucleic acid isolation kits are designed for simple, efficient, and rapid purification of DNA and RNA from wide range of samples. These kits utilize the silica-membrane technology in the form of spin column, eliminating the need for toxic phenol-chloroform extraction or time-consuming alcohol precipitation. Purified nucleic acid is ready to use for downstream applications.

Simple SPINeasy[®] protocol for spin-column based purification

Spin column purification utilize solid-phase extraction method to bind and isolate DNA /RNA within column which contain silica filter membrane. Sample is homogenized and/or lysed using the optimized lysis buffer. Lysate is then mixed with ethanol to precipitate the nucleic acid.

Once the lysate is passed through the silica membrane by centrifugation, the spin column membrane is then washed to remove the remaining protein and salts residual. The nucleic acid is then eluted and ready to use for various downstream applications.



SPINeasy[®] purification protocol. Four simple steps purification procedure to purify nucleic acid from sample using spin-column method.

NUCLEIC ACID EXTRACTION METHODS

Method	Spin Column	Magnetic Beads
Series	SPINeasy®	MagBeads
Technology	Spin column and reagents are utilized for nucleic acid purification via centrifugation method	Magnetic beads and reagents are utilized for nucleic acid purification
Technique	Sample is pre-treated and homogenized prior to loading into spin column. The column is washed, and the extracted DNA/RNA is eluted off from the column via centrifugation or vacuum manifold.	Sample is pre-treated and homogenized prior to mixing with magnetic beads. The magnetic beads are then washed, and the extracted DNA/RNA is dissociated from the beads.
Purity	High	High
Throughput	Low-medium	Medium-high
Advantage	<ul style="list-style-type: none"> • Fast and simple procedure • Ready to use kit format for improved convenience • Flexible for use with both centrifugation or vacuum based systems for higher throughput 	<ul style="list-style-type: none"> • High throughput • No risk of column clogging • High yield and efficiency • Automatable on MPure aNAP systems
Recommended For	Most nucleic acid extraction	Medium to high throughput sample processing

SPINeasy[®]

Genomic DNA
Extraction Kit

Sample Type Kit Guide for SPINeasy®

Genomic DNA Extraction Kit

Sample Type	Tissue & Bacteria	Plant	Blood	Pro Kit for Soil	Feces/Soil	Water	Saliva	Host Depletion Microbial DNA Kit
Animal Tissue	✓							
Body Fluids							✓	✓
Buccal swab	✓							✓
Cultured Cells	✓		○					
Fixed Tissue	✓							
Paraffin block	✓							
Gram (-) bacteria	✓			✓	✓			
Gram (+) bacteria	✓			✓	✓			
Yeast				✓	✓			
Lichen		✓						
Insect	✓							
Mammalian whole blood	✓		✓	✓				
Plasma			✓					
Serum			✓					
Fungi				✓	✓			
Plant cells		✓						
Plant tissue		✓						
Rice		✓						
Rodent tails	✓							
Saliva				○	○		✓	✓
General Soil				✓				
High Biomass soil				✓	✓			
Low Biomass Soil				✓				
Urine			○	✓	✓			
Stool					✓			
Seawater				○	○	✓		
Fresh Water				○	○	✓		
Wastewater				○	○	✓		
Pond water				○	○	✓		
River water				○	○	✓		

✓ Recommended

○ Recommended with Additional Optimization Step

SPINEASY® DNA KIT FOR TISSUE AND BACTERIA (With / Without Lysing Matrix)

The SPINEasy® DNA Kit for Tissue and Bacteria quickly and efficiently isolates genomic DNA from almost any sample (animal tissues, cultured cells, bacteria, insect, etc). The samples can be processed by the FastPrep-24 with Lysing Matrix A tubes.

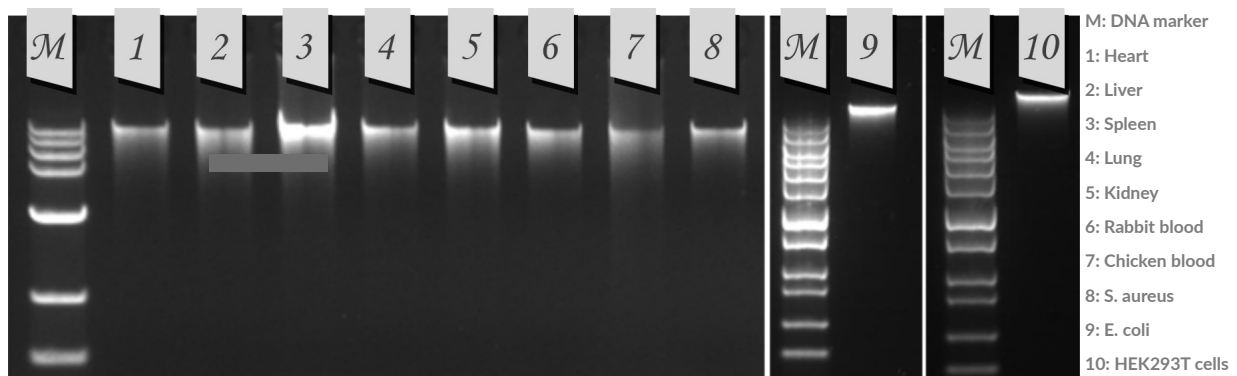
The SPINEasy® DNA kit supplies you with Lysing Matrix A tubes, all necessary buffers for the homogenization of a wide variety of sample types. The released DNA is purified by a silica column-based method, and is ready for enzyme digestion, electrophoresis, PCR and any other desired application.



Features

- Isolate genomic DNA from animal tissues, cells, blood, bacteria, yeast, algae, and fungi cells
- Comes with **Lysing Matrix A** tubes for rapid sample lysis
- Silica spin column method for extraction process
- **High yields** of pure gDNA which is suitable for downstream applications

Extraction Results



gDNA extracted from various samples using SPINEasy® DNA Kit for Tissue and Bacteria, analyzed using agarose gel electrophoresis.

Product Information

Description	Size	Cat.No.
SPINEasy® DNA Kit for Tissue and Bacteria (With Lysing Matrix)	50 preps	116532050
	5 preps	116532005
SPINEasy® DNA Kit for Tissue and Bacteria (Without Lysing Matrix)	50 preps	116533050
	5 preps	116533000

SPINEASY® DNA KIT FOR PLANT

The SPINEasy® DNA Kit for Plant is designed to isolate high quality genomic DNA from a variety of plant samples including leaves, stems, buds, fruits, seeds, etc. The samples are lysed with beads beating method which is rapid and efficient.

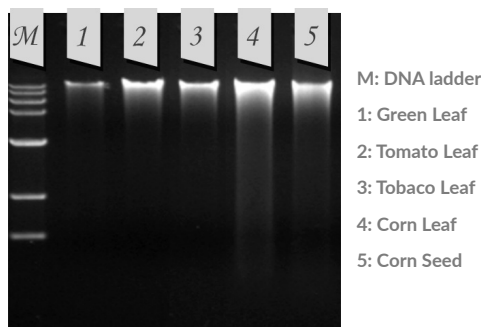
The superior technology can remove polysaccharides, lipids and polyphenols from the DNA, which is then ready for enzyme digestion, electrophoresis, PCR and any other desired application.



Features

- Isolate genomic DNA from various plant samples
- Comes with **Lysing Matrix A** tubes for thorough sample lysis
- Superior inhibitor removal
- **High concentrations** of pure gDNA which is suitable for downstream applications
- No hazardous chemicals, no ethanol precipitation

Extraction Results



MP Biomedicals SPINEasy® DNA Kit for Plant isolated genomic DNA with high yield and purity, as shown by the intact bands on gel electrophoresis

Product Information

Description	Size	Cat.No.
SPINEasy® DNA Kit for Plant	50 preps	116535050
	5 preps	116535005

SPINEASY® DNA KIT FOR BLOOD

SPINEasy® DNA Kit for Blood is a high-performance genomic DNA (gDNA) extraction kit which is based on silica-membrane spin-column technology.

