

NUCLEIC ACID PURIFICATION KITS



*Optimized
for Bead Mill
Homogenization*



**Purify High Quality DNA and RNA
from Tissues, Soil, Feces, Cells,
Bacteria and Fungi**

 **OMNI**
INTERNATIONAL

OMNI BEAD MILL NUCLEIC PURIFICATION KITS

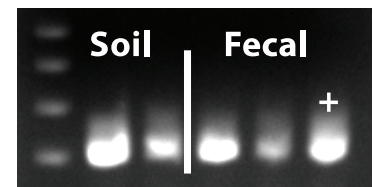
The **Omni Bead Mill Nucleic Purification Kits** are designed for use with Omni Bead Ruptor Bead Mill homogenizers to extract DNA or RNA from bacterial cells, fungal cells or tissues. Omni Nucleic Acid Purification Kits contain spin-column capture columns, pre-filled bead beating tubes and nontoxic reagents. The optimized reagents are designed specifically for sample dissociation through bead milling and ensure that high quality DNA and RNA is extracted in high yields. Omni Pre-filled bead tubes contain an optimized amount of lysing matrix and are certified DNase/RNase free to ensure purified DNA/RNA is of the highest quality. DNA and RNA purified using the Omni Bead Mill Nucleic Acid Purification Kits are ready for downstream applications such as PCR, RT-PCR, southern blots, northern blots, and enzyme digestions.

FEATURES

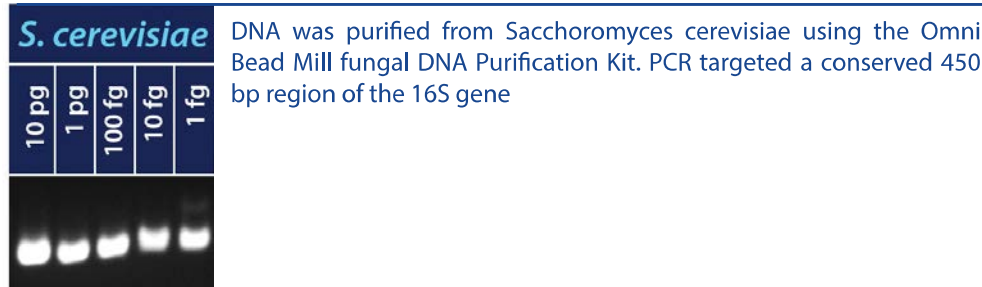
- Nucleic acid extraction kits designed specifically for bead mill homogenization
- Contains pre-filled bead tubes, spin-columns and extraction reagents
- Rapid DNA and RNA isolation
- PCR inhibitors removed
- Non toxic reagents with no organic extractions
- Pre-filled bead tubes certified DNase/RNase Free

REMOVAL OF PCR INHIBITORS FROM SOIL AND FECES

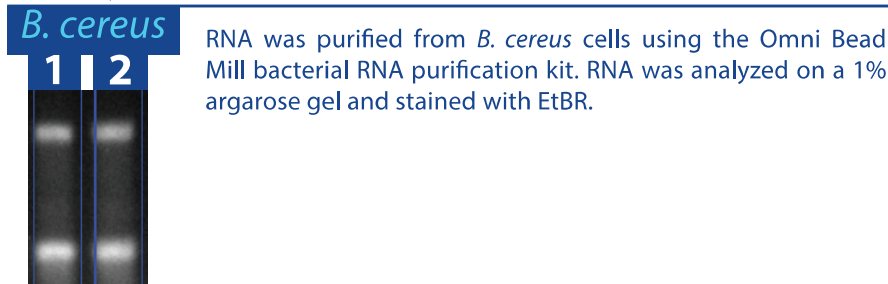
Each soil and fecal DNA sample was spiked with 70 ng of pGLO plasmid DNA. Genomic DNA was extracted using the Omni soil and fecal DNA kits. DNA was then subjected to end point PCR to detect the GFP gene (714 bp). It is important to note that no inhibitors were found from either of the extractions.



PCR PRODUCTS OBTAINED FROM DNA ISOLATION OF *S. CEREVISIAE*



HIGH QUALITY RNA PURIFIED FROM *BACILLUS CEREUS* CELLS

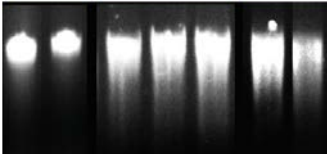


GENOMIC DNA OBTAINED FROM 0.2 GRAMS OF SOIL



HIGH QUALITY DNA OBTAINED FROM BACTERIA AND TISSUES

<i>E.coli</i>		Rat Brain			Rat Heart	
1	2	3	4	5	6	7



DNA was purified using the Omni Bead Mill Bacterial and Tissue DNA Purification kits. DNA was analyzed on a 1% agarose/ E+Br gel

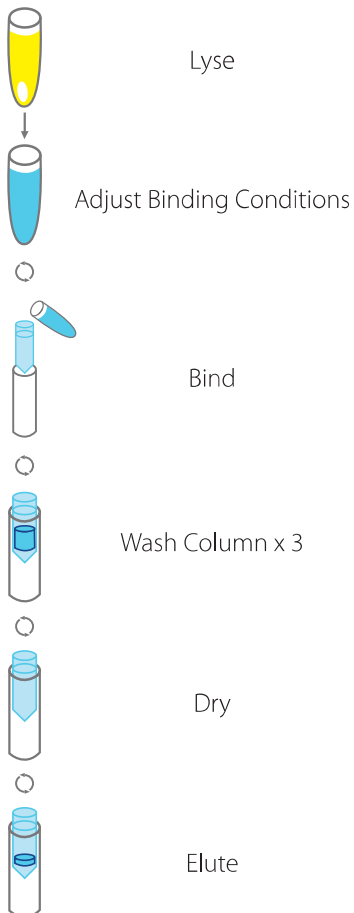
EXAMPLE OF DNA PROTOCOLS

1. Samples are resuspended in bead mill lysis buffer.
2. Samples are dissociated through bead mill homogenization.
3. For Soil and Fecal Kits inhibitors are removed
4. Homogenate is passed through the Omni spin column to bind DNA or RNA.
5. Column is washed to remove contaminants.
6. DNA is eluted

