### **GENOMIC DNA ISOLATION KITS**

(CAT. 24700, 24750, 24770)



- Isolate genomic DNA from animal tissues, cells, bodily fluids, viruses and swabs
- Rapid and convenient spin column procedure
- Purified DNA is of the highest quality and integrity for sensitive downstream applications including PCR, qPCR, genotyping, sequencing and more

# FOR THE **ISOLATION** OF **GENOMIC DNA** FROM ANIMAL TISSUES, CELLS, BODILY FLUIDS, VIRUS AND SWABS

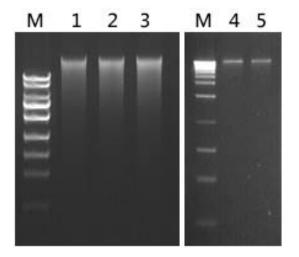


Figure 1. Isolation of High Quality Genomic DNA. Genomic DNA was isolated from various sample types using Norgen's Genomic DNA Isolation Kit. Lanes 1-3 contain genomic DNA that was isolated from four different samples containing 5 x 10<sup>5</sup> HeLa cells, while lanes 4 and 5 contain genomic DNA that was isolated from 5 mg of heart tissue. All the purified genomic DNA is of the highest quality and integrity. Lane M is the Norgen HighRanger 1kb DNA Ladder. For all purified DNA, 10  $\mu$ L of each 200  $\mu$ L elution were resolved on a 1X TAE, 1% agarose DNA gel.

### **Ordering Information**

Genomic DNA Isolation Kits	
50 Preps	Cat. 24700
100 Preps	Cat. 24750
250 Preps	Cat. 24770





# CELLS AND TISSUE DNA ISOLATION KIT

(CAT. 53100)



- 🗹 Rapid spin column format
- 🔽 High yield
- Excellent quality
- DNA ready for any application including PCR, qPCR, genotyping and more

### FOR THE **RAPID PREPARATION** OF **GENOMIC DNA** FROM CULTURED CELLS AS WELL AS VARIOUS TISSUE SAMPLE

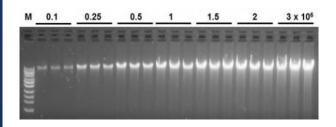


Figure 1. Isolation of High Quality Genomic DNA from 0.1 up to 3 million mammalian cells. Genomic DNA was isolated from  $0.1 \times 10^6$  to up to 3 million HeLa cells using Norgen's Cells and Tissue DNA Isolation Kit. Triplicate samples were used from each cell input and yielded genomic DNA of the highest quality and integrity with linear increase in yield with increasing cell input. Lane M is the Norgen UltraRanger 1kb DNA Ladder. For all purified DNA, 15 µL of each 200 µL elution were resolved on a 1X TAE, 1% agarose DNA gel.

### **Ordering Information**

Cells and Tissue DNA Is	olation Kit
50 Preps	Cat. 53100

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# CELLS AND TISSUE DNA ISOLATION MICRO KIT

(CAT. 57300)



- DNA is eluted in small elution volumes (20 – 40 µL)
- Fast and easy processing using a rapid spin-column format
- ✓ Isolate high quality genomic DNA

### OPTIMIZED FOR **SMALL INPUTS OF CELLS AND TISSUES**, SUCH AS LASER-CAPTURED MICRODISSECTION (LCM)

### **Kit Specifications**

Cells and Tissue DNA Is	olation Micro Kit
Maximum Tissue Input	3 mg animal tissue
mpac	Up to 150 µL of viral suspension
	5 x 10⁵ cells
Column Loading Capacity	> 750 µL
Elution Volume	20 - 40 µL
Analyte Purified	Genomic DNA, mito- chondrial DNA, viral DNA
Time to Complete Purification	60 minutes

### **Ordering Information**

Cells and Tissue DNA Is	olation Micro Kit
50 Preps (Micro)	Cat. 57300





# **CELLS AND TISSUE DNA ISOLATION KITS (MAGNETIC BEAD SYSTEM)** (CAT. 59100, 62500)



- Fast, reproducible and easy processing using a magnetic bead system
- ✓ Isolate high quality genomic DNA
- Recovered genomic DNA is compatible with various downstream applications
- Also available in a 96-well format that can be integrated with a robotic automation system
- Rapid high throughput method to isolate genomic DNA

### ISOLATE **GENOMIC DNA** FROM **CULTURED CELLS** AS WELL AS VARIOUS TISSUE TYPES

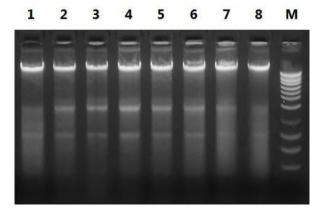


Figure 1. DNA was Isolated from 1 x 10<sup>6</sup> HeLa Cells Using Norgen's Cells and Tissue DNA Isolation 96-Well Kit (Magnetic Bead System). For evaluation, 10  $\mu$ L from each 100  $\mu$ L of elution were run on 1X TAE 1.2% agarose gel. As it can be seen, Norgen's Cells and Tissue DNA Isolation 96-Well Kit (Magnetic Bead System) was able to isolate consistent and high yields of DNA from HeLa cells. M = Norgen's HighRanger DNA Ladder (Cat. 11900).

### **Ordering Information**

Cells and Tissue DNA Isolation Kits (Magnetic Bead System)	
50 Preps	Cat. 59100
2 x 96-Well Plates	Cat. 62500

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### FFPE DNA PURIFICATION KITS

(CAT. 47400, Dx47400)



- CE-IVDR marked in accordance with the European Commission Regulation (EU) No. 2017/746 (Dx47400)
- Intended for in vitro diagnostic use
- Fast and easy processing using rapid and convenient spin-columns
- ✓ Isolate high quality and high yield DNA
- DNA is free of inhibitors and ready for downstream use including SNP (single nucleotide polymorphism) and short-tandem repeat (STR) genotyping

### FOR THE **RAPID AND EFFICIENT** EXTRACTION AND PU-RIFICATION OF **DNA** FROM **FFPE SAMPLES**

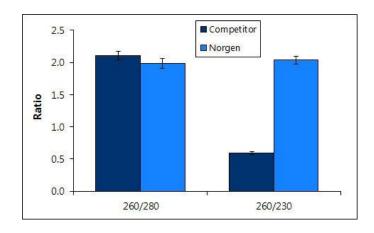


Figure 1. Comparison of DNA Quality Isolated by Norgen's FFPE DNA Kit and a Leading Competitor's FFPE DNA Purification Kit. DNA was isolated from 10 mg of FFPE kidney blocks. Quality was assessed using A260:A280 and A260:A230 ratios generated from the NanoVue spectrophotometer (GE Healthcare). While Norgen and the competitor kit were found to have similar A260:A280 ratios, Norgen was found to have a much higher A260:A230 ratio, indicating higher quality DNA.

### **Ordering Information**

FFPE DNA Purification Kits	
50 Preps	Cat. 47400
50 Preps	Cat. Dx47400 <b>C</b> €



Intended for *in vitro* diagnostic use CE-IVDR marked in accordance with the European Commission Regulation (EU) No. 2017/746

CE



# MICROBIOME DNA ISOLATION KIT

(CAT. 64100)



- For use with samples collected using a swab

   fresh, frozen or preserved in Norgen's Swab
   Collection and DNA Preservation System
   or Norgen's Fecal Swab Collection and

  Preservation System
- Rapid and convenient spin-column format
- Remove all PCR inhibitors from DNA samples
- Isolate high quality total DNA for PCR and NGS applications (Microbiome/Metagenomic sequencing)
- Optimized to isolate from the full preservative volume of the Swab Collection and DNA
  Preservation System for maximum yield

### UNIVERSAL **METHOD TO ISOLATE AND DETECT** MICROORGANISMS AND HOST CELLS SIMULTANEOUSLY

### **Kit Specifications**

Microbiome DNA Isolation Kit	
Maximum Sample Input	1 mL of preserved swab sample* or up to 0.5 mL preserved samples**
Swab Samples Tested	Fecal, saliva, buccal, food, nasal, blood, sur- face, skin
Maximum Column Binding Capacity	50 µg
Maximum Column Loading Volume	650 µL
Time to Complete 10 Purifications	30 minutes

### **Ordering Information**

Microbiome DNA Isolation Kit	
50 Preps	Cat. 64100





### **BIOFILM DNA ISOLATION KIT**

(CAT. 62300)



- Rapid and convenient method to isolate genomic DNA from different types of biofilm and biofilm forming-bacteria
- Yields high quality DNA that is ready for PCR and other downstream applications

### NO PHENOL OR CHLOROFORM EXTRACTIONS

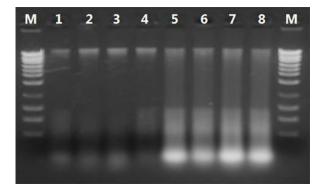


Figure 1. High quality and yield of DNA from biofilm formed by two different species, Komagataeibacter xylinus (1-4), Komagataeibacter hansenii (5-8). Total DNA was isolated from 200 mg of biofilm using Norgen's Biofilm DNA Isolation Kit. For evaluation, 10  $\mu$ L of each 100  $\mu$ L DNA elution was run on a 1.2 % agarose gel. Note the high yield and quality of the DNA in all lanes. Lane M: Norgen's HighRanger 1 kb DNA Ladder (Cat. 11900).

### **Ordering Information**

Biofilm DNA Isolation Kit	
50 Preps	Cat. 62300
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### FUNGI/YEAST GENOMIC DNA ISOLATION KITS

(CAT. 27300, 27350)



- Rapid spin column purification of genomic
  DNA from viable yeast cells, fungal spores or
  mycelium, and bacteria including Gram-positive
- Bead tubes (provided) allow for effective mechanical homogenization
- Purified DNA is of high quality and integrity and compatible with any sensitive downstream applications such as PCR, qPCR, RFLP and more
- Available in spin column format and 96-well format for rapid high throughput applications

### FOR THE RAPID PURIFICATION OF DNA FROM YEAST CELLS AND FUNGAL SPORES OR MYCELIUM

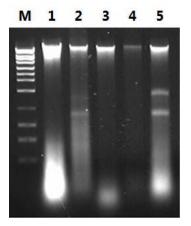


Figure 1. DNA Isolation from Different Fungi Species and Yeast. To demonstrate the purification of DNA from different fungal species, 30 mg of fungi were collected from plate cultures of Pichia sp, Aspergillus niger, Cladosporium cladasporioides, Botrytis cinerea and Mucor racemosus, and the DNA was extracted using Norgen's Fungi/Yeast Genomic DNA Isolation Kit. The bead system efficiently lysed the fungal cell walls with the provided Lysis Solution, and total DNA was eluted in 100  $\mu$ L. For analysis, 10  $\mu$ L from each elution was loaded in 1% 1xTAE agarose gel. Lane 1: Yeast (Pichia sp.), Lane 2: Aspergillus Niger; Lane 3: Cladosporium cladosporioides; Lane 4: Botrytis cinerea; Lane 5: Mucor racemosus; Lane M: Norgen's HighRanger 1kb DNA Ladder. The optional RNase treatment was not performed during the process.

