

INSTRUCTION MANUAL

Quick-DNA™ Fungal/Bacterial 96 Kit Catalog No. D6006

Highlights

- Simple, high-throughput (96-well) isolation of DNA from all types of tough-to-lyse fungi (e.g., yeast) and bacteria in as little as 40 minutes.
- State-of-the-art, ultra-high density **BashingBeads™** are fracture resistant and chemically inert.
- Omits the use of organic denaturants as well as proteinases.

Contents

| | |
|--|---|
| Product Contents & Specifications..... | 1 |
| Product Description..... | 2 |
| Protocol..... | 3 |
| Ordering Information..... | 4 |

Satisfaction of all Zymo Research products is guaranteed. If you should be dissatisfied with this product please call 1-888-882-9682.

Product Contents

| Quick-DNA™ Fungal/Bacterial 96 Kit (Kit Size) | D6006 (2x96 preps.) | Storage Temperature |
|--|----------------------------|----------------------------|
| ZR BashingBead™ Lysis Rack (0.1 & 0.5 mm) | 2 | Room Temp. |
| BashingBead™ Buffer | (2) 40 ml | Room Temp. |
| Genomic Lysis Buffer¹ | 150 ml | Room Temp. |
| DNA Pre-Wash Buffer² | 50 ml | Room Temp. |
| g-DNA Wash Buffer | 100 ml | Room Temp. |
| DNA Elution Buffer | (2) 10 ml | Room Temp. |
| 96-Well Block | 2 | Room Temp. |
| Silicon-A™ Plate | 2 | Room Temp. |
| Collection Plate | 2 | Room Temp. |
| Elution Plate | 2 | Room Temp. |
| Cover Foil | 4 | Room Temp. |
| Instruction Manual | 1 | - |

Note - Integrity of kit components is guaranteed for up to one year from date of purchase. Reagents are routinely tested on a lot-to-lot basis to ensure they provide maximal performance and reliability.

¹ For optimal performance, add beta-mercaptoethanol to 0.5%(v/v) i.e., 750 µl per 150 ml.

² A precipitate may have formed in the DNA Pre-Wash Buffer during shipping. To completely resuspend the buffer, incubate the bottle at 30 – 37 °C for 30 minutes and mix by inversion. DO NOT MICROWAVE.

Specifications

- **Format** – Bead Beating, 96-Well Plate Purification
- **Sample Sources** – 10-20 mg (wet weight) fungi or bacteria. This equates to approximately 2×10^8 bacterial cells and 2×10^7 yeast. Spores, pollen, nematodes, other microorganisms, and can also be sampled.
- **DNA Purity** – High quality DNA is eluted with **DNA Elution Buffer** making it perfect for PCR ($A_{260}/A_{280} > 1.8$).
- **DNA Size Limits** – Capable of recovering genomic DNA up to and above 40 kb. In most instances, mitochondrial DNA and viral DNA (if present) will also be recovered.
- **DNA Recovery** – Typically, up to 5 µg total DNA is eluted into 100 µl (25 µl minimum) **DNA Elution Buffer** per sample.
- **Equipment** – Centrifuge w/ microplate carriers, 96-well plate/block disruptor or pulverizer

