

# Produktinformation



Forschungsprodukte & Biochemikalien
Zellkultur & Verbrauchsmaterial
Diagnostik & molekulare Diagnostik
Laborgeräte & Service

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#### Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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### Quick-DNA<sup>™</sup> Fungal/Bacterial Miniprep Kit

DNA from tough-to-lyse fungi and bacteria samples.

#### Highlights

- Simple, efficient isolation of DNA (up to 25 µg/prep) from all types of tough-to-lyse fungi (e.g., yeast) and bacteria in as little as 15 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.

Catalog Numbers: D6005



Scan with your smart-phone camera to view the online protocol/video.







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#### **Product Contents**

Quick-DNA™ Fungal/Bacterial Miniprep Kit	<b>D6005</b> (50 Preps.)	Storage Temperature	
ZR BashingBead™ Lysis Tubes (0.1 & 0.5 mm)	50	Room Temp.	
BashingBead™ Buffer	40 ml	Room Temp.	
Genomic Lysis Buffer <sup>1</sup>	100 ml	Room Temp.	
DNA Pre-Wash Buffer <sup>2</sup>	15 ml	Room Temp.	
g-DNA Wash Buffer	50 ml	Room Temp.	
DNA Elution Buffer	10