### **Ordering Information**

Fungi/Yeast Genomic DNA Isolation Kits	
50 Preps	Cat. 27300
2 x 96-Well Plates	Cat. 27350

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### **PLANT/FUNGI DNA ISOLATION KITS**

(CAT. 26200, 26250, 26900)



- Rapid and simple procedure
- Excellent quality and yield of DNA
- Process a broad spectrum of plant species and filamentous fungi
- Isolate total DNA including pathogen DNA without phenol
- Available in spin column format and 96-well format for high throughput applications

### FOR RAPID ISOLATION OF TOTAL DNA FROM PLANTS AND FUNGI

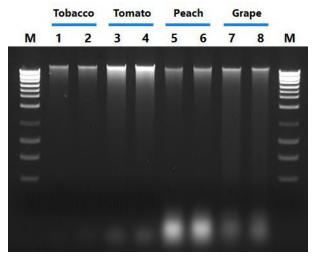


Figure 1. Isolate DNA from a Wide Range of Plants. DNA was isolated from 50 mg samples of tobacco leaves (Lanes 1 and 2), tomato leaves (lanes 3 and 4), peach leaves (Lanes 5 and 6) and grape leaves (lanes 7 and 8) using Norgen's Plant/Fungi DNA Isolation Kit, and 5  $\mu$ L aliquots of the 100 $\mu$ L elutions were run on a 1x TAE 1% agarose gel. As it can be seen, high quality DNA was isolated in all cases. The M lanes contain Norgen's HighRanger 1Kb DNA Ladder.

### **Ordering Information**

Plant/Fungi DNA Isolation Kits	
50 Preps	Cat. 26200
250 Preps	Cat. 26250
2 x 96-Well Plates	Cat. 26900





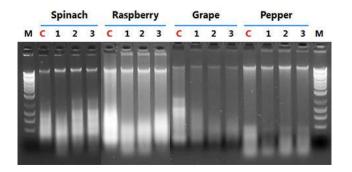
### PLANT DNA ISOLATION KITS (MAGNETIC BEAD SYSTEM)

(CAT. 58200, 62400)



- Robust lysis system (chemical lysis combined with a mechanical homogenization)
- High yields Consistent, high yields of inhibitorfree DNA up to 50 kb plus
- Isolate high quality total DNA from a variety of plant species, including any pathogen DNA
- Also available in a 96-well format that can be integrated with a robotic automation system
- Rapid, high throughput method to isolate genomic DNA

### FAST AND EASY PROCESSING USING A MAGNETIC BEAD SYSTEM



# Figure 1. Resolution of DNA isolated from four different plant species. DNA was isolated from four different plant species using Norgen's Plant DNA Isolation Kit (Magnetic Bead System) and Norgen's Plant/Fungi DNA Isolation Kit (column format, Cat. 26200). For evaluation, 10 $\mu$ L from 75 $\mu$ L of elution were run on 1X TAE 1.2% agarose gel. Excellent DNA integrity and yield were observed from the Plant DNA Isolation Kit (Magnetic Bead System) (Lanes 1 to 3), indicating the robust performance comparable to the column based method (Red C). Marker = Norgen's HighRanger DNA Ladder.

### **Ordering Information**

Plant DNA Isolation Kit (Magnetic Bead System) Kits	
50 Preps	Cat. 58200
2 x 96-Well Plates	Cat. 62400





### OLIVE OIL DNA ISOLATION KIT

(CAT. 61700)



- Isolate total DNA without compromising total yield
- No phenol or chloroform extractions
- Isolate high quality total DNA from a variety of oil samples

### FAST AND EASY PROCESSING USING A RAPID SPIN-COLUMN FORMAT

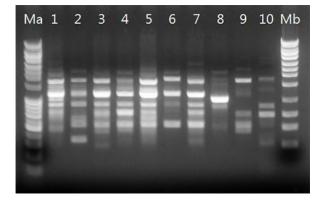


Figure 1. Random Amplified Polymorphic DNA (RAPD) Analysis of 10 Food Oil Products. Inputs of 0.5 mL of oil were processed using Norgen's Olive Oil DNA Isolation Kit,and 5  $\mu$ L of the 40  $\mu$ L eluted DNA was used in 20  $\mu$ L of RAPD reaction. The RAPD pattern indicates successful RAPD amplification with high DNA quality. Ma: Norgen's UltraRanger 1 kb DNA Ladder (Cat. 12100), Mb: HighRanger 1 kb DNA Ladder (Cat. 11900).

### **Ordering Information**

Olive Oil DNA Isolation Kit	
50 Preps	Cat. 61700

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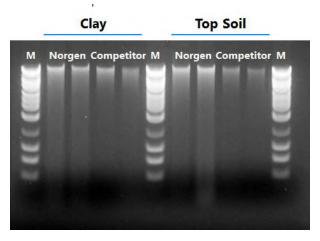
### SOIL DNA ISOLATION PLUS KITS

(CAT. 64000, 64060, 62000, 26560)



- Process all soil types including clay, loam, sandy soils and high humic content soils such as peat, compost and manure
- Rapid and convenient method to detect microorganisms in up to 10 g of soil samples
- Remove all humic acid from DNA samples using the Maxi Humic Acid Removal Columns
- Remove organic substances using the OSR Solution
- Fast and easy processing using a rapid spin-column format
- Isolate high quality total DNA from a variety of microorganisms including bacteria, fungi and algae
- Isolate high quality total DNA from all soil types ready for any downstream PCR, qPCR
- Available in spin column format and 96-well format for high throughput applications
- Also available in fast and easy high throughput processing using either a vacuum manifold or centrifugation
- Excellent DNA for metagenomic studies
- No phenol or chloroform extractions

### **RAPID AND CONVENIENT** METHOD TO DETECT MICROORGANISMS IN SOIL SAMPLES



**Figure 1. Comparison of DNA Yield from Top Soil and Clay Samples.** Norgen's Soil DNA Isolation Plus Kit (Cat. 64000) and Competitor M's kit were used to isolate DNA from 250 mg of top soil and clay samples. Following isolation, 10 µL from each 100 µL elution was loaded on 1% TAE agarose gel. Lane M: Norgen's HighRanger 1kb DNA Ladder.

### **Ordering Information**

Soil DNA Isolation Plus Kits	
50 Preps	Cat. 64000
100 Preps	Cat. 64060
10 Preps (Maxi)	Cat. 62000
2 x 96-well plates	Cat. 26560





### SOIL DNA ISOLATION KITS (MAGNETIC BEAD SYSTEM)

(CAT. 58100, 62800)



- Robust lysis system (chemical lysis combined with a mechanical homogenization)
- Isolate high quality genomic DNA
- High yields Consistent, high yields of inhibitorfree DNA up to 50 kb plus
- Isolate sequencing quality total DNA from a variety of microorganisms including bacteria, fungi and algae
- Also available in a 96-well format that can be integrated with a robotic automation system
- Rapid, high throughput method to isolate genomic DNA

# FAST AND EASY PROCESSING USING A MAGNETIC BEAD SYSTEM

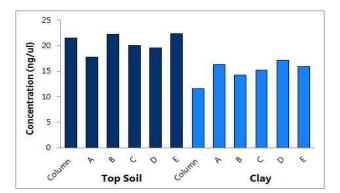


Figure 1. Two of Norgen's soil DNA isolation methods (Column vs Magnetic Bead System) were compared for DNA concentration. All DNA elutions isolated using Norgen's Soil DNA Isolation Kit (Magnetic Bead System) [A to E] showed a comparable DNA concentration to Norgen's Soil DNA Isolation Kit (Column Method; Cat. 26500), indicating the consistent and robust performance of the Soil DNA Isolation Kit (Magnetic Bead System).

### **Ordering Information**

Soil DNA Isolation Kit (Magnetic Bead System) Kits	
50 Preps	Cat. 58100
2 x 96-Well Plates	Cat. 62800





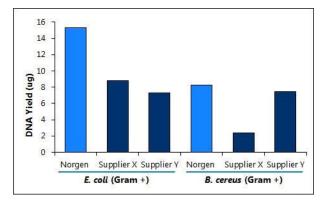
### **BACTERIAL GENOMIC DNA ISOLATION KITS**

(CAT. 17900, 17950)



- Isolate genomic DNA from all types of bacteria (both Gram-positive and Gram-negative)
- Rapid and convenient spin column protocol
- Available in 96-well format for high throughput to isolate genomic DNA
- High yield, high quality DNA for sensitive downstream applications including sequencing, PCR, qPCR and more

### FOR THE **RAPID PREPARATION** OF **GENOMIC DNA** FROM BACTERIA



**Figure 1. High Yield Purification.** The high yield of Norgen's Bacterial Genomic DNA Isolation Kit is illustrated by purifying genomic DNA from 1 mL overnight culture (1 x 10<sup>9</sup> cells) of both a Gram positive (B. cereus) and a Gram negative strain (E. coli), and comparing the yield with two major competitors. The quantification of the DNA yield was performed by resolving 5  $\mu$ L of the 200  $\mu$ L of eluted DNA on a 1X TAE, 0.9% agarose gel followed by densitometry. With both types of bacteria, Norgen's kit was found to give a higher recovery than the competitor's kits.

### **Ordering Information**

Bacterial Genomic DNA Isolation Kits	
50 Preps	Cat. 17900
2 x 96-Well Plates	Cat. 17950

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### PHAGE DNA ISOLATION KITS

(CAT. 46800, 46850)



- Isolate high quality DNA from a broad variety of phage strains
- ✓ High yields of total DNA
- Fast and easy processing using a rapid spincolumn format
- No phenol or chloroform extractions or cesium chloride banding required

### FOR THE **RAPID PURIFICATION** OF **TOTAL DNA FROM BACTERIOPHAGES**

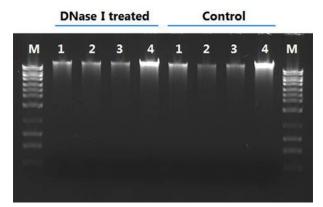


Figure 1. Effective Host Genomic DNA Removal without Reducing Phage DNA Yield. Total DNA was isolated from four enriched phage cultures using Norgen's Phage DNA Isolation Kit. A DNase I pre-treatment was performed prior to adding the provided Lysis Buffer. Briefly, 20 units of DNase I was added to 1 mL of enriched phage culture and the mixture was incubated at room temperature for 20 minutes. After the DNAase I treatment the procedure was followed. As a control, DNA was isolated from aliquots of the same 4 cultures using Norgen's Phage DNA Isolation Kit without performing the DNase I treatment. For DNA analysis 10  $\mu$ L of each 50  $\mu$ L elution was loaded onto a 1X TAE agarose gel. As it can be seen, the phage DNA was safely protected from the DNase I treatment by its coat protein, while the host genomic DNA was efficiently degraded by the DNase I. Thus the DNase I pre-treatment resulted in less host gDNA contamination in the final phage elution without influencing the total phage DNA yield. Lane M is Norgen's Highranger 1 kb DNA Ladder (Cat. 11900) from as little as a single HeLa cell.