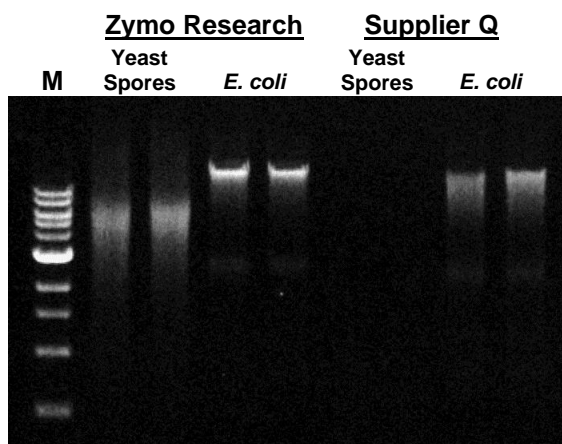
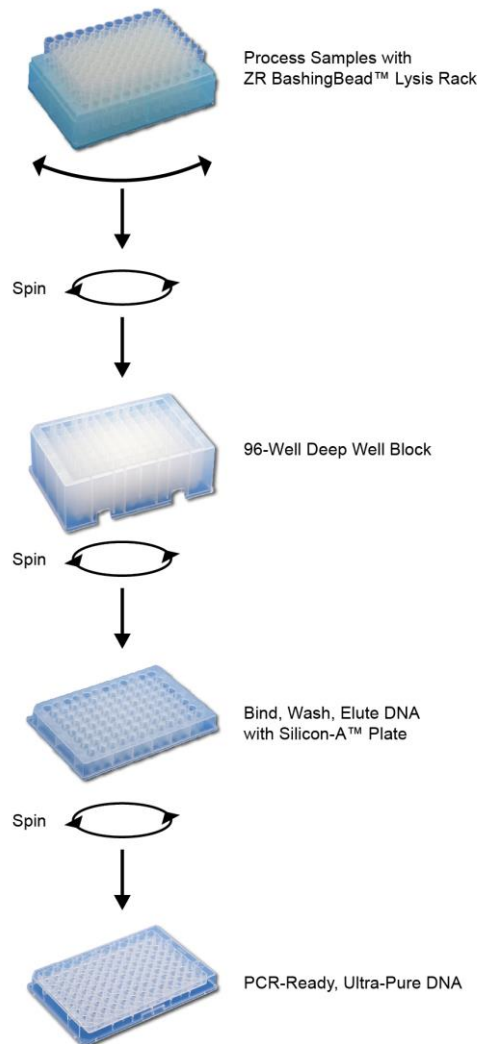
Note - ™ Trademarks of Zymo Research Corporation. This product is for research use only and should only be used by trained professionals. It is not intended for use in diagnostic procedures. Some reagents included with this kit are irritants. Wear protective gloves and eye protection. Follow the safety guidelines and rules enacted by your research institution or facility. 2010 GenoGrinder® is a registered trademark of Spex SamplePrep®, LLC

ZYMO RESEARCH CORP.

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Product Description

The **Quick-DNA™ Fungal/Bacterial 96 Kit** is designed for the simple, rapid, and high-throughput (96-well) isolation of DNA from tough-to-lyse fungi including: *A. fumigatus*, *C. albicans*, *N. crassa*, *S. cerevisiae*, *S. pombe*, as well as from mycelium and Gram(+/-) bacteria. The procedure is easy and can be completed in as little as 40 minutes. Fungal and/or bacterial samples are added directly to the tubes of a **ZR BashingBead™ Lysis Rack (0.1 & 0.5 mm)** and rapidly and efficiently lysed by bead beating (e.g., 2010 GenoGrinder® Instrument, Page 4) without using organic denaturants or proteinases. The DNA is isolated and purified using our Zymo-Spin™ Technology and is ideal for downstream molecular-based applications including PCR, array, etc. A schematic of the **Quick-DNA™ Fungal/Bacterial 96 Kit** procedure is shown below.



High yield DNA is successfully isolated from *Saccharomyces cerevisiae* (spores) and *E. coli* cells using the **Quick-DNA™ Fungal/Bacterial Kit**. Equivalent amounts of yeast or bacteria were processed using the **Quick-DNA™ Fungal/Bacterial Kit** and the kit from supplier Q. Equal volumes of eluted DNA were then analyzed in a 0.8% (w/v) agarose/ethidium bromide gel. The size marker "M" is a 1 kb ladder (Zymo Research).

For **Technical Assistance**, please contact those at **Zymo Research's Technical Department** at 1-888-882-9682 or E-mail to tech@zymoresearch.com.

Protocol

For optimal performance, add beta-mercaptoethanol (user supplied) to the **Genomic Lysis Buffer** to a final dilution of 0.5%(v/v) i.e., 750 µl per 150 ml.

¹ This equates to approximately 2x10⁸ bacterial cells and 2x10⁷ yeast cells.

1. Add 10-20 mg (wet weight) bacterial/fungal cells¹ that have been resuspended in up to 50 µl of water or isotonic buffer (e.g., PBS) to the tubes of a **ZR BashingBead™ Lysis Rack (0.1 & 0.5 mm)**. Add 400 µl **BashingBead™ Buffer** to each tube. Cap tubes tightly to prevent leakage.
2. Secure in a 96-well block/plate bead beater (e.g., 2010 GenoGrinder®) and process samples. Optimization of processing time/speed will be necessary for complete sample lysis.