This kit enables quick isolation of gDNA from whole blood preserved in different anticoagulants (EDTA, Heparin, and sodium citrate), typically in less than 30 minutes. It also allows easy gDNA isolation from other samples, including plasma, serum, saliva, and cell culture medium. The use of our specially formulated Lysis Buffer BL omits the need of homogenization and enables efficient lysis of various samples.



Features

- Rapid and efficient DNA isolation in **less than 30 minutes**
- **Fresh, frozen, or anticoagulated blood**
- Simple and effective lysis protocol using **Lysis Buffer BL** and Proteinase K to omit the need of any mechanical lysis
- No organic extraction
- **High purity DNA ready to be used** for downstream application

Performance

SPINeasy® DNA Kit for Blood has been tested on various sample types for its performance. The following data demonstrate the gDNA yields obtained from various sample sources. Results showed that all extracted gDNA are of high yield and purity (Table and Figure below) which is suitable for downstream PCR amplification.

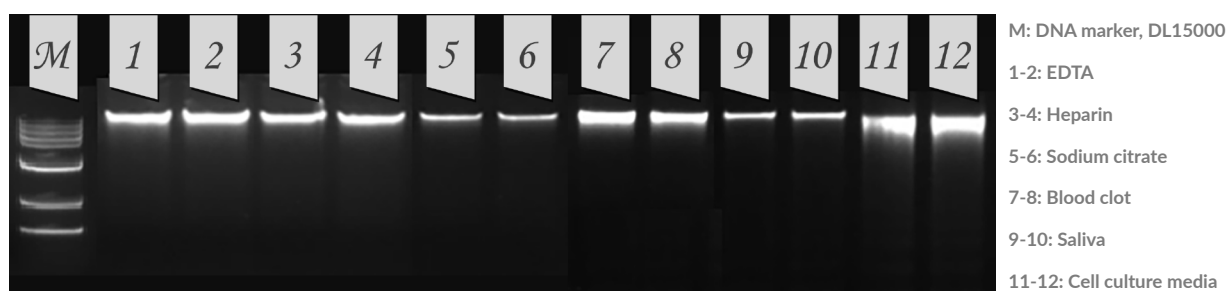
Samples	Sample Volume	Yield (ng/ μ L sample)	A (260/280)	A (260/230)
Human Blood (EDTA)	200 μ L	28.38	1.87	2.32
Human Blood (Heparin)	200 μ L	29.78	1.93	2.49
Human Blood (Citrate)	200 μ L	16.16	1.90	2.54
Blood Clot*	0.15 g	43.64	1.90	2.18
Saliva**	200 μ L	16.48	1.93	3.62
Cell Culture Media	200 μ L	32.83	1.87	2.86

Quality and quantity of gDNA extracted from various sample types using SPINeasy® DNA kit for Blood.

*Sample processed using homogenization method via Fastprep-24™ 5G with lysing matrix.

**Sample preserved in preservation buffer (SPS, provided in SPINeasy DNA Kit for Saliva).

Extraction Results



gDNA extracted from various sample using SPINeasy® DNA Kit for Blood. The purified DNA was analyzed on 1% agarose gel electrophoresis.

Product Information

Description	Size	Cat.No.
SPINeasy® DNA Kit for Blood	50 preps	116552050
	5 preps	116552000

SPINEASY® DNA PRO KIT FOR SOIL

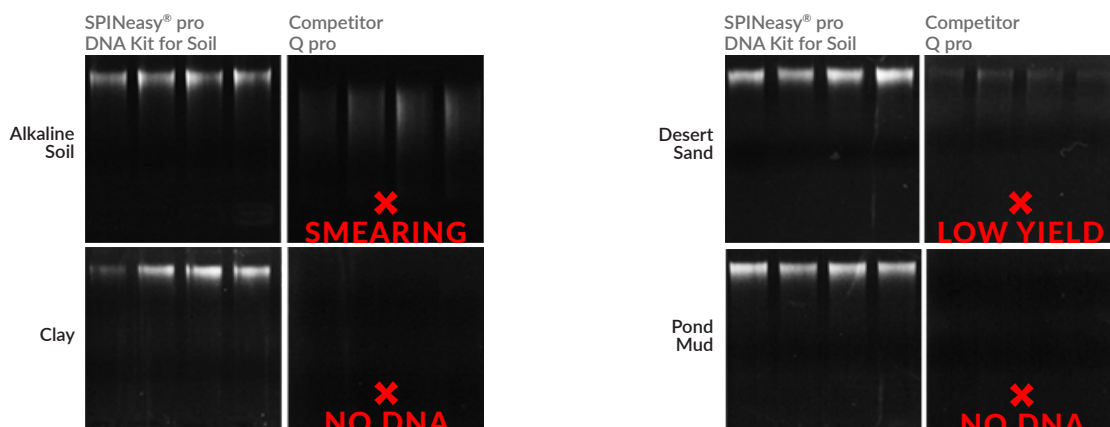
Soil samples are complex environments characterized by the presence of inhibitory compounds, such as humic acid, heavy metals, and other aromatic components which may prove to be challenging for downstream analyses. The SPINEasy® DNA Pro Kit for Soil has been carefully designed for the isolation of pure microbiome genomic DNA from challenging soil types including those with low biomass or those highly contaminated. The SPINEasy® DNA Pro Kit for Soil effectively lyses various microbiome population, including bacteria, fungi, viruses, and protists. The kit provides similar yields to that of our highly cited FastDNA™ SPIN Kit, but with improved purity and reduced processing time. Isolated DNA products showed no inhibition in PCR and were immediately ready to be used in downstream applications, including long fragment PCR, qPCR, and next-generation sequencing (16S and whole genome) without the need of further inhibitor removal step.



Features

- Effective isolation of high quality genomic DNA from high biomass and **low biomass sample**
- **Unbiased** alpha diversity results
- **Higher purity** and shorter processing time
- Compatible with **vacuum manifold**

Extraction Performance



DNA extraction performed on 250 mg of low biomass soil samples using SPINEasy® DNA Pro kit and competitor Q Pro kit following manufacturer instruction.

SPINEASY® DNA KIT FOR FECES / SOIL

SPINEasy® DNA Kit for Feces/Soil is formulated to isolate high-quality DNA from both feces and soil samples regardless of their sample complexity. Samples are optimally homogenized by bead beating method using the new Lysing Matrix YB and lysis Buffer SF1. Subsequent treatment with Buffer SF2 effectively removes humic acid and other contaminants. The chemistry included in Buffer SF3 enables the specific binding of DNA without co-purification of RNA, eliminating the need for RNase A treatment.