### **Ordering Information**

Phage DNA Isolation Kits	
50 Preps	Cat. 46800
100 Preps	Cat. 46850

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# DIRECT DNA EXTRACTION KIT (BACTERIA)

(CAT. 61500)



- Easy and convenient protocol
- Reproducible
- Rapid procedure

### APPLICABLE FOR **HIGH THROUGHPUT DETECTION** PLATFORMS

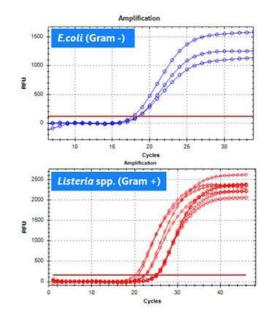


Figure 1. Detection of Gram negative (E.coli) and Gram positive (Listeria spp.) bacteria using Norgen's Direct DNA Extraction Kit (Bacteria) in real-time PCR system. Two microlitres of the clean supernatant was directly added to a PCR reaction (total 20  $\mu$ L) to detect 16s rRNA target or Listeria spp. specific gene for E.coli and Listeria spp. respectively. Targets were successfully amplified, indicating the high quality of the inhibitor-free DNA that was extracted using Norgen's Direct DNA Extraction Kit (Bacteria). This kit is applicable for rapid and sensitive microorganism detection for food quality monitoring and other high throughput analysis applications.

### **Ordering Information**

Direct DNA Extraction Kit (Bacteria)	
50 Preps	Cat. 61500



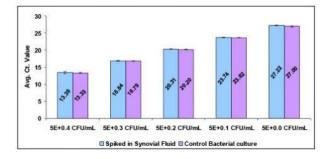


### SYNOVIAL FLUID BACTERIAL GENOMIC DNA PURIFICATION KIT (CAT. 67900)



- Rapid and convenient spin column protocol
- Purified bacterial gDNA has a minimal host gDNA contamination
- High yield, high quality DNA for sensitive downstream applications including sequencing, PCR, qPCR and more

### ISOLATE GENOMIC DNA FROM ALL TYPES OF BACTERIA (BOTH GRAM-POSITIVE AND GRAM-NEGATIVE)



**Figure 1.** Isolation and Detection of the Gram +Ve *S. Aureus* **Bacterial Genomic DNA from 1 mL of spike-in Synovial fluid.** Genomic DNA was isolated from 1 mL synovial fluid spiked with a serially diluted Gram +Ve *S. Aureus* using Norgen's Synovial

Fluid Bacterial genomic DNA Purification Kit. The efficiency of the purified bacterial gDNA from the spiked-in synovial fluid was evaluated against the gDNA isolation from pure culture containing the same amount of *S. Aureus* spiked in 1mL synovial fluid. The purified gDNA was subsequently detected using quantitative PCR. All serially diluted spiked-in Gram +Ve *S. Aureus* was purified with high efficiency from 1mL synovial fluid as compared to the amplification of *S. aureus* from pure culture. The limit of detection for the Gram +Ve *S. Aureus* was down to 5 CFU/mL.

### **Ordering Information**

Synovial Fluid Bacterial Genomic DNA Purification Kit	
50 Preps	Cat. 67900

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# MILK BACTERIAL DNA ISOLATION KIT

(CAT. 21550)



- Genomic DNA can be isolated from as few as 10 bacterial cells in 1 mL of milk
- Isolate genomic DNA from both Gram-negative and Gram-positive bacteria in milk
- Can process challenging samples such as mastitic milk
- Inhibitor-free DNA is ready for PCR, qPCR, Southern Blot, sequencing & more
- Fast and efficient spin-column format

### FOR THE **RAPID PURIFICATION** OF **GENOMIC DNA** FROM VARIOUS **BACTERIAL SPECIES FOUND IN MILK**

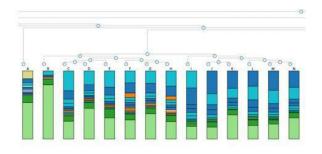


Figure 1. Hierarchial Clustering Dendrogram of Milk Related Microorganisms Found in Milk Samples. DNA was isolated using Norgens Milk Bacterial DNA Isolation Kit and the 16S Metagenomic Sequencing Library was prepared according to the Illumina MiSeq System. This dendogram shows a hierarchial clustering of samples based on genus-level classifications. The barchart beneath each sample shows the relative abundance of its genus-level classifications.

### **Ordering Information**

Milk Bacterial DNA Isolation Kit	
50 Preps	Cat. 21550

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# MILK DNA PRESERVATION AND ISOLATION KIT (CAT. 44800)



- Milk samples are stable for 1 month at room temperature (or 1 week at 37°C) in the Preservation Solution
- Fast and easy processing using a rapid spincolumn format
- DNA can be isolated and detected from as little as 100 µL of milk
- Isolate high quality genomic DNA

### A **RAPID ALL-IN-ONE PROCEDURE** FOR THE PRESERVATION AND ISOLATION OF MILK DNA AT AMBIENT TEMPERATURES.

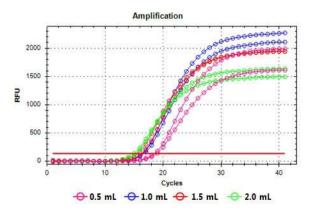


Figure 1. Amplification of 16s rRNA Gene From Different Volumes of Preserved Milk. E.coli was spiked into the preserved milk and the DNA was then isolated using Norgen's Milk DNA Preservation and Isolation Kit (Cat. 44800). Two microlitres of the 100  $\mu$ L isolated DNA were used in a 20  $\mu$ L qPCR reaction using TaqMan 16s rRNA qPCR. No PCR inhibition was observed from all milk DNA isolated from the different preserved milk volumes (Pink: 0.5 mL, Blue: 1 mL, Red: 1.5 mL and Green: 2 mL), indicating the high quality of milk DNA.

### **Ordering Information**

Milk DNA Preservation	and Isolation Kit
25 Preps	Cat. 44800

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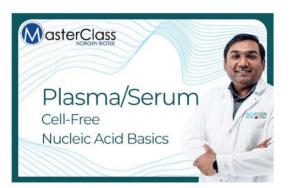




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# Learn About:

- Urine Exosomes
- Stool RNA/DNA
- Plasma/Serum Cell-Free Nucleic Acids
- And so much more!



### FOOD DNA ISOLATION KIT

(CAT. 54500)



- Isolate DNA from a wide range of food materials.
  (e.g. boiled, fluid, processed or raw food products)
- No hazardous chemicals required (e.g. phenol or chloroform)
- Effective lysis with Proteinase K and optional lysozyme treatment
- Fast (less than 15 minutes hands-on time) and convenient processing using a rapid spin-column format
- Wide compatibility with a variety of food products for GMO-DNA isolation
- Universal protocol for food related pathogen DNA isolation (Gram positive and Gram negative)

### FOR THE ISOLATION OF DNA DIRECTLY FROM FOOD OR FROM ENRICHED MICROORGANISMS

### **Kit Specifications**

Food DNA Isolation Kit	
Maximum Column Binding Capacity	50 µg
Maximum Column Loading Volume	650 µL
Maximum Amount of Starting Material: Solid food material Liquid sample (e.g. milk or concentrated juice)	200 mg 1 mL to 1.5 mL
Time to Complete 10 Purifications	45 minutes

### **Ordering Information**

Food DNA Isolation Kit	
50 Preps	Cat. 54500

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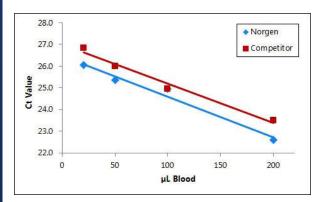
### **BLOOD DNA ISOLATION KITS**

(CAT. 46300, Dx46300, 46380, 51400, 31200, 46350)



- CE-IVDR marked in accordance with the European Commission Regulation (EU) No. 2017/746 (Dx46300)
- Input volumes from 200 µL to 10 mL
- High yield and high quality DNA ready for any application
- DNA is of excellent yield and quality
- Fast and convenient spin column protocol

### FOR THE RAPID PREPARATION OF HIGH QUALITY DNA FROM WHOLE BLOOD



# Figure 1. Purified DNA Can be Amplified in a Real-time PCR (TaqMan) Reaction. DNA was isolated from 20, 50, 100 and 200 $\mu$ L of whole human blood using Norgen's Blood DNA Isolation Mini Kit (Blue) and a leading competitor's kit (Red). Nine $\mu$ L of the DNA from each 200 $\mu$ L of elution was used in a real-time PCR reaction (total reaction volume of 20 $\mu$ L) with GAPDH TaqMan probe and primers. The real-time PCR was successful in amplifying the GAPDH gene, with a linear decrease in Ct value with the increase in blood input volume, indicating that the DNA is of a high quality and can be used in sensitive downstream applications. Furthermore, Norgen-isolated DNA was amplified with a lower Ct value from all DNA isolated from the different blood input volumes, indicating the higher yield and purity of DNA isolated using Norgen's kit.

### **Ordering Information**

Blood DNA Isolation Kits	
50 Preps (Mini)	Cat. 46300
50 Preps (Mini)	Cat. Dx46300 <b>( €</b>
100 Preps (Mini)	Cat. 46380
20 Preps (Midi)	Cat. 51400
12 Preps (Maxi)	Cat. 31200
2 X 96-Well Plates	Cat. 46350



**Intended for** *in vitro* **diagnostic use** CE-IVDR marked in accordance with the European Commission Regulation (EU) No. 2017/746

CE

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For more data and technical specifications please visit **norgenbiotek.com** or scan the **QR code.** 

### norgenbiotek.com

# BLOOD DNA ISOLATION KITS (MAGNETIC BEAD SYSTEM)

(CAT. 59800, 62600)



- High yield and high purity DNA ready for any application
- Available in a variety of formats to properly suit your needs
- Compatible with blood collected on a variety of commercially available tubes

### FAST, REPRODUCIBLE AND EASY PROCESSING USING A MAGNETIC BEAD SYSTEM

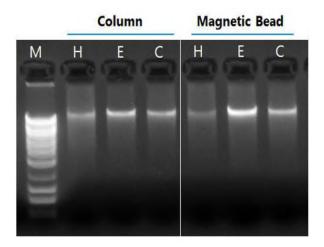


Figure 1. DNA Isolated from Blood Preserved in 3 Different Anticoagulants. DNA was isolated from 200  $\mu$ L of human whole blood samples preserved in three different anticoagulants (Heparin: H, EDTA: E and Na Citrate: C) using Norgen's Blood DNA Isolation Kit (Magnetic Bead System) and Norgen's Blood DNA Isolation Mini Kit (column format, Cat. 46300). For evaluation, 10  $\mu$ L from each 200  $\mu$ L of elution were run on 1X TAE 1.2% agarose gel. Norgen's Blood DNA Isolation Kit (Magnetic Bead System) showed an intact and comparable DNA profile to the column method from all three different anticoagulant mixed blood samples. Marker = Norgen's HighRanger DNA Ladder.