***Note:** Processing times may be as little as one minute when using high-speed bead beaters (e.g., 2000 GenoGrinder®, page 4). See manufacturer's literature for specific operating information.*

3. Centrifuge the ZR BashingBead™ Lysis Rack (0.1 & 0.5 mm) at ≥ 3,000 x g (5,000 x g max.) for 5 minutes.
4. Transfer up to 250 µl supernatant to each well of a **96-Well Block**.
5. Add 750 µl of **Genomic Lysis Buffer** to the supernatant in the 96-Well Block from Step 4. Cover completely with **Cover Foil** and mix thoroughly by vortexing block for 2 minutes. Centrifuge the 96-Well Block at ≥ 3,000 x g (5,000 x g max.) for 5 minutes.
6. Remove or pierce foil and transfer 500 µl from the wells of Step 5 to the wells² of a **Silicon-A™ Plate**, mounted on a **Collection Plate**. Centrifuge the assembly at ≥ 3,000 x g (5,000 x g max.) for 5 minutes.
7. Discard the flow through from the Collection Plate and repeat Step 6.
8. Add 200 µl **DNA Pre-Wash Buffer** to the wells of the Silicon-A™ Plate, mounted on the emptied Collection Plate, and centrifuge the assembly at ≥ 3,000 x g for 5 minutes.
9. Add 500 µl **g-DNA Wash Buffer** to the wells of the Silicon-A™ Plate on the Collection Plate and centrifuge the assembly at ≥ 3,000 x g for 5 minutes.
10. Transfer the Silicon-A™ Plate to an **Elution Plate** and add 100 µl (25 µl minimum) **DNA Elution Buffer** directly to the matrices in the plate. Centrifuge the assembly at ≥ 3,000 x g for 5 minutes.

Eluted, ultra-pure DNA is now ready for use in your experiments, or the **Elution Plate** can be covered with **Cover Foil** for storage of the DNA.

² Be careful to avoid pipetting debris that can clog the wells of the Silicon-A™ Plate.

2010 GenoGrinder® is a registered trademark of Spex SamplePrep®, LLC

Ordering Information

| Product Description | Format | Catalog No. | Kit Size |
|---|-------------|-------------|-------------|
| Quick-DNA™ Fungal/Bacterial Miniprep Kit | Spin Column | D6005 | 50 preps. |
| Quick-DNA™ Fungal/Bacterial 96 Kit | 96-Well | D6006 | 2x96 preps. |

| For Individual Sale | Catalog No. | Amount |
|--|-------------|----------|
| Genomic Lysis Buffer | D3004-1-150 | 150 ml |
| BashingBead™ Buffer | D6001-3-40 | 40 ml |
| DNA Pre-Wash Buffer | D3004-5-50 | 50 ml |
| g-DNA Wash Buffer | D3004-2-100 | 100 ml |
| DNA Elution Buffer | D3004-4-10 | 10 ml |
| ZR BashingBead™ Lysis Rack (0.1 & 0.5 mm) | S6002-96-3 | 1 rack |
| 96-Well Block | P1001-2 | 2 blocks |
| Silicon-A™ Plates | C2001 | 2 plates |
| Collection Plates | C2002 | 2 plates |
| Elution Plates | C2003 | 2 plates |

The Ultimate Combination For High-Throughput Sample Lysis!

High-Throughput BashingBead™ Kits From Zymo Research & The 2010 GenoGrinder® Instrument From Spex SamplePrep

High-Throughput Lysis of Tough or Frozen Samples in Minutes!



| Description | Cat. No. | Amount |
|--|----------|--------|
| 2010 GenoGrinder® w/ 2 x 96-well block head adapter | S6006 | 1 unit |
| Aluminum CryoBlock w/ 48 x 2.0 ml Tube Adapter | S6006-1 | 1 pair |

GenoGrinder and accessories for sale in USA only. Visit www.spexcsp.com for a distributor near you.

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