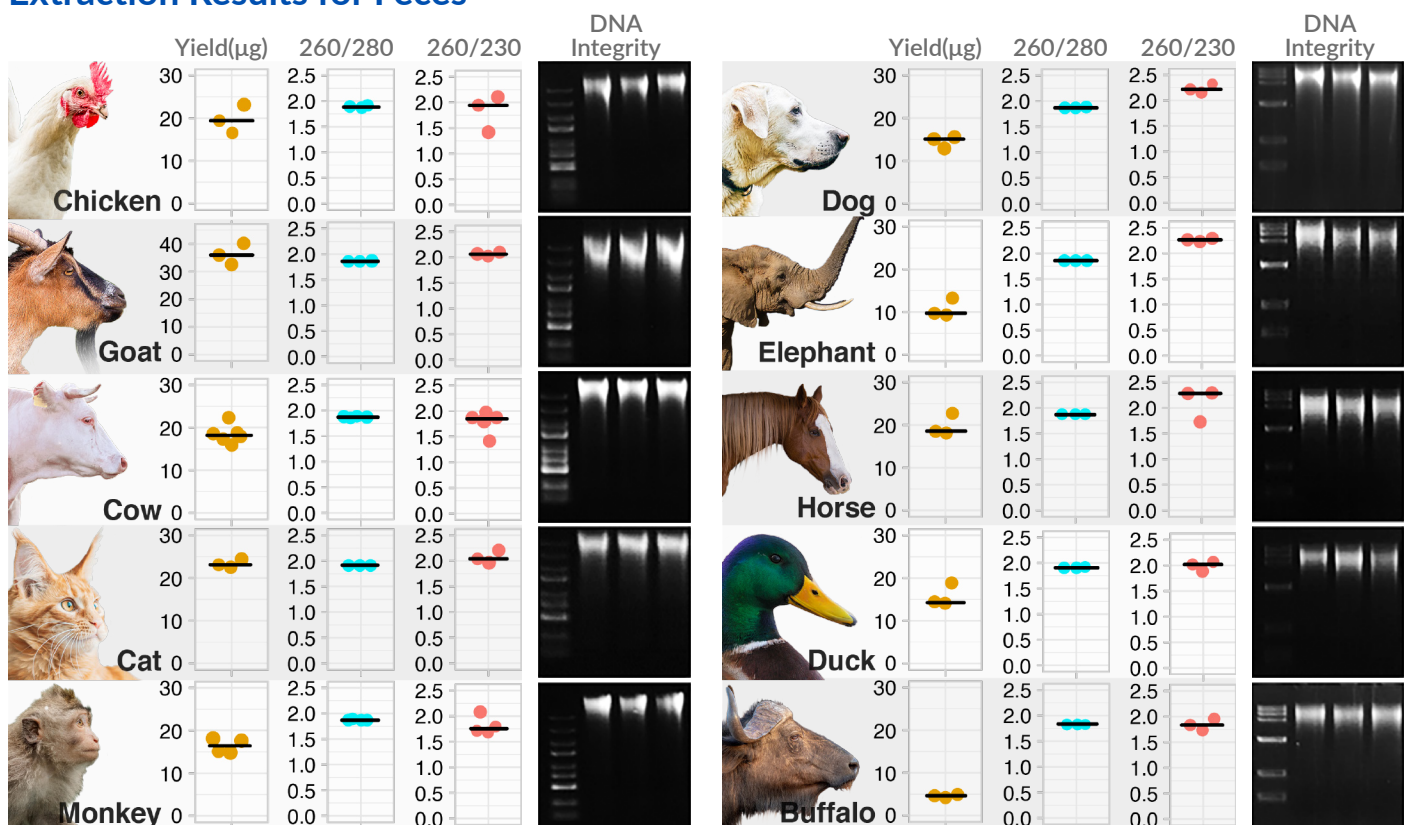
DNA obtained from heavily contaminated soil samples showed no inhibition in PCR and was immediately ready to be used for downstream applications, including long fragment PCR, qPCR, and next-generation sequencing (16S and whole genome) without the need for a further inhibitor removal step.



Features

- Rapid and effective isolation of inhibitor free high-quality DNA from feces and soil samples in minutes
- Optimized Buffer SF3 enables the specific binding of DNA without co-purification of RNA
- New Lysing Matrix YB for effective homogenization

Extraction Results for Feces

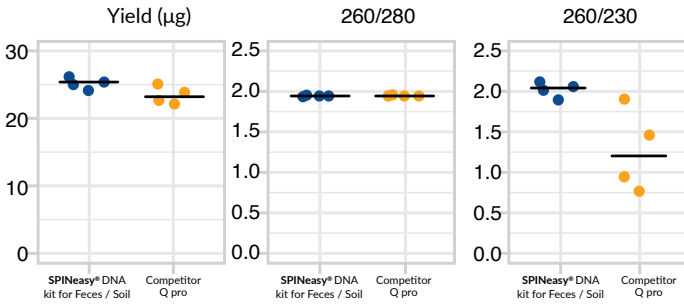


The SPINEasy® for Feces / Soil kit provides high-quality DNA from various fecal samples.

Extraction Results for Soil

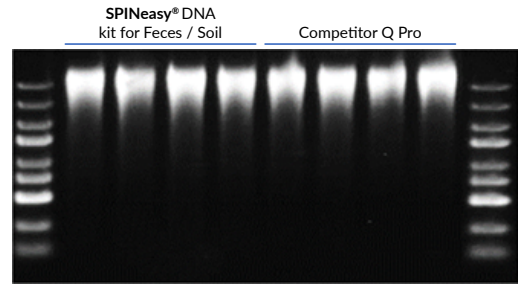
DNA Quality

Spectrophotometer



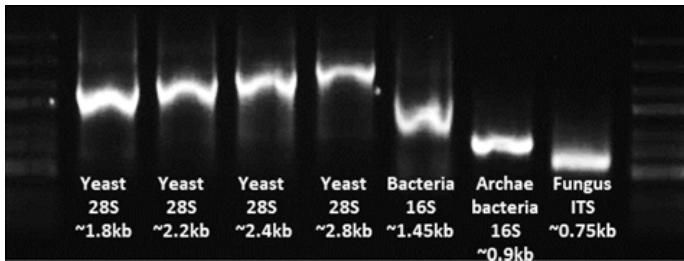
DNA yield, purity (A260/280 and A260/230 ratio) and integrity were assessed using spectrophotometer in quadruplicate and DNA gel, respectively. Each dot of the plot represents a single extraction. The horizontal bars indicate the median value.

DNA Gel

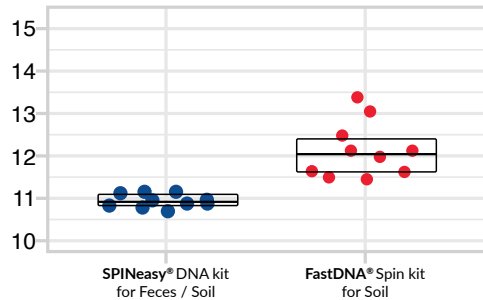


Amplifiability

End Point PCR



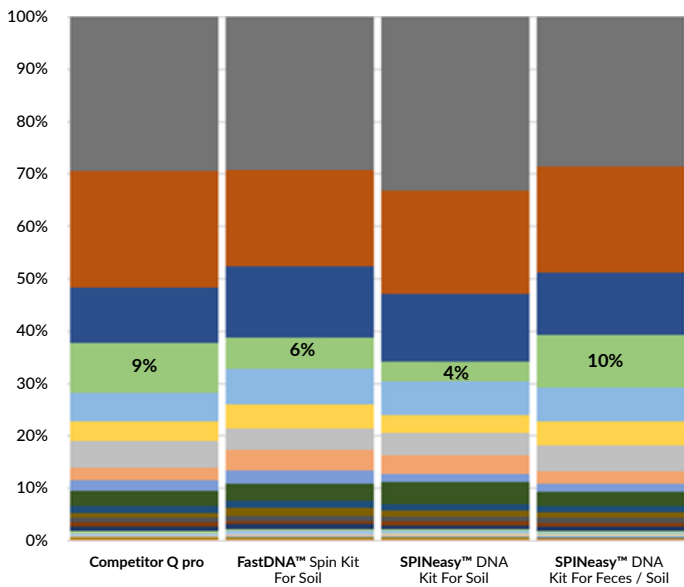
Quantitative PCR



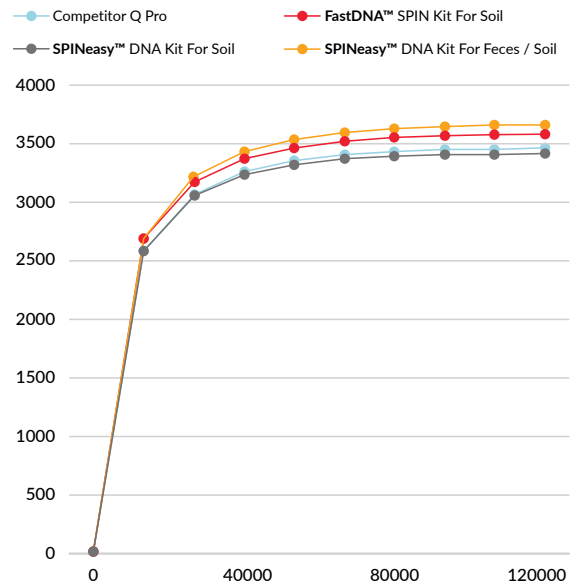
DNA obtained from soil are more prone to inhibitor contamination. The absence of inhibitor in soil samples obtained using SPINeasys DNA Kit for Feces / Soil kit was confirmed using inhibitor-sensitive PCR and undiluted sample as well as quantitative PCR.