### **Ordering Information**

Blood DNA Isolation Kit	S
50 Preps	Cat. 59800
2 x 96-Well Plates	Cat. 62600

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# DRIED BLOOD SPOT (DBS) DNA ISOLATION KIT (CAT. 36000)



- High quality DNA, free from RNA contamination
- Isolate genomic DNA from anticoagulated and untreated blood
- Rapid and convenient spin column procedure
- Solate DNA from inputs as low as 20 μL

### RAPID PREPARATION OF TOTAL DNA FROM DRIED BLOOD SPOTS

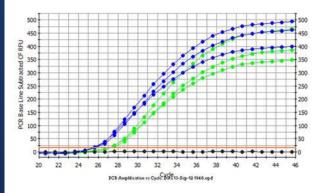


Figure 1. Purified DNA can be Amplified in a Real-time PCR (TaqMan) Reaction. DNA was isolated from 3 x 3 mm diameter circles per sample using Norgen's Dried Blood Spot DNA Isolation Kit. Next, 3  $\mu$ L (green line) & 9  $\mu$ L (blue line) of the DNA from each of the 150  $\mu$ L elutions was used in a realtime PCR reaction (total reaction volume of 20  $\mu$ L) with GAPDH TaqMan probe and primers. The real-time PCR was successful in amplifying the GAPDH gene, indicating that the DNA is of a high quality and can be used in sensitive downstream applications. The black line is a no-template control.

### **Ordering Information**

Dried Blood Spot (DBS)	DNA Isolation Kit
50 Preps	Cat. 36000

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### URINE DNA ISOLATION KIT

(CAT. 18100)



- Rapid isolation of both small and large species of DNA from urine
- 🗹 Convenient spin column format
- Effective removal of PCR inhibitors
- Purified DNA is highly suited to sensitive downstream applications
- Allows for the purification of viral DNA from urine
- Small urine input ranging from as low as 50 μL to 1.75 mL

### FAST AND RELIABLE PURIFICATION OF GENOMIC AND APOPTOTIC DNA FROM URINE

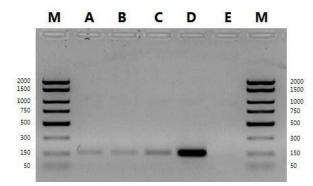


Figure 1. Circulating DNA Isolated from Urine can be used as the Template in PCR Reactions. Total urinary DNA was isolated from three different 1.5 mL urine samples using Norgen's Urine DNA Isolation Kit. The bind, wash and elute procedure was performed, and the purified DNA was eluted into two separate elutions of 100  $\mu$ L (E1) and 75  $\mu$ L (E2). Five microliters of each elution was then used as a template in a PCR reaction to amplify the K-ras gene. Lanes A-C contain the expected 157 bp product, and correspond to the first elution from each sample. Lane D is the positive control of 293 HEK DNA and shows the expected 157 bp product, while Lane E is the negative control. Lane M is Norgen's FastRunner DNA Ladder.

### **Ordering Information**

Urine DNA Isolation Mid	cro Kit
50 Preps	Cat. 18100

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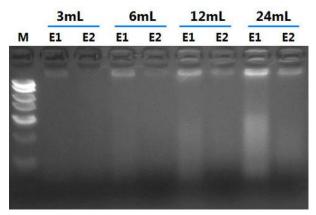
### URINE DNA ISOLATION KITS (SLURRY FORMAT)

(CAT. 48800, Dx48800)



- CE-IVDR marked in accordance with the European Commission Regulation (EU) No. 2017/746 (Dx48800)
- Ideal for use in *in vitro* diagnostic workflows
- Unlike other methods, Norgen's Urine DNA Isolation Kit (Slurry Method) does not require any additional urine concentrating devices
- Fast processing time
- Purify both genomic and apoptotic DNA with one protocol
- ✓ Isolate DNA from 3 mL to 25 mL of urine
- Allows for purification of viral DNA

### FAST, RELIABLE ISOLATION OF URINE DNA FROM 3 ML TO 25 ML SAMPLES



**Figure 1.** Typical Agarose Gel Showing Total Urinary DNA Isolated from Different Urine Volumes using Norgen's Urine DNA Isolation Kit (Slurry Format). Total urinary DNA was isolated from 3 mL, 6 mL, 12 mL and 24 mL of urine. Total urinary DNA was isolated from each urine sample according to the isolation protocol that is optimized for different sample volumes. The isolated DNA was eluted into two separate elutions (E1 and E2). The purified urine DNA was then loaded onto a 1.5% agarose gel. Each lane shows one tenth from each elution. It can be seen that the first elution contains most of urinary DNA whereas the second elution contains the rest of the urinary DNA isolated. Lane M is 10 μL of Norgen's FastRunner DNA Ladder.

### **Ordering Information**

Urine DNA Isolation Kits (Slurry Format)	
50 Preps	Cat. 48800
50 Preps	Cat. Dx48800 <b>CE</b>





Intended for *in vitro* diagnostic use CE-IVDR marked in accordance with the European Commission Regulation (EU) No. 2017/746





# URINE DNA ISOLATION MAXI KIT (SLURRY FORMAT)

(CAT. 50100)



- Does not require any additional urine concentrating devices
- ✓ Fast processing time
- Purify both genomic and apoptotic DNA with one protocol
- Isolate DNA from 25 mL to 80 mL of urine
- Also allows for purification of viral DNA from urine

### FAST, RELIABLE ISOLATION OF URINE DNA FROM 25 ML TO 80 ML SAMPLES

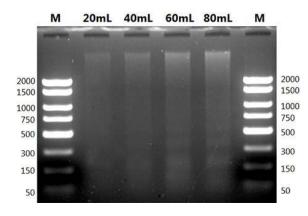


Figure 1. Typical Agarose Gel Showing Total Urinary DNA Isolated from Different Urine Volumes using Norgen's Urine DNA Isolation Maxi Kit (Slurry Format). Total urinary DNA was isolated from 20 mL, 40 mL, 60 mL and 80 mL of urine. Total urinary DNA was isolated from each urine sample according to the isolation protocol that is optimized for different sample volumes. The isolated DNA was eluted, and was then loaded onto a 1.8% agarose gel. Each lane shows 1/10 from each elution. It can be seen that urine DNA is increasing linearly with the urine input volume. It should also be noted that the circulating DNA started to appear in the form of ladder with the increase of the urine sample input. Lane M is 10 µL of Norgen's FastRunner DNA Ladder.

### **Ordering Information**

Urine DNA Isolation Maxi Kit (Slurry Format)	
50 Preps	Cat. 50100





### URINE DNA ISOLATION KIT FOR EXFOLIATED CELLS OR BACTERIA (CAT. 47050)



- Isolate genomic DNA from either exfoliated cells or bacteria found in urine
- Isolate and detect genomic DNA from as little as 1 mL of urine and up to 50 mL urine
- High quality DNA for sensitive applications
- Rapid processing time

### FOR THE **RAPID** AND **EFFICIENT PURIFICATION** OF **DNA** FROM **EXFOLIATED CELLS** OR **BACTERIA** IN **URINE**

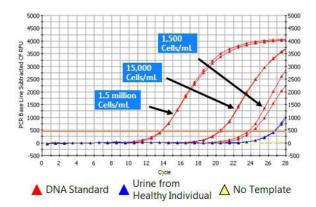


Figure 1. Isolation and Detection of Bacterial Genomic DNA from a 1 mL Urine Sample. Bacterial genomic DNA was isolated from a 1 mL urine sample from a healthy individual using Norgen's Urine DNA Isolation Kit for Exfoliated Cells or Bacteria. The provided protocol was followed, and the purified urinary bacterial DNA was eluted in 100  $\mu$ L of Elution Buffer. Five microliters of the eluted DNA was then used as a template in a quantitative PCR reaction to detect the bacteria using the iQ SYBR Green Supermix (BioRad, #170-8882). Healthy humans generally have <10,000 CFU per mL of urine, and this kit is sensitive enough to isolate genomic DNA from this small amount of bacteria (blue line in graph above). The red lines in the above graph correspond to DNA standards.

### **Ordering Information**

Urine DNA Isolation Kit For Exfoliated Cells Or Bacteria	
50 Preps	Cat. 47050

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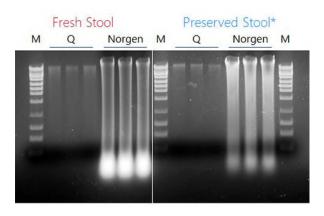
### STOOL DNA ISOLATION KITS

(CAT. 27600, Dx27600, 65600)



- CE-IVDR marked in accordance with the European Commission Regulation (EU) No. 2017/746 (Dx27600)
- Ideal for *in vitro* diagnostic workflows
- Simultaneous isolation of both host DNA and microbial DNA (universal protocol)
- Eliminates PCR inhibitors including humic acids
- Fully compatible with Norgen's Stool Nucleic Acid
  Collection and Transport Tubes
- High quality DNA for sensitive downstream applications including PCR, qPCR, Sequencing and microarray
- Available in single column and high throughput
  96-well format

### FOR THE RAPID AND SIMPLE PURIFICATION OF BACTERIAL AND HOST DNA FROM STOOL AND FECAL SAMPLES



**Figure 1. Higher Yields of DNA than Competitor Q.** Stool DNA was isolated from 200 mg of fresh or preserved stool samples using Norgen's Stool DNA Isolation Kit and Competitor Q's Kit. For evaluation, 10 μL of DNA from the elution was run on 1X TAE 1.2% agarose gel. Norgen's kit isolated much higher yields of DNA. \*Stool was collected using Norgen's Stool Nucleic Acid Collection and Preservation tubes (Cat. 45660). Marker = Norgen's HighRanger DNA Ladder (Cat. 11900).

### **Ordering Information**

Stool DNA Isolation Kits	
50 Preps	Cat. 27600
50 Preps	Cat. Dx27600 <b>( €</b>
2 x 96-Well Plates	Cat. 65600



### **Intended for** *in vitro* **diagnostic use** CE-IVDR marked in accordance with the European Commission Regulation (EU) No. 2017/746

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### STOOL DNA ISOLATION KITS (MAGNETIC BEAD SYSTEM)

(CAT. 55700, 63100)



- Fast and easy processing using a magnetic bead system
- Robust lysis system (chemical lysis combined with a mechanical homogenization)
- ✓ Isolate high quality genomic DNA
- Compatible with preserved stool samples collected using Norgen's Stool Nucleic Acid
   Collection and Transport Tubes
- High yields Consistent, high yields of inhibitorfree DNA up to 50 kb plus
- Also available in a 96-well format that can be integrated with a robotic automation system
- Rapid high throughput method to isolate genomic DNA

### FOR THE RAPID, SIMPLE, AND AUTOMATION-COMPATIBLE PURIFICATION OF BACTERIAL AND HOST DNA FROM STOOL SAMPLES

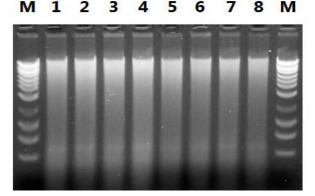


Figure 1. High Quality DNA Isolated from Preserved Stool Samples. DNA was isolated from 200  $\mu$ L preserved stool samples using Norgen's Stool DNA Isolation 96-Well Kit (Magnetic Bead System). For evaluation, 10  $\mu$ L from 75  $\mu$ L of elution were run on 1X TAE 1.2% agarose gel. M = Norgen's HighRanger 1kb DNA Ladder (Cat. 11900).