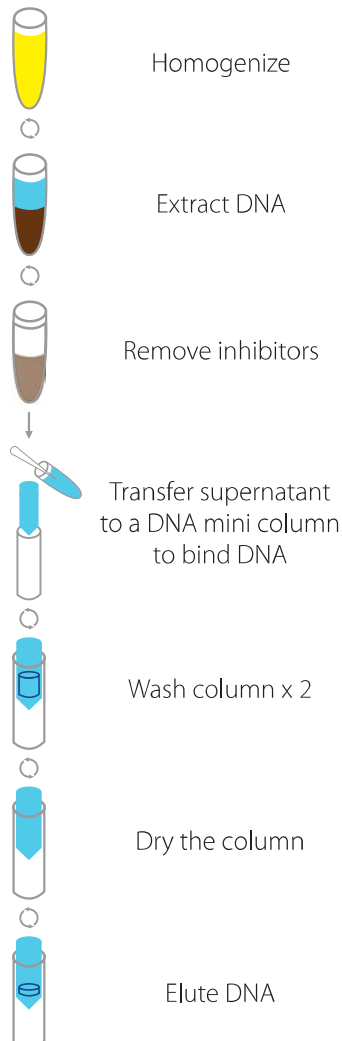
EXAMPLE OF RNA PROTOCOL

1. Fungal cell walls are permeabilized with lyticase
2. Cell disruption through bead milling
3. RNA is bound to the spin-column matrix
4. Contaminants are removed through washing
5. High purity RNA is eluted form column

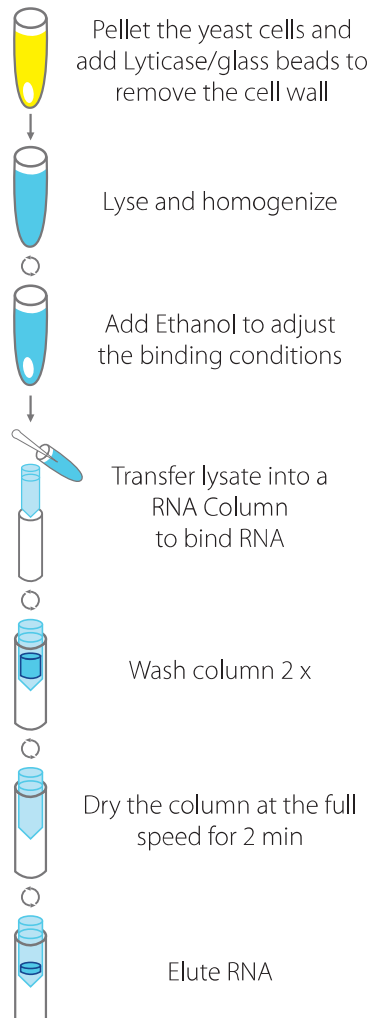
TISSUE AND CELLS



SOIL AND FECES



YEAST AND BACTERIA



OMNI BEAD MILL NUCLEIC ACID EXTRACTION KITS

TARGET	PRODUCT	PREPS	CATALOG #	SAMPLE SIZE	PRE-FILLED BEAD TUBES
Genomic DNA	Tissue DNA Kit	50	26-007	Up to 30 mg tissue	
Genomic DNA	Bead Mill Tissue DNA Kit	50	26-007B	Up to 30 mg tissue	2 mL with 2.8 mm ceramic
Genomic DNA	Bacteria DNA Kit	50	26-008	Up to 3x10 ⁷ cells	
Genomic DNA	Bead Mill Bacteria DNA Kit	50	26-008B	Up to 3x10 ⁷ cells	2 mL with 0.5 mm glass
Genomic DNA	Yeast DNA Kit	50	26-009	Up to 3x10 ⁷ cells	
Genomic DNA	Bead Mill Yeast DNA Kit	50	26-009B	Up to 3x10 ⁷ cells	2 mL with 0.5 mm glass
RNA	Tissue RNA Kit	50	26-010	Up to 30 mg tissue	
RNA	Bead Mill Tissue RNA Kit	50	26-010B	Up to 30 mg tissue	2 mL with 2.8 mm ceramic
RNA	Bacteria RNA Kit	50	26-011	Up to 3x10 ⁷ cells	
RNA	Bead Mill Bacteria RNA Kit	50	26-011B	Up to 3x10 ⁷ cells	2 mL with 0.5 mm glass
RNA	Yeast RNA Kit	50	26-012	Up to 3x10 ⁷ cells	
RNA	Bead Mill Yeast RNA Kit	50	26-012B	Up to 3x10 ⁷ cells	2 mL with 0.5 mm glass
Genomic DNA	Bead Mill Soil DNA Kit	50	26-013G	Up to 0.25 g soil	2 mL with 0.7 mm garnet
Genomic DNA	Bead Mill Soil Midi DNA Kit	50	26-013B	Up to 1 g soil	30 g bulk 0.5 mm glass
Genomic DNA	Bead Mill Fecal DNA Kit	50	26-014B	Up to 0.25 g feces	2 mL with 0.5 mm glass



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Rev D