16S Microbial Analyses

Relative Abundance of Bacterial Species



Diversity



The hypervariable region V4 of the bacterial 16S rRNA gene was amplified using DNA extracted using the 4 extraction kits described in the legend. Sequences were obtained using a NovaSeq PE250 platform and analyzed using the Qiime 2 pipeline. The relative abundance of bacterial species compiled from 4 technical replicates is shown on the left. The percentage indicate the average proportion of gram positive firmicutes (green) found in DNA samples derived from the same soil sample. The rarefaction curves corresponding to each method are depicted on the right. The alpha diversity was measured by the number of operational taxonomic units (OTUs) identified (vertical axis) following the sequencing depth (horizontal axis).

Product Information

Description	Size	Cat.No.
SPINeasys [®] DNA Kit for Feces / Soil	50 preps	116547050
	5 preps	116547000

SPINEASY® DNA KIT FOR WATER

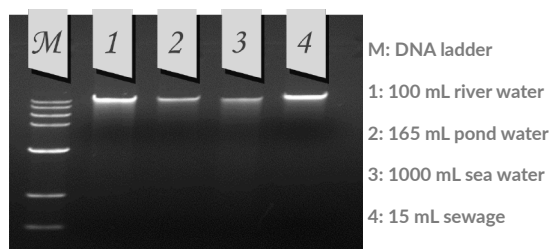
SPINeasy® DNA Kit for Water is specially designed to achieve quick isolation of genomic DNA from various types of water samples. The kit employs silica-membrane spin-column technology to effectively bind DNA. The resulting high-quality DNA can be used for downstream analyses. The kit is supplied with 5ml lysing matrix and a sterile 0.22 µm filter membrane.



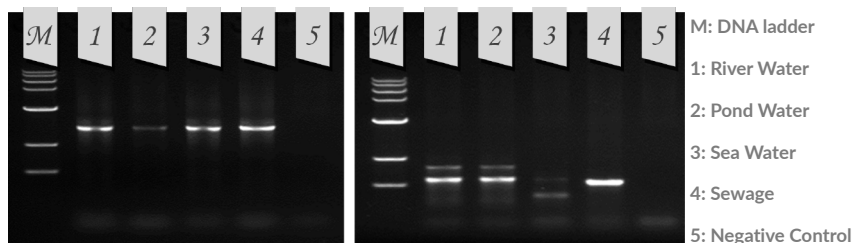
Features

- Proprietary removal buffers significantly **improve the purity** of extracted DNA
- **Rapid** lysis of microorganisms yields **high concentrations** of pure DNA
- Suitable for various types of water samples
- The extraction process **does not require** phenol, chloroform or other toxic reagents

Extraction Results



gDNA extracted from different types of water samples using SPINeasy® DNA Kit for Water, analyzed using 1 % agarose gel electrophoresed at 70 V for 30 min



16S- PCR (left) & ITS-PCR (right) amplification of gene from different types of water samples using SPINeasy® DNA Kit for Water

Water Samples	Sample Volume (mL)	Yield (ng/ μ L sample)	A (260/280)	A (260/230)
River Water	100	46.22	1.88	1.90
Pond Water	165	19.85	1.86	2.32
Sea Water	1000	28.39	1.92	2.00
Sewage	15	120.32	1.83	1.65

Product Information

Description	Size	Cat.No.
SPINeasy® DNA Kit for Water	50 preps	116536050
	5 preps	116536000

SPINEASY® DNA KIT FOR SALIVA

The use of saliva as a source of DNA over blood samples has become an attractive approach for various applications ranging from genetic studies to pathogen detection. Unlike blood sampling, saliva collection is an easy, painless, and non-invasive method which does not require trained personnel for the collection process. In addition, saliva does not clot, and it is safe to be handled as there is lower risk of pathogen transmission as compared to other bio-fluid samples. However, storing saliva samples can be problematic. The **SPINEasy® DNA Kit for Saliva** from MP Biomedicals makes saliva sampling easier using our specially formulated Saliva Preservation Solution (SPS) to preserve the sample at room temperature without compromising the quality. SPINEasy® DNA Kit for Saliva allows DNA from fresh, frozen, or SPS-preserved saliva to be extracted with a quick and easy protocol, using silica spin-column technology. Purified DNA is recovered with high yield and purity, suitable for various downstream molecular applications.

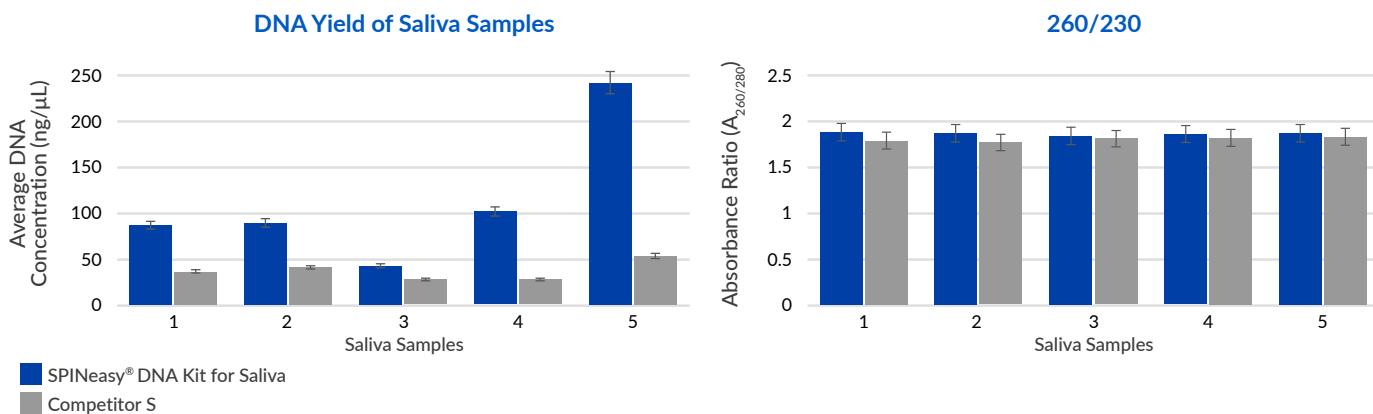


Features

- **Specially formulated saliva preservative solution** to store saliva samples at room temperature for a prolonged period
- Simple and effective extraction protocol with **high DNA yield and purity**
- Isolate gDNA from **25 – 500 µL** of saliva with simple procedures
- **Purified DNA is ready to be used** for downstream application

Extraction Result

SPINEasy® DNA Kit for Saliva has been optimized to offer superior performance over the competitors' kits in both yield and purity, with minimal demand for the amount of sample.



Average DNA yields of saliva samples from five donors. Genomic DNA isolated using SPINEasy® DNA Kit for Saliva and comparable kit from Competitor S following manufacturer's recommended protocols. Purified DNA was quantified using spectrophotometer.

Product Information

Description	Size	Cat.No.
SPINEasy® DNA Kit for Saliva	50 preps	116551050
	5 preps	116551000

SPINEASY® HOST DEPLETION MICROBIAL DNA KIT

Host DNA contamination impedes the molecular analyses of microbiomes in host samples, such as bodily fluids and swabs.

The SPINeasy® Host Depletion Microbial DNA Kit provides an easy-to-use workflow to isolate microbial DNA from samples containing high amounts of host DNA. This background reduction of host DNA is achieved through selective lysis of host cells with our specially formulated Host Lysis Buffer. Microbial DNA is purified using a convenient silica-membrane spin-column technology workflow and ready for downstream molecular applications.