### **Ordering Information**

Stool DNA Isolation Kits (Magnetic Bead System)		
50 Preps	Cat. 55700	
2 x 96-Well Plates	Cat. 63100	





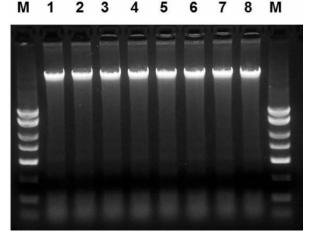
### SALIVA DNA ISOLATION KITS

(CAT. RU45400, Dx45400, RU35200)



- CE-IVDR marked in accordance with the European Commission Regulation (EU) No. 2017/746 (Dx45400)
- Ideal for use in *in vitro* diagnostic workflows
- Fast and easy processing using a rapid spin-column format or 96-well plates
- Isolate high quality genomic DNA
- Compatible with preserved saliva samples collected using Norgen's Saliva DNA Collection and Preservation Devices, as well as fresh saliva samples
- Available in single column and high throughput
  96-well format

### FOR THE **RAPID PURIFICATION** OF **HIGH-QUALITY DNA** FROM **PRESERVED** AND **FRESH SALIVA** SAMPLES



**Figure 1. High Quality and Yield of DNA from Saliva Samples.** Total DNA was isolated from 250  $\mu$ L of eight different fresh saliva samples using Norgen's Saliva DNA Isolation Kit (Lanes 1-8). For evaluation, 10  $\mu$ L of each 100  $\mu$ L DNA elution was run on a 1.2 % agarose gel. Note the high yield and quality of the DNA in all lanes. Lane M: Norgen's Fast runner 1kb DNA Ladder.

### **Ordering Information**

Saliva DNA Isolation Kits	
50 Preps	Cat. RU45400
50 Preps	Cat. Dx45400 <b>( €</b>
2 X 96-Well Plates	Cat. RU35200



**Intended for** *in vitro* **diagnostic use** CE-IVDR marked in accordance with the European Commission Regulation (EU) No. 2017/746

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# SALIVA DNA ISOLATION KIT (MAGNETIC BEAD SYSTEM)

(CAT. RU55400, RU62900)



- Sample collection is non-invasive and painless
- Fast and easy processing using a magnetic bead system
- ✓ Isolate high quality genomic DNA
- This kit is also compatible with Norgen's Saliva
  DNA Collection and Preservation Devices
- Also available in a 96-well format that can be integrated with a robotic automation system
- Rapid high throughput method to isolate genomic DNA

# FAST AND EASY PROCESSING USING A MAGNETIC BEAD SYSTEM

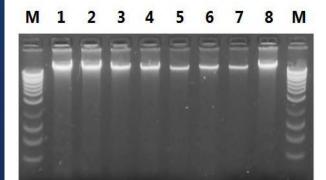


Figure 1. Resolution of DNA Isolated from Preserved Saliva Samples from Different Donors. DNA was isolated from 0.5 mL of preserved saliva samples collected from 8 different healthy donors using Norgen's Saliva DNA Isolation 96-Well Kit (Magnetic Bead System). For evaluation, 10  $\mu$ L of each 50  $\mu$ L elution was run on a 1X TAE 1.2% agarose gel. Marker = Norgen's HighRanger 1kb DNA Ladder (Cat. 11900).

### **Ordering Information**

Saliva DNA Isolation Kits (Magnetic Bead System)	
50 Preps	Cat. RU55400
2 x 96-Well Plates	Cat. RU62900

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### SALIVA DNA ISOLATION REAGENT KIT (UP TO 4 ML) (CAT. RU35720)



- Cost effective method to isolate DNA from preserved saliva samples collected using Norgen's saliva DNA devices or other preservation methods
- Solate DNA of high recovery and quality suitable for sensitive downstream applications including PCR, qPCR, sequencing, SNP analysis, microarrays, RFLP and Southern Blot Analysis

### ISOLATE DNA FROM A RANGE OF INPUT VOLUMES - UP TO 4 ML

### **Ordering Information**

Saliva DNA Isolation Reagent Kit 50 Preps

Cat. RU35720



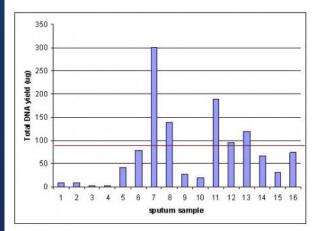
### SPUTUM DNA ISOLATION KIT

(CAT. 46200)



- Fast and easy processing using a spin column format
- DNA can be isolated and detected from as little as 100 µL of sputum
- Effective removal of PCR inhibitors

### FOR THE RAPID PURIFICATION OF HIGH QUALITY DNA FROM SPUTUM SAMPLES



**Figure 1. High Yield of Sputum DNA.** Sixteen sputum samples were collected and stored at room temperature for 1 day. DNA was subsequently purified using Norgen's Sputum DNA Isolation Kit, and the DNA yield was determined using the NanoVue Plus (GE Healthcare). The total average sputum DNA yield from 1.0 mL of preserved sputum of the 16 samples processed using Norgen's kit was 75.25 µg (indicated by the red line in the graph). Again it is important to stress that the yield of DNA obtained from each sample will vary from donor to donor as it relies heavily on the health status of the donor at the time the sample was taken.

### **Ordering Information**

Sputum DNA Isolation Kit		
25 Preps	Cat. 46200	

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### SPUTUM LIQUIFICATION BUFFER

(CAT. 28289)



- Simple and efficient liquification
- Sputum liquification to allow for the isolation of cells
- Liquify sputum prior to nucleic acid isolation

### SIMPLE AND EFFICIENT LIQUIFICATION OF VISCOUS SPUTUM SAMPLES

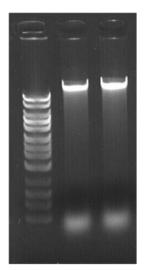


Figure 1. Isolation of Genomic DNA from Sputum Samples Liquefied using Norgen's Sputum Liquification Buffer. Expectorated sputum samples (0.2 mL) were collected and an equal volume of Norgen's Sputum Liquification Buffer (final concentration = 50  $\mu$ g/mL dithiothreitol) was added to each sample. Samples were then incubated at 37°C with intermittent mixing to allow the samples to be completely homogenized. Genomic DNA was then isolated from the homogenized sputum samples using Norgen's Sputum DNA Isolation Kit (Cat# 46200) according to the kit protocol. For each 100  $\mu$ L DNA elution, 10  $\mu$ L was loaded into the wells of a 1X TAE, 1% agarose gel, run at 150 volts for 30 minutes. The gel was then visualized via ethidium bromide staining and photographed.

### **Ordering Information**

Sputum Liquification Buffer	
10 mL	Cat. 282

IOTIL

Cat. 28289

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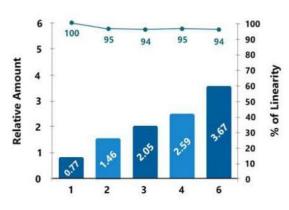


# PLASMA/SERUM CFC-DNA ADVANCED PURIFICATION KIT (CAT. 68000)



- Versatile plasma and serum input volumes (0.5 mL 6 mL)
- Concentrate cfc-DNA and ct-DNA into a flexible elution volume ranging from (25 μL - 50 μL)
- Minimal high molecular weight gDNA contamination in the purified cfc-DNA
  - Isolate inhibitor-free cell-free circulating DNA
- Purify superior quantity and quality DNA in 45 minutes
- Compatible with fresh, preserved or frozen serum/plasma prepared from blood collected on either Norgen's cf-DNA/cf-RNA Preservative Tubes (Cat. 63950, Dx63950), Cell-Free DNA BCT ® (Streck), Heparin, EDTA or Citrate
- Fully automated Isolation procedure on Hamilton MicroLab Nimbus
- Purification is based on spin column chromatography that uses Norgen's proprietary resin separation matrix

### FOR RAPID AND SIMPLE PURIFICATION OF ALL SIZES OF CFC-DNA AND CT-DNA FROM PLASMA AND SERUM SAMPLES



**Figure 1.** Norgens Plasma/Serum cfc-DNA Advanced Purification Kit was used to purify circulating DNA from 1mL, 2mL, 4 mL and 6mL plasma prepared from blood collected on EDTA as an anticoagulant. 2 microlitres of the purified DNA was then used as the template in qPCR reactions to assess the linearity of the purified cfc-DNA by targeting a short ALU gene target (115 bp) representing the mono-nucleosomal cfc-DNA population. Norgen's Plasma/Serum cfc-DNA Advanced Purification Kit showed an excellent linearity between all plasma volumes with a % of linearity of more than 90% indicating efficient cfc-DNA recovery from all plasma volumes used.

### **Ordering Information**

Plasma/Serum CFC-DNA Advanced Purification Kit	
50 Preps	Cat. 68000

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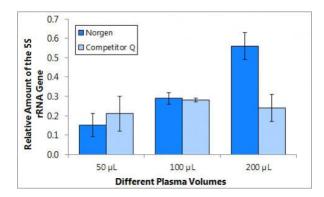
## PLASMA/SERUM CELL-FREE CIRCULATING DNA PURIFICATION KITS (CAT. 55500, Dx55500, 55100, Dx55100,

55600, Dx55600, 55800, Dx55800)



- Isolate viral and bacterial DNA
- Versatile plasma and serum input volumes (10 µL - 10 ml)
- Concentrate circulating DNA into a flexible elution volume ranging from (25 µL - 50 µL)
- Isolate inhibitor-free cell-free circulating DNA
- Purify high-quality DNA in 15-20 minutes
- Compatible with Streck Cell-Free DNA BCT® Tubes
- Purification is based on spin column chromatography that uses Norgen's proprietary resin separation matrix

## FOR RAPID AND SIMPLE PURIFICATION OF ALL SIZES OF CIRCULATING DNA FROM PLASMA AND SERUM SAMPLES



**Figure 1.** Norgens Plasma/Serum Cell-Free Circulating DNA Purification Micro Kit was used to purify circulating DNA from  $50 \,\mu$ L,  $100 \,\mu$ L and  $200 \,\mu$ L plasma prepared from blood collected on citrate as an anticoagulant, andcomparedto Competitor Q's kit. Two microlitres of the purified DNA was then used as the template in qPCR reactions to assess the relative amount of the purified housekeeping 5S rRNA gene. The relative amount of the 5S rRNA gene increases linearly with increasing the sample input volume. Norgen's kit showed the most consistent and the highest recovery of the housekeeping 5S rRNA gene as compared to the other isolation method.