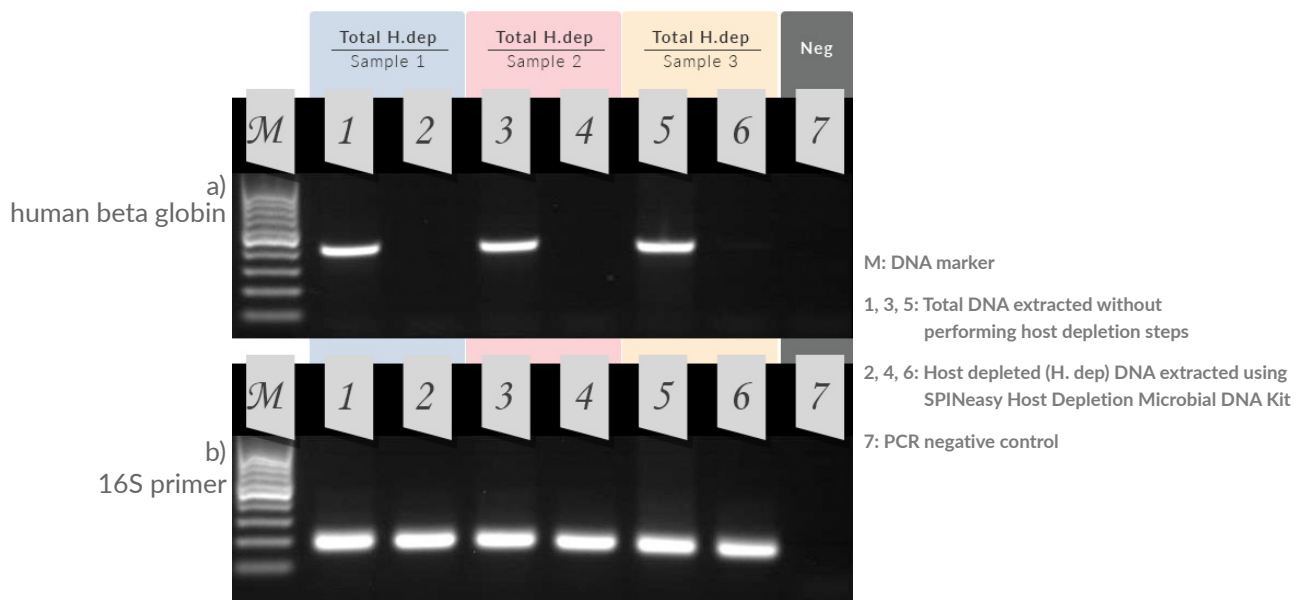


Features

- Effectively depletes host DNA
- Isolation of Microbial DNA from **bodily fluids and swab**
- Silica-membrane **spin-column technology**
- **Optimized lysis workflow** with Host Lysis Buffer

Extraction Results

SPINeasy Host Depletion Microbial DNA Kit demonstrates effective host DNA depletion with >90% recovery of microbial DNA.



Gel electrophoresis of PCR amplification with DNA extracted from three saliva samples using SPINeasy Host Depletion Microbial DNA Kit. a) PCR detection of host DNA using human β -globin primers. b) PCR detection of bacterial DNA using 16S primers.

Product Information

Description	Size	Cat.No.
SPINeasy® Host Depletion Microbial DNA kit	50 preps	116545050
	5 preps	116545000

SPINeasy[®]

RNA Extraction Kit

Sample Type Kit Guide for SPINeasy®

RNA Extraction Kit

Sample Type	Tissue	Bacteria	Virus RNA Kit
Animal Tissue	✓		
Body Fluids			✓
Cultured Cells	✓		✓
Fixed Tissue	○		
Paraffin block	○		
Gram (-) bacteria		✓	
Gram (+) bacteria		✓	
Yeast	✓	✓	
Serum			✓
Fungi	✓	✓	
Plant tissue	✓		
Saliva			✓

✓ Recommended

○ Recommended with Additional Optimization Step

SPINEASY® RNA KIT FOR TISSUE (With / Without Lysing Matrix)

The SPINEasy® RNA Kit for Tissue is a silica-membrane spin-column kit that enables quick and convenient purification of total RNA from various animal tissues, plant tissues and tissue cultures. The use of our specially formulated Lysis Buffer R and Lysing Matrix A in combination with FastPrep® instruments from MP Biomedicals enables highly efficient lysis of tissue samples within seconds.

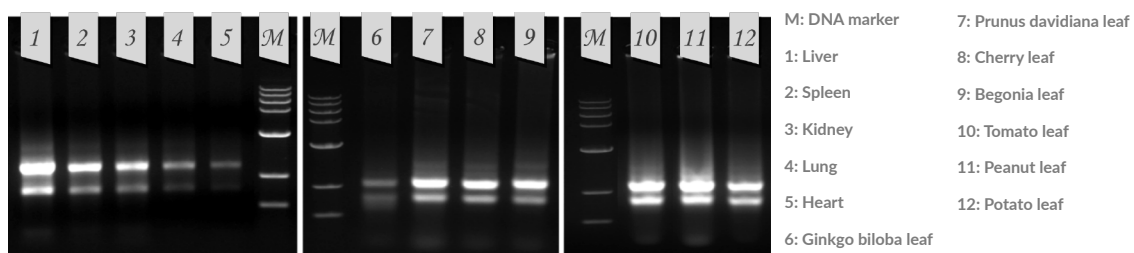
With a simple workflow, the kit allows multiple samples to be processed simultaneously, without the use of toxic substances such as phenol and chloroform. Purified RNA is of high quality and integrity and immediately ready for RT-PCR and other downstream applications.



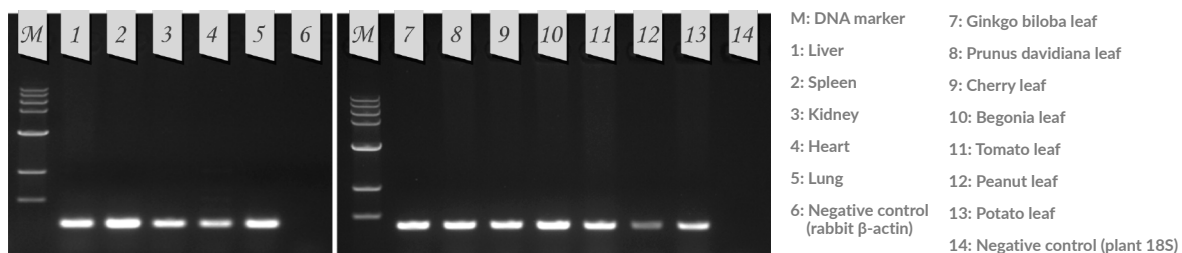
Features

- Rapidly and efficiently isolate RNA from a variety of samples
- Comes with Lysing Matrix A tubes for thorough sample lysis
- No phenol/chloroform
- Silica spin column method for extraction process
- Highly purified RNA for better downstream RT-PCR results

Extraction Results



RNA extracted from various samples using SPINeasy® RNA Kit for Tissue, analyzed using agarose gel electrophoresis



RT-PCR amplification of RNA extracted from various samples using SPINeasy® RNA Kit for Tissue

Product Information

Description	Size	Cat.No.
SPINeasy® RNA Kit for Tissues (With Lysing Matrix)	50 preps	116543050
	5 preps	116543000
SPINeasy® RNA Kit for Tissues (Without Lysing Matrix)	50 preps	116542050

SPINEASY® RNA KIT FOR BACTERIA

The SPINEasy® RNA Kit for Bacteria is a silica-membrane spin-column kit that enables quick and convenient purification of total RNA from gram-positive and gram-negative bacteria. Included in the kit is our specially formulated RNASS solution that stabilizes and protects RNA in bacteria samples.