#### **Ordering Information**

Plasma/Serum Cell-Free Purification Kits	e Circulating DNA
50 Preps (Micro)	Cat. 55500
50 Preps (Micro)	Cat. Dx55500 <b>C €</b>
50 Preps (Mini)	Cat. 55100
50 Preps (Mini)	Cat. Dx55100 <b>CE</b>
20 Preps (Midi)	Cat. 55600
20 Preps (Midi)	Cat. Dx55600 CE
10 Preps (Maxi)	Cat. 55800
10 Preps (Maxi)	Cat. Dx55800 🤇 🤅



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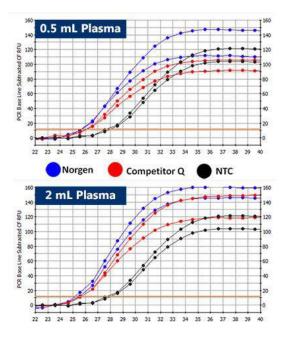


## PLASMA/SERUM CIRCULATING DNA PURIFICATION KIT (SLURRY FORMAT) (CAT. 50600, 51200, 51300)



- Isolate all sizes of circulating DNA from plasma and serum samples
- Isolate Viral and Bacterial DNA
- Versatile plasma and serum input volumes (50 μL 10 mL)
  - Concentrate circulating DNA into small elution volumes
  - Different elution strategies depending on the downstream application
- ✓ Isolate inhibitor-free circulating DNA for any application including PCR, qPCR, methylation-sensitive PCR
- Compatible with Streck Cell-Free DNA BCT® Tubes
- Isolate DNA with high quality and quantity from milk
- Purification is based on spin column chromatography that uses Norgen's proprietary resin separation matrix
  - uses norgen's proprietary resin separation matrix

## FOR THE **RAPID** AND **SIMPLE ISOLATION** OF **CIRCULATING DNA** FROM **PLASMA/SERUM** SAMPLES



**Figure 1. Detection of Human 5S Gene from 0.5 mL and 2 mL of Plasma.** Norgen's Plasma/Serum Circulating DNA Purification Midi Kit (Slurry Format) was compared to a leading Competitor's kit for their ability to isolate high quality plasma DNA ready for sensitive downstream applications such as qPCR. Norgen's samples (blue) were found to amplify sooner than competitor Q's samples (red), when both 0.5 mL and 2 mL of plasma were processed, indicating a higher recovery of high quality circulating DNA present in Norgen's samples.

#### **Ordering Information**

Plasma/Serum Circulating DNA Purification Kits (Slurry Format)	
50 Preps (Mini)	Cat. 50600
20 Preps (Midi)	Cat. 51200
10 Preps (Maxi)	Cat. 51300





## URINE CELL-FREE CIRCULATING DNA PURIFICATION KITS

(CAT. 56600, 56700, 56800)



#### 🗹 Isolate viral DNA

- Versatile urine input volumes (250 µL 30 mL)
- Concentrate circulating DNA into a flexible elution volume ranging from (50 μL - 100 μL)
- Isolate inhibitor-free cell-free circulating DNA
- Purify high-quality DNA in 15-20 minutes
- Compatible with Norgen's Urine Preservative and other commercially available urine preservatives
- Purification is based on spin column chromatography that uses Norgen's proprietary resin separation matrix

## ISOLATE ALL SIZES OF CIRCULATING DNA FROM FRESH, PRESERVED OR FROZEN URINE SAMPLES

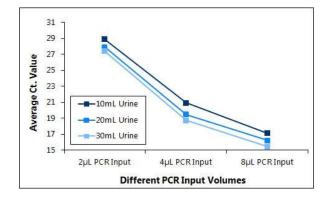


Figure 1. Determination of the amount of inhibition present in urine cell-free circulating DNA samples when detecting the human 5S gene. DNA was isolated from 10 mL, 20 mL and 30 mL urine using Norgen's Urine Cell-Free Circulating DNA Purification Maxi Kit (Cat# 56800). Increasing volumes of the elution (2, 4 and 8  $\mu$ L) were used in a 20  $\mu$ L qPCR reaction to observe any decrease in Ct value. An increase in Ct values with increasing amount of template would be a clear indication of PCR inhibitors present in the sample. An increase in elution volume used as a template in the qPCR did not affect the Ct value generated from qPCR. In fact the Ct values tend to decrease with increasing the PCR input volume, indicating that DNA purified from urine using Norgen's kit is free of the common inhibitors usually present in urine.

#### **Ordering Information**

	Urine Cell-Free Circulating DNA Purification Kits	
ļ	50 Preps (Mini)	Cat. 56600
1	20 Preps (Midi)	Cat. 56700
1	0 Preps (Maxi)	Cat. 56800

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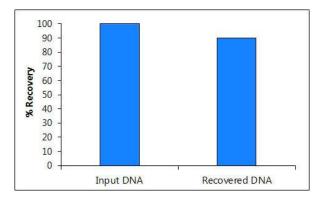
## ENDOTOXIN REMOVAL KITS

(CAT. 21900, 22700, 52200)



- Reduce endotoxin levels to 0.1 EU/µg DNA or less
- Effectively remove endotoxins in as little as 20 minutes
- Remove endotoxins from 25 µg up to 1 mg of DNA
- 🗹 Rapid spin-column format

## FOR THE **RAPID REMOVAL** OF ENDOTOXINS FROM UP TO 1 MG OF PREVIOUSLY PURIFIED DNA



**Figure 1. High DNA Recovery.** An input of 11  $\mu$ g of a plasmid in a 50  $\mu$ L volume with an endotoxin level of over 8 EU/ $\mu$ g was subjected to clean- $\mu$ p by Norgen's Endotoxin Removal Kit in triplicate. The 50  $\mu$ L DNA elution was quantified by spectrophotometry. There is very little loss of DNA associated with using Norgen's Endotoxin Removal Kit. Recoveries of plasmid DNA are greater than 90% of the input amount when using this kit with efficient endotoxin removal (see Figure 1.)

## **Ordering Information**

Endotoxin Removal Kits	;
25 Preps (Mini)	Cat. 22700
10 Preps (Midi)	Cat. 52200
4 Preps (Maxi)	Cat. 21900

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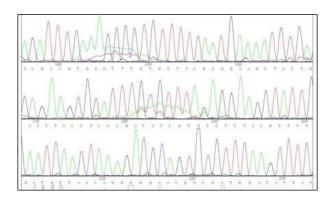
## PLASMID MINIPREP KITS

(CAT. 13300, 46400)



- High yield of plasmid DNA
- Purify plasmids up to 13 kb
- Plasmid DNA is ready for restriction digestion, bacterial transformation, sequencing and more
- Rapid spin-column format and 96-well format available

## FOR **RAPID** AND **CONVENIENT PLASMID DNA** PREPARATIONS



**Figure 1. High-Accuracy Sequencing.** One microgram of plasmid DNA purified by Norgens Plasmid Miniprep DNA Kit was used as a template in an Applied Biosystem DNA Sequencer. The result showed an accuracy of >99% over a 950 bp contiguous sequence.

## **Ordering Information**

Plasmid MiniPrep Kits	
50 Preps	Cat. 13300
250 Preps	Cat. 46400

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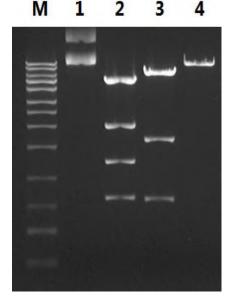
## PLASMID DNA MAXIPREP KITS

(CAT. 46500, 46600)



- Isolate up to 1.0 mg of plasmid DNA from 150 mL bacterial cultures
- Fast and efficient spin column procedure
- Purified DNA is of excellent yield and quality for restriction digestion, bacterial transformation, sequencing and more

# FOR THE **RAPID PREPARATION** OF **HIGH YIELDS** OF **PLASMID DNA**



## **Figure 1. Full Compatibility with Digests.** DNA isolated with Norgen's Plasmid DNA MaxiPrep Kit is easily digestible, often requiring less than 1 hour for full digestion. One microgram of a 9,309 bp plasmid purified by Norgen's DNA MaxiPrep Kit was digested for one hour at 37°C in a 20 µL reaction with 2 units of BamHI (Lane 2), HindIII (Lane 3), and Smal (Lane 4). The entire reaction was loaded on a 1X TAE, 0.9% agarose gel. Lane 1 is uncut plasmid, and Lane M is the Norgen UltraRanger 1kb DNA Ladder

### **Ordering Information**

Plasmid DNA MaxiPrep Kits	
4 Preps	Cat. 46500
20 Preps	Cat. 46600

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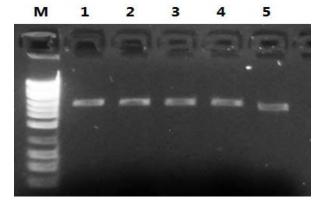
## PLASMID MINIPREP KITS (MAGNETIC BEAD SYSTEM)

(CAT. 60300, 63000)



- Isolate high quality plasmid DNA
- Recovered plasmid DNA is compatible with various downstream applications
- Also available in a 96-well format that can be integrated with a robotic automation system

## FAST, REPRODUCIBLE AND EASY PROCESSING USING A MAGNETIC BEAD SYSTEM



**Figure 1. High Quality of Plasmid DNA.** Resolution of plasmid DNA isolated from E. coli (1 mL) using Norgens Plasmid MiniPrep Kit (Magnetic Bead System). For evaluation, 10  $\mu$ L from 50  $\mu$ L of elution were digested with the restriction enzyme, EcoR I and run on 1X TAE 1.3% agarose gel. All plasmid DNA isolated were digestible, indicating the high quality of plasmid DNA. Marker = Norgens HighRanger DNA Ladder.

#### **Ordering Information**

Plasmid MiniPrep Kit (Magnetic Bead System) Kits	
50 Preps	Cat. 60300
2 x 96-Well Plates	Cat. 63000





# **DNA CLEAN-UP AND CONCENTRATION MICRO-ELUTE KIT** (CAT. 67200)



- Ideal for concentrating DNA from PCR and other enzymatic or labelling reactions and cleanup of plasmids or DNA previously isolated by other methods
- Isolated DNA is suitable for any downstream application including PCR, sequencing, ligation, RNA transcription, radiolabeling, arrays and more

# **RAPID CONCENTRATION** OF SMALL AMOUNTS OF DNA **INTO FLEXIBLE FINAL ELUTION VOLUMES** OF 8 TO 15 $\mu$ L

### **Kit Specifications**

DNA Clean-Up and Con	centration Micro-Elute Kit
Maximum Binding Capacity	40 µg of DNA
Size of DNA Purified	50 bp to 10,000 bp
Maximum Volume of Starting Material	200 µL
Minimum Elution Volume	8 µL
Time to Complete 10 Purifications	20 minutes
Average Recovery	≥ 90%

#### **Ordering Information**

DNA Clean-Up and Concentration Micro-Elute Kit	
50 Preps	Cat. 67200





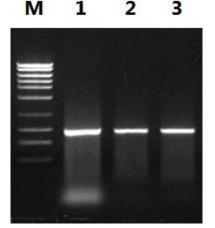
## PCR PURIFICATION KITS

(CAT. 14400, 24800, 45700)



- Purify amplified DNA ranging from 100 bp -15,000 bp in size
- Fast and efficient spin column format
- Available in a 50 prep size and a 250 prep size
- Also available in 96 well format
- Rapid high throughput method to isolate genomic DNA

## PURIFY AMPLIFIED DNA RANGING FROM 100 BP -15,000 BP IN SIZE



**Figure 1. Removal of Primer-Dimers.** Primer-dimers present in PCR reactions are effectively removed during the purification process with Norgen's PCR Purification Kit. One microgram of a 700 bp PCR fragment, spiked with 250 pmol of primer (Lane 1) was purified using Norgen's kit, with high recovery and no traces of spiked primer present in the elutions (Lanes 2 and 3). Lane 1 contains 400 ng (40%) of the input, and Lanes 2 and 3 contain 20  $\mu$ L (40%) of the 50  $\mu$ L elution (duplicate). Lane M is Norgen's MidRanger 1kb DNA Ladder. Eluted DNA was resolved on a 1X TAE, 1% agarose gel.

#### **Ordering Information**

PCR Purification Kits	
50 Preps	Cat. 14400
2 x 96-Well Plates	Cat. 24800
250 Preps	Cat. 45700



## **DNA GEL EXTRACTION KIT** (CAT. 13100)



- Fast and easy recovery of DNA from agarose gel fragments
- High recovery of desired DNA
- Convenient spin column format
- DNA is ready for ligation, restriction digestion, sequencing and more

## FOR RAPID EXTRACTION OF DNA FROM AGAROSE GEL FRAGMENTS

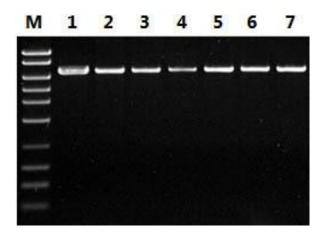


Figure 1. Efficient Recovery of Large DNA Fragments. The efficient recovery of Norgen's DNA Gel Extraction Kit is illustrated by purification of 1.5  $\mu$ g of a 3,700 bp fragment from a 0.9% agarose gel using Norgen's DNA Gel Extraction Kit (Lanes 5-7) and a competitor's kit (Lanes 2-4). Eluted DNA was resolved on a 1X TAE, 0.9% agarose gel. Lane 1 indicates 300 ng (20%) of the input amount, while lanes 2-7 contain 10  $\mu$ L (20%) of the 50  $\mu$ L eluted amount. Norgen's kit shows a higher recovery than the competitors kit.

### **Ordering Information**

DNA Gel Extraction Kit	
50 Preps	Cat. 13100

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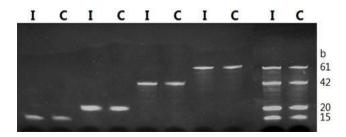
## **OLIGO CLEAN-UP AND CONCENTRATION KIT**

(CAT. 34100)



- Cleans and concentrates single-stranded or double-stranded DNA or RNA oligonucleotides larger than 10 bases
- Rapid and efficient spin column procedure
- No phenol, chloroform or alcohol precipitations are involved
- High recovery of up to 90%
- Efficient removal of enzymatic reaction buffers and proteins
- Purification is based on spin column chromatography that uses Norgen's proprietary resin separation matrix

## FAST AND SIMPLE CLEAN-UP AND CONCENTRATION OF OLIGONUCLEOTIDES WITHOUT THE USE OF PHENOL



**Figure 1. Integrity of Purified DNA Oligonucleotides.** Oligonucleotides of different sizes (15mer, 20mer, 42mer and 61mer) were purified using Norgen's Oligo Clean-Up and Concentration Kit, and the integrity of the oligonucleotides before and after cleaning were compared by running a 15% urea-PAGE gel. Equal volumes of the input (I) and cleaned (C) oligonucleotide were run, and as it can be seen the purified oligonucleotides were of a high quality and integrity. Please note that the kit can also clean a mixture of different oligo sizes, as shown on the far right two lanes.

#### **Ordering Information**

Oligo Clean-Up and Concentration Kit	
50 Preps	Cat. 34100

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## SEQUENCING REACTION CLEAN-UP KITS

(CAT. 34400, 34500)

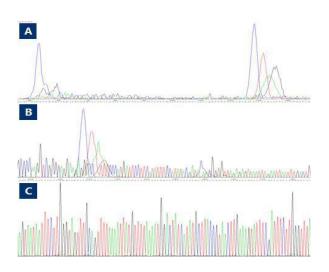


- Purify sequencing extension products from dye terminators, primers and other contaminants
- Also purify DNA from different enzymatic

reactions including restriction enzyme digests, Klenow reactions, alkaline phosphatase reactions, and ligations.

- High recovery
- Fast and efficient spin column format
- Also available in 96 well format for high throughput

## FOR THE RAPID PURIFICATION OF SEQUENCING EXTENSION PRODUCTS FROM REACTION MIXES



**Figure 1. Sequencing Chromatogram of pDC-CG DNA.** A single extension product was divided into 3 equal aliquots and was cleaned using either Norgen's Sequencing Reaction Clean-Up Kit, or one of two competitor kits. Sequencing data was then generated using Bigdye Terminator chemistry on the Applied Biosystems 3130xL DNA Sequencer. Panel A corresponds to the results when the sample was cleaned using Competitor 1, and this chromatogram indicates low extension product yields. Panel B corresponds to the results when the sample was cleaned using Competitor 2, and this product exhibited poor dye terminator removal that introduced several blobs to the sequence. Panel C corresponds to the sample cleaned with Norgen's Sequencing Reaction Clean-Up Kit, and shows good yield and efficient removal of dye terminator and contaminants as indicated from the chromatogram signals.

## **Ordering Information**

Total RNA Purification Kits	
50 Preps	Cat. 34500
2 X 96-Well Plates	Cat. 34400



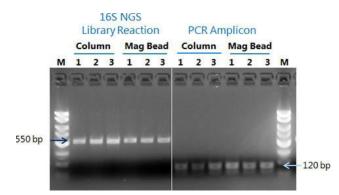


## PCR AND SEQUENCING REACTION CLEAN-UP KITS (MAGNETIC BEAD SYSTEM)(CAT. 60200, 62700)



- Purification of all types of enzymatic reactions
  High recovery
- High recovery
- Complete magnetic bead purification
- High integrity product
- Also available in a 96-well format that can be integrated with a robotic automation system
- Rapid high throughput method to isolate genomic DNA

## PURIFICATION FROM ALL SEQUENCE CYCLING BY-PRODUCTS



**Figure 1. Efficient Clean-Up and Recovery.** The performance of Norgen's PCR and Sequencing Reaction Clean-Up Kit (Magnetic Bead System) was compared to Norgen's columnbased PCR Purification Kit and Sequencing Reaction Clean-Up Kit by purifying and cleaning 20  $\mu$ L of 16S NGS library reaction and an end-point PCR. For evaluation, 10  $\mu$ L of each 50  $\mu$ L elution were run on a 1X TAE 1.4% agarose gel. As it can be seen, Norgen's PCR and Sequencing Reaction Clean-Up Kit (Magnetic Bead System) was able to successfully recover the target bands without any primer dimer contamination. Marker = Norgen's FastRunner DNA Ladder.

#### **Ordering Information**

PCR and Sequencing Reaction Clean-Up Kits (Magnetic Bead System)		
50 Preps	Cat. 60200	
2 x 96-Well Plates	Cat. 62700	

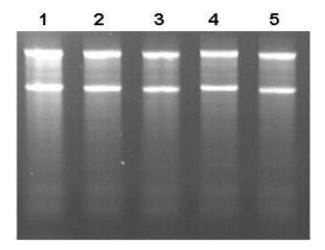


## CLEANALL DNA/RNA CLEAN-UP AND CONCENTRATION MICRO KIT (CAT. 23800)



- Can be used for the clean up of both RNA and DNA from enzymatic reactions, labeling etc.
- Purifies all sizes of RNA, from large mRNA down to microRNA (miRNA)
- Purifies all sizes of DNA, from small PCR products to plasmids to genomic DNA
- Removes endotoxins for transfection of injection ready RNA or DNA
- Rapid and efficient spin-column format (20 minutes)
- Purification is based on spin column chromatography that uses Norgen's resin separation matrix

## FOR THE **RAPID** AND **EFFICIENT PURIFICATION**, **CLEANUP** AND **CONCENTRATION** OF RNA OR DNA



**Figure 1. Clean-Up of RNA with High Recovery.** Norgen's CleanAll DNA/RNA Clean-Up and Concentration Micro Kit can be used to clean up various enzymatic reactions including DNase treatment. Lane 1 is the RNA input, while lanes 2-5 contain the RNA that has been cleaned using Norgen's CleanAll Kit. It can be seen that in all cases the recovery is high, and the purified RNA is intact and of a high quality.

### **Ordering Information**

CleanAll DNA/RNA Clean-Up And Concentration Micro Kit	
50 Preps	Cat. 23800





## LOW ABUNDANCE DNA QUANTIFICATION KIT

(CAT. 57200)



- Quantify DNA of a wide spectrum of concentrations, including the lower ng per μL, pg per μL and sub-pg per μL range
- DNA is accurately quantified using a standard curve constructed from the provided DNA standard

## COMPATIBLE WITH ANY REAL-TIME PCR SYSTEM

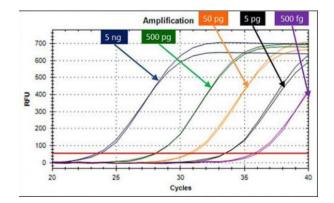


Figure 1. Sensitivity of DNA Quantification in the Picogram Range Using the Low Abundance DNA Quantification Kit. A representative qPCR Baseline Graph showing the amplification of a DNA standard dilution series. The Low Abundance DNA Quantification Kit can quantify purified DNA from low abundance samples such as liquid biopsies (Plasma or Urine). As little as 500 fg of DNA can be quantified.