The use of Lysis Buffer R and Lysing Matrix B in combination with FastPrep® instruments from MP Biomedicals enables highly efficient lysis of bacterial samples within seconds. With a simple workflow, the kit allows multiple samples to be processed simultaneously, without the use of toxic substances such as phenol and chloroform.

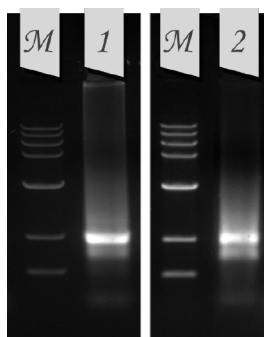
Total RNA of high quality and integrity can be typically obtained within 40 minutes and is immediately available for RT-PCR and other downstream applications.



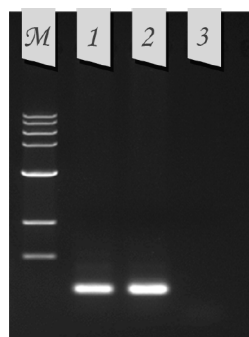
Features

- Rapidly and efficiently isolate RNA from a variety of samples
- Comes with Lysing Matrix B tubes for thorough sample lysis
- No phenol/chloroform
- Silica spin column method for extraction process
- Highly purified RNA for better downstream RT-PCR results

Extraction Results



M: DNA marker
1: *E. coli*
2: *S. aureus*



M: DNA marker
1: *E. coli*
2: *S. aureus*
3: Negative Control

Agarose gel electrophoresis demonstrates integrity of total RNA (Left) and RT-PCR performance (Right) of bacterial RNA samples extracted using SPINEasy® RNA Kit for Bacteria

Product Information

Description	Size	Cat.No.
SPINEasy® RNA Kit for Bacteria	50 preps	116541050
	5 preps	116541000

SPINEASY® VIRUS RNA KIT

SPINeasy® Virus RNA Kit is a silica-membrane spin-column kit that enables quick and convenient extraction of virus RNA from cell culture media and bodily fluids such as saliva and serum.

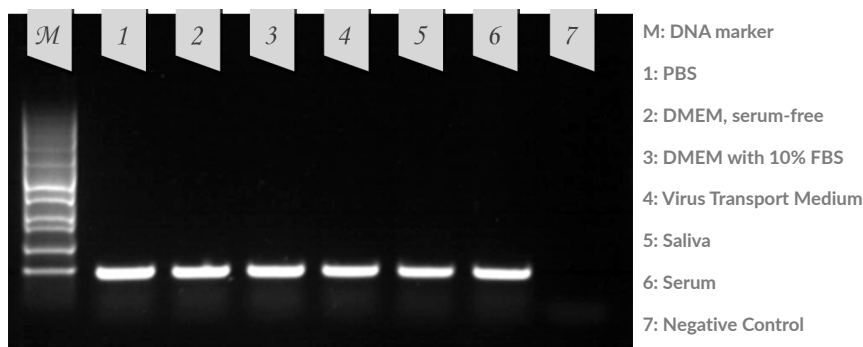
Through a simple workflow, virus RNA is typically extracted within 20 minutes and is immediately available for downstream applications such as RT-PCR and RT-qPCR.



Features

- Quick and convenient extraction of virus RNA from cell culture media and bodily fluids
- Efficient extraction of virus RNA within 20 minutes
- Silica spin column method for extraction process
- Without hazardous component

Extraction Results



RT-PCR amplification of a viral-specific gene from RNA extracted from the indicated samples spiked with Influenza B virus, using SPINeasy Virus RNA Kit

Product Information

Description	Size	Cat.No.
SPINeasy® Virus RNA Kit	50 preps	116537050
	5 preps	116537000

The background is a solid blue color with several large, semi-transparent, overlapping circles of varying shades of blue. The text is white and positioned in the lower-left quadrant.

SPINeasy[®]

Clean-Up/
Co-Purification Kit

Clean-Up

SPINeasy® clean-up series provides fast and reliable methods for purification of DNA fragments. Central to our clean-up products is the total removal of salts and ethanol from samples using uniquely designed spin columns that ensure complete elution of DNA without carryover contaminants. DNA clean-up technologies assure the purification of high-quality DNA using the specially formulated buffer to effectively remove enzymatic inhibitors.

SPINeasy® PCR Purification and Gel Extraction Kit is a combo kit which utilizes the advantage of silica membrane to recover up to 23 µg of DNA with molecular weight ranging from 100 bp to 20 kb from most grades of agarose gel with expected recovery of 85%.

SPINeasy® DNA Purification Kit is used to remove inhibitory compounds, so as to effectively recover ready-to-amplify DNA from contaminated inputs in less than 10 minutes with typical recoveries of >80%.

Specification	SPINeasy® PCR Purification and Gel Extraction Kit	SPINeasy® DNA Purification Kit
Format	Spin column	Spin-column / Vacuum
Recommended sample type	Gel, PCR product	Previously isolated DNA
Fragment DNA Size	100 bp – 20 kb	>200 bp
Removes	Primers, nucleotides, enzymes, salts, agarose, EtBr, etc.	Humic acids, heme, polysaccharides, polyphenols, flavic acids, lipids, and dyes from samples
Recovery Rate	>85%	>80%
APPLICATION	PCR Cleanup	✓
	Gel Extraction	✓
	Humic Acid Removal	✓

Co-Purification

SPINeasy® co-purification series provides a convenient method for simultaneous isolation of nucleic acid from single sample of tissue or cultured cells, minimizing the variation inherent in preparing these eluents from different samples.

Specification	SPINeasy® DNA/RNA/Protein All-in-One Kit
Format	Spin column
Recommended sample amount	up to 30 mg tissue or 1 x 10e6 cells
Purified product	Total DNA, total RNA, and western-grade proteins
Fragment DNA Size	100 bp – 20 kb
Processing Time	45 min (RNA and DNA), 35 min (protein)
Desired yield	Depends on sample type
Application	PCR, real-time PCR, Northern, Western and Southern Blotting, Microarray

SPINEASY® DNA/RNA/PROTEIN ALL-IN-ONE KIT

The SPINEasy® DNA/RNA/Protein All-In-One Kit utilizes a convenient workflow and silica-membrane spin-columns to isolate DNA, RNA and protein components from the same sample, without the use of toxic substances such as phenol and chloroform.

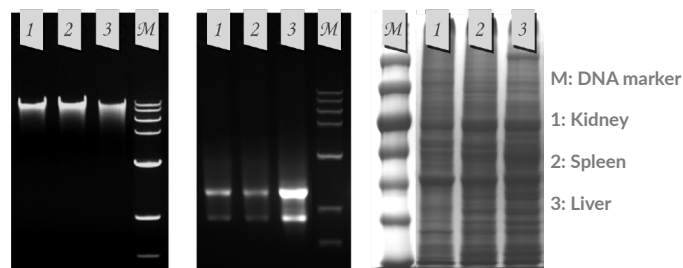
The use of our specially formulated Lysis Buffer R and Lysing Matrix A in combination with FastPrep® Instruments from MP Biomedicals enables highly efficient lysis of tissue samples within seconds. DNA, RNA and proteins are then sequentially purified from the same lysate. Each molecular component is immediately available for their respective downstream applications.