### **Ordering Information**

Total RNA Purification Kit			
(9 Depatience	Cat	<b>F</b> 77	

48 Reactions

Cat. 57200

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## SELECT PUBLICATIONS AND APPLICATION NOTES

#### FFPE DNA Purification Kit (Cat. 47400, Dx47400)

Cruz-Flores, R., Hernández Rodríguez, M., Flores, J. S. O. G., & Dhar, A. K. (2022). Formalin-fixed paraffin-embedded tissues for microbiome analysis in rainbow trout (Oncorhynchus mykiss). Journal of Microbiological Methods, 192, 106389–106389.

https://doi.org/10.1016/j.mimet.2021.106389

#### Microbiome DNA Isolation Kit (Cat. 64100)

Christian, K., Shine, R., Day, K. A., Kaestli, M., Gibb, K., Shilton, C. M., & Brown, G. P. (2021). First line of defence: Skin microbiota may protect anurans from infective larval lungworms. International Journal for Parasitology. Parasites and Wildlife, 14, 185–189.

https://doi.org/10.1016/j.ijppaw.2021.02.014

#### Biofilm DNA Isolation Kit (Cat. 62300)

Rodríguez, J., Mais, L., Campana, R., Piroddi, L., Mascia, M., Gurauskis, J., ... Palmas, S. (2021). Comprehensive characterization of a cost-effective microbial fuel cell with Pt-free catalyst cathode and slip-casted ceramic membrane. International Journal of Hydrogen Energy, 46(51), 26205–26223.

https://doi.org/10.1016/j.ijhydene.2021.01.066

#### Fungi/Yeast Genomic DNA Isolation Kit (Cat. 27300, 27350)

Sikandar, S., Ujor, V. C., Ezeji, T. C., Rossington, J. L., Michel, F. C., McMahan, C. M., ... Cornish, K. (2017). Thermomyces lanuginosus STm: A source of thermostable hydrolytic enzymes for novel application in extraction of high-quality natural rubber from *Taraxacum kok-saghyz* (Rubber dandelion). *Industrial Crops and Products*, *103*, 161–168.

https://doi.org/10.1016/j.indcrop.2017.03.044

#### Bacterial Genomic DNA Isolation Kit (Cat. 17900, 17950)

Tao, X., Franasiak, J. M., Zhan, Y., Scott, R. T., Rajchel, J., Bedard, J., ... Chu, T. (2017). **Characterizing** the endometrial microbiome by analyzing the ultra-low bacteria from embryo transfer catheter tips in IVF cycles: Next generation sequencing (NCS) analysis of the 16S ribosomal gene. *Human Microbiome Journal*, *3*, 15–21.

https://doi.org/10.1016/j.humic.2017.01.004

#### Phage DNA Isolation Kit (Cat. 46800, 46850)

Nepal, R., Houtak, G., Karki, S., Dhungana, G., Vreugde, S., & Malla, R. (2022). **Genomic** characterization of three bacteriophages targeting multidrug resistant clinical isolates of Escherichia, *Klebsiella* and *Salmonella*. *Archives of Microbiology*, 204(6), 334–334.

https://doi.org/10.1007/s00203-022-02948-0

#### Milk DNA Preservation And Isolation Kit (Cat. 44800)

Lackey, K. A., Williams, J. E., Price, W. J., Carrothers, J. M., Brooker, S. L., Shafii, B., ... McGuire, M. K. (2017). Comparison of commercially-available preservatives for maintaining the integrity of bacterial DNA in human milk. *Journal of Microbiological Methods*, 141, 73–81.

https://doi.org/10.1016/j.mimet.2017.08.002



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#### Plant/Fungi DNA Isolation Kits (Cat. 26200, 26250, 26900)

Boccacci, P., Mela, A., Pavez Mina, C., Chitarra, W., Perrone, I., Gribaudo, I., & Gambino, G. (2017). Cultivar-specific gene modulation in Vitis vinifera: analysis of the promoters regulating the expression of WOX transcription factors. Scientific Reports, 7(1), 45670–45670.

https://doi.org/10.1038/srep45670

#### Soil DNA Isolation Plus Kits (Cat. 64000, 64060, 62000, 26560)

Yousaf, S., Anam, M., & Ali, N. (2017). Evaluating the production and bio-stimulating effect of 5-methyl 1, hydroxy phenazine on microbial fuel cell performance. International Journal of Environmental Science and Technology (Tehran), 14(7), 1439-1450.

https://doi.org/10.1007/s13762-016-1241-7

#### Blood DNA Isolation Kits (Cat. 46300, Dx46300, 46380, 51400, 31200, 46350)

Dal, T., Açıkgöz, Z. C., Başyiğit, T., Zeybek, H., & Durmaz, R. (2018). [Comparison of two commercial DNA extraction kits and PCR master mixes for the detection of Brucella from blood samples and blood culture bottles]. Mikrobiyoloji bulteni, 52(2), 135–146.

https://doi.org/10.5578/mb.66742

#### Urine DNA Isolation Micro Kit (Cat. 18100)

Biderman Waberski, M., Lindhurst, M., Keppler-Noreuil, K. M., Sapp, J. C., Baker, L., Gripp, K. W., ... Biesecker, L. G. (2018). Urine cell-free DNA is a biomarker for nephroblastomatosis or Wilms tumor in PIK3CA-related overgrowth spectrum (PROS). Genetics in Medicine, 20(9), 1077–1081.

https://doi.org/10.1038/gim.2017.228

#### Urine DNA Isolation Kit For Exfoliated Cells Or Bacteria (Cat. 47050)

Hussein, A. A., Elsayed, A. S., Durrani, M., Jing, Z., Iqbal, U., Gomez, E. C., ... Guru, K. A. (2021). Investigating the association between the urinary microbiome and bladder cancer: An exploratory study. Urologic Oncology, 39(6), 370.e9-370.e19.

https://doi.org/10.1016/j.urolonc.2020.12.011

#### Stool DNA Isolation Kits (Cat. 27600, Dx27600, 65600)

Oldenburg, C. E., Hinterwirth, A., Sié, A., Coulibaly, B., Ouermi, L., Dah, C., ... Doan, T. (2020). Gut Resistome After Oral Antibiotics in Preschool Children in Burkina Faso: A Randomized, Controlled Trial. Clinical Infectious Diseases, 70(3), 525-527.

https://doi.org/10.1093/cid/ciz455

#### Saliva DNA Isolation Kits (Cat. 45400, Dx45400, 35200), Sputum Liquification Buffer (Cat. 28289)

Niemeier-Walsh, C., Ryan, P. H., Meller, J., Ollberding, N. J., Adhikari, A., & Reponen, T. (2021). Exposure to traffic-related air pollution and bacterial diversity in the lower respiratory tract of children. PloS One, 16(6), e0244341-.

https://doi.org/10.1371/journal.pone.0244341





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DNA PURIFICATION

## Saliva DNA Isolation Reagent Kit (Up To 4 Ml) (Cat. 35720)

Soriano, S., Curry, K., Sadrameli, S. S., Wang, Q., Nute, M., Reeves, E., ... Villapol, S. (2022). Alterations to the gut microbiome after sport-related concussion in a collegiate football players cohort: A pilot study. *Brain, Behavior, & Immunity. Health, 21*, 100438–100438.

https://doi.org/10.1016/j.bbih.2022.100438

## Sputum Liquification Buffer (Cat. 28289)

Mehta, P., Alle, S., Chaturvedi, A., Swaminathan, A., Saifi, S., Maurya, R., ... Pandey, R. (2021). Clinico-Genomic Analysis Reveals Mutations Associated with COVID-19 Disease Severity: Possible Modulation by RNA Structure. *Pathogens (Basel), 10(9),* 1109–.

https://doi.org/10.3390/pathogens10091109

## PCR Purification Kits (Cat. 14400, 24800, 45700)

Naveen, M., & Siddalingeshwara, K. (2015). **Molecular Confirmation, Identification And Influence Of Carbon Source For The Production Of Xylanase From Penicillium Citribum.** *Journal of Drug Delivery and Therapeutics, 5(6),* 63-67.

https://doi.org/10.22270/jddt.v5i6.1113

## DNA Gel Extraction Kit (Cat. 13100)

Besbes, S., Shah, S., Al-dybiat, I., Mirshahi, S., Helfer, H., Najah, H., ... Mirshahi, M. (2017). Thrombopoietin Secretion by Human Ovarian Cancer Cells. International Journal of Cell Biology, 2017, 1873834–10.

https://doi.org/10.1155/2017/1873834

## Oligo CleanUp And Concentration Kit (Cat. 34100)

Wu, M. Z., Asahara, H., Tzertzinis, G., & Roy, B. (2020). Synthesis of low immunogenicity RNA with high-temperature in vitro transcription. *RNA* (*Cambridge*), 26(3), 345–360.

https://doi.org/10.1261/rna.073858.119

## CleanAll DNA/RNA Clean-Up And Concentration Micro Kit (Cat.23800)

Duan, Y.-F., Kong, X.-W., Schramm, A., Labouriau, R., Eriksen, J., & Petersen, S. O. (2017). Microbial N Transformations and N2O Emission after Simulated Grassland Cultivation: Effects of the Nitrification Inhibitor 3,4-Dimethylpyrazole Phosphate (DMPP). *Applied and Environmental Microbiology*, 83(1).

https://doi.org/10.1128/AEM.02019-16

## Plasma/Serum Cell-Free Circulating DNA Purification Kits (Cat. 55600, Dx55600)

Diefenbach, R. J., Lee, J. H., Kefford, R. F., & Rizos, H. (2018). **Evaluation of commercial kits for purification of circulating free DNA.** *Cancer Genetics, 228-229,* 21–27.

https://doi.org/10.1016/j.cancergen.2018.08.005



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#### Plasma/Serum Cell-Free Circulating DNA Purification Kits (Cat. 55100, Dx55100)

Kirov, A., Mihaylova, Z., Petrova, V., Todorov, T., Petkova, D., Garev, A., & Todorova-Georgieva, A. (2018). **KRAS-dependent and independent mechanisms of progressive disease (PD) in colorectal cancer (CRC) patients (pts) with liver metastases (LM) while monitoring on circulating cell free DNA (cfDNA).** *Annals of Oncology, 29 Suppl 8,* **viii185–.** 

https://doi.org/10.1093/annonc/mdy281.100

#### Plasma/Serum Circulating DNA Purification Kits (Slurry Format) (Cat. 50600, 51200, 51300)

Mauger, F., Dulary, C., Daviaud, C., Deleuze, J.-F., & Tost, J. (2015). **Comprehensive evaluation of methods to isolate, quantify, and characterize circulating cell-free DNA from small volumes of plasma.** *Analytical and Bioanalytical Chemistry, 407(22),* 6873–6878.

https://doi.org/10.1007/s00216-015-8846-4

#### Urine Cell-Free Circulating DNA Purification (Cat. 56600, 56700, 56800)

Lee, E. Y., Lee, E.-J., Yoon, H., Lee, D. H., & Kim, K. H. (2020). Comparison of Four Commercial Kits for Isolation of Urinary Cell-Free DNA and Sample Storage Conditions. *Diagnostics (Basel), 10(4),* 234–.

https://doi.org/10.3390/diagnostics10040234

#### Endotoxin Removal Kit (Cat. 22700, 52200, 21900)

Prochazka, L., Angelici, B., Haefliger, B., & Benenson, Y. (2014). **Highly modular bow-tie gene** circuits with programmable dynamic behaviour. *Nature Communications*, *5*(1), 4729–4729.

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DNA PURIFICATION





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