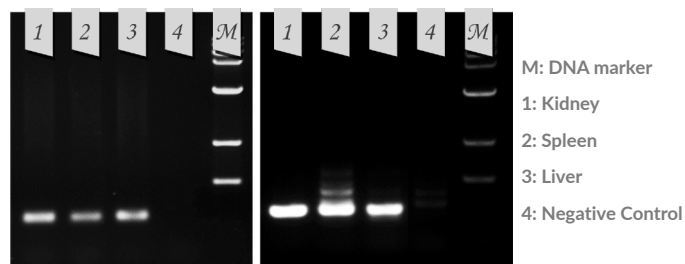
Features

- Rapidly and efficiently isolate DNA/RNA/Protein from a single sample
- Comes with Lysing Matrix A tubes for thorough sample lysis
- No phenol/chloroform
- Silica spin column method for extraction process
- Highly purified DNA/RNA/Protein for better downstream applications

Extraction Results



DNA (left); RNA (center); Protein (right) extracted from each animal tissue using SPINeasy® DNA/RNA/Protein All-In-One Kit



PCR amplification of DNA (left) and RT-PCR amplification of RNA (right) extracted from various samples using SPINeasy® DNA/RNA/Protein All-In-One Kit

Product Information

Description	Size	Cat.No.
SPINeasy® DNA/RNA/ Protein All-In-One Kit	50 preps	116544050
	5 preps	116544000

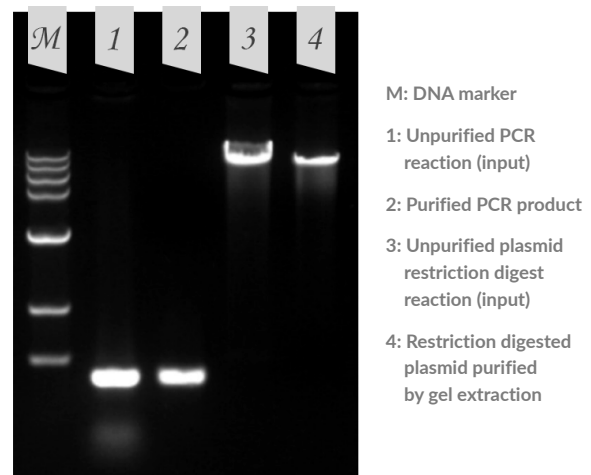
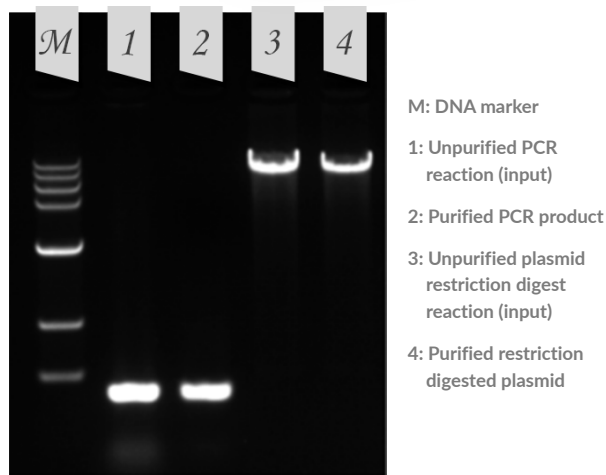
SPINEASY® PCR PURIFICATION AND GEL EXTRACTION KIT

The SPINEasy® PCR Purification and Gel Extraction Kit is a silica-membrane spin-column kit that enables quick and convenient DNA clean up from various enzymatic reactions, such as PCR and restriction digestion, as well as isolation and purification of DNA fragments from agarose gel electrophoresis.

Up to 23 µg of DNA of molecular weight ranging from 100 bp to 20 kb can be purified through a quick and simple process. Purified DNA is immediately ready for routine molecular biology laboratory applications.



Extraction Results



Agarose gel electrophoresis of PCR-purified DNA (left) and gel extracted-DNA (right) using SPINEasy® PCR Purification and Gel Extraction Kit

Product Information

Description	Size	Cat.No.
SPINEasy® PCR Purification and Gel Extraction Kit	50 preps	116538050
	5 preps	116538000

SPINEASY® DNA PURIFICATION KIT

Humic acids, heavy metals, heme are the most notorious PCR inhibitors. This could be due to non-optimized DNA purification procedures which often co-purify inhibitors and lead to false negative results on downstream applications.

The SPINEasy® DNA Purification Kit is formulated to effectively remove contaminants on pre-purified DNA samples using the novel and proprietary humic acid removal technology. It can recover high quality DNA for all downstream applications.

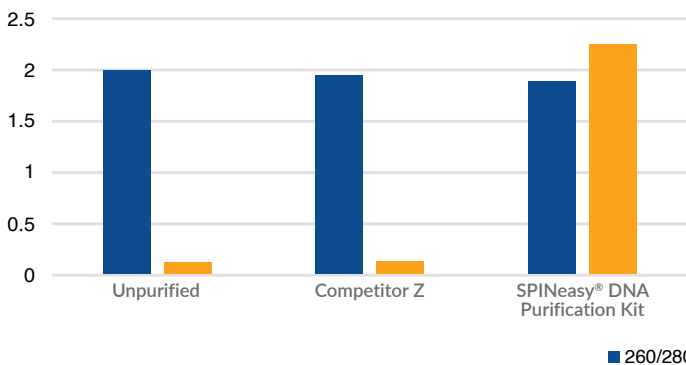


Features

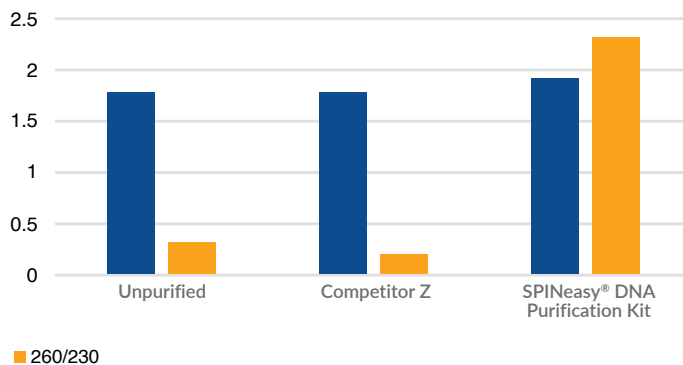
- Fast: Efficient clean-up of highly contaminated pre-purified DNA samples
- Clean: Effective removal of inhibitory compound
- Buffer P1 and P1HA suitable for sample with various degree of contamination

Extraction Results

Chemical Contamination



Chemical and Protein Contamination



SPINEasy® DNA Purification Kit improves A260/280 and A260/230 ratios of sample contaminated with chemicals (SDS, chaotropic salts, solvents, humic acid) or both chemicals and proteins

Product Information

Description	Size	Cat.No.
SPINEasy® DNA Purification Kit	50 preps	116548050
	5 preps	116548000

SPINeasy[®]

Plasmid DNA
Extraction Kit

Plasmid DNA purification is an essential step in various procedures, including DNA sequencing, cloning, in vitro translation, etc.

Our SPINeasy® Plasmid DNA Kit is designed for isolating small or medium scale of plasmid DNA from E. coli cultures following the modified alkaline lysis procedure. This is followed by neutralization step to re-nature the hydrogen bonding between bases of ssDNA to form dsDNA. Unwanted impurities will be precipitated through hydrophobic interaction and easily separated from plasmid DNA solution by centrifugation. Plasmid DNA is then eluted and ready for downstream application.

Specification	SPINeasy® Plasmid Miniprep Kit	SPINeasy® Plasmid Midiprep Kit	
Scale	Mini	Midi	
Recommended sample volume	1-5 mL LB culture	25-50 mL LB culture	
Processing time	25 min	60 min	
Desired Yield*	20 µg	1 mg	
APPLICATION	<i>In vitro</i> Transcription	✓	✓
	Cloning	✓	✓
	Next Generation Sequencing	✓	✓
	PCR	✓	✓
	Restriction Digestion	✓	✓
	Transformation	✓	✓
	Endotoxin free	—	—

* Actual yield depends on the culture volume, culture media, copy number of plasmid, host strain, and size of insert.

SPINEASY® PLASMID MINIPREP KIT

SPINEasy® Plasmid Miniprep Kit is a silica-membrane spin-column kit that enables up to 20 µg of high-quality plasmid DNA to be purified from 1-5 mL of transformed bacterial culture in 25 minutes.

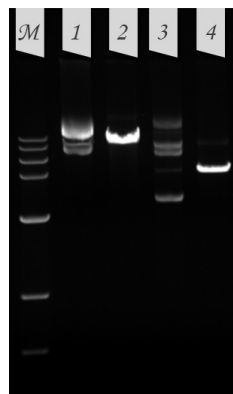
This kit uses modified alkaline lysis method to lyse the cells and separate gDNA from plasmid DNA. High purity plasmid DNA can be obtained through a simple purification process and is immediately ready for routine molecular biology laboratory applications.



Features

- 25 minutes processing time
- **High-quality** plasmid DNA suitable for variety of downstream applications including transfection and sequencing
- **No phenol-chloroform** extraction

Extraction Results

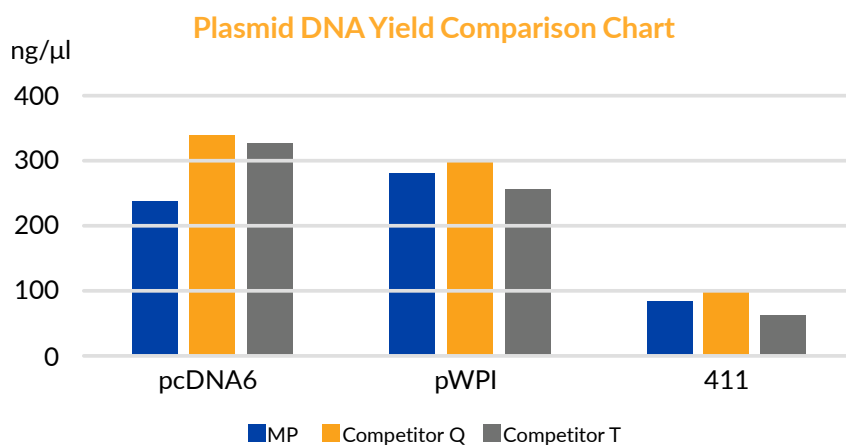


M : DNA marker
 Lane 1 : pWPI plasmid
 Lane 2 : pWPI plasmid linearized by restriction digest
 Lane 3 : pcDNA6 plasmid
 Lane 4 : pcDNA6 plasmid linearized by restriction digest

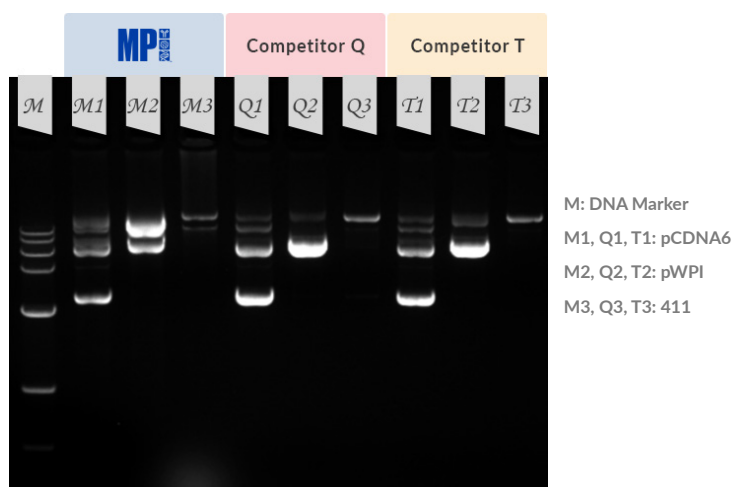
Vector Backbone	Plasmid Size (bp)	Extraction Results		
		Yield (µg)	A _{260/280}	A _{260/230}
pWPI	11,103	14.36	1.89	2.18
pcDNA6	5,149	11.24	1.86	2.19

Purified plasmid analyzed on agarose gel. Plasmid was isolated from 3 mL DH5α cultures harboring the plasmid using SPINEasy Plasmid Miniprep Kit

Comparison Data of DNA extracted with SPINeasy® Plasmid Miniprep Kit



Plasmid DNA was isolated according to manufacturer's recommended protocols from 2 mL LB cultures. DNA was quantified with NanoDrop.



Gel electrophoresis image of plasmid DNA extracted with SPINeasy Plasmid Miniprep and Other Competitors.

Product Information

Description	Size	Cat.No.
SPINeasy® Plasmid Miniprep Kit	50 preps	116534050
	5 preps	116534005

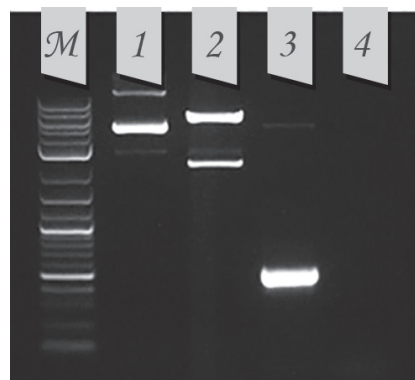
SPINEASY® PLASMID MIDIPREP KIT

SPINEasy® Plasmid Midiprep Kit offers a reliable method for purification of high-copy and low-copy number plasmid DNA from 25-50 mL of transformed bacterial culture.

The midi kit allows user to obtain high-quality plasmid DNA using spin column method without the need of expensive accessories. Using our specially formulated buffers, bacterial cells are disrupted by alkaline lysis to release the plasmid DNA. SPINEasy® Plasmid Midiprep Kit typically produces up to 1 mg of plasmid from the overnight culture in LB medium. High-quality plasmid DNA is immediately ready for routine molecular biology laboratory applications.



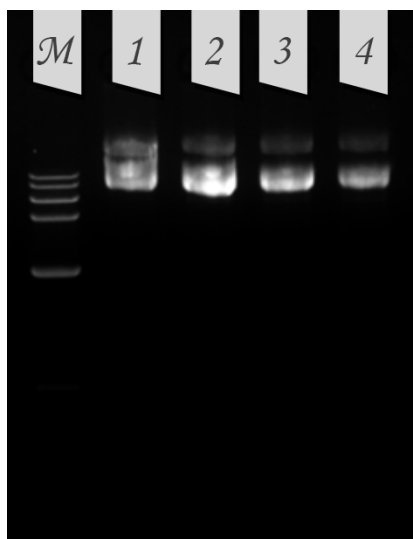
Extraction Results



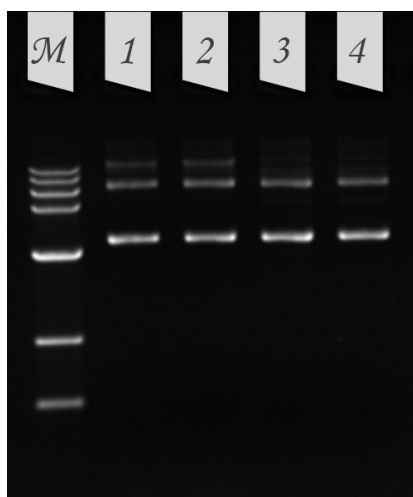
- M : DNA marker;
- Lane 1 : Purified plasmid DNA
- Lane 2 : Plasmid digested with two single cut restriction enzymes, yielding two bands
- Lane 3 : PCR of plasmid, producing a band of the expected amplicon size
- Lane 4 : PCR negative control

Agarose gel electrophoresis result of pcDNA 3.1 plasmid DNA extracted using SPINEasy® Plasmid Midiprep Kit.

Comparison Data of Plasmid extracted with SPINeasy® Plasmid Midiprep Kit and Competitor Kit



Number	Plasmid	Brand	Nanodrop (ng/μl)	A (260/280)	A (260/230)
1-2	pWPI	MP	250.35	1.87	2.07
3-4	pWPI	Competitor T	204.91	1.86	1.91



Number	Plasmid	Brand	Nanodrop (ng/μl)	A (260/280)	A (260/230)
1-2	pcDNA6	MP	307.70	1.89	2.19
3-4	pcDNA6	Competitor T	245.66	1.85	1.98

Above figures show the plasmid DNA isolated according to the manufacturer's recommended protocols from 50 mL of cultures. Each protocol was performed in duplicate with average data shown in the table. DNA was quantified with NanoDrop.

Product Information

Description	Size	Cat.No.
SPINeasy® Plasmid Midiprep Kit	25 preps	116539025
	5 preps	116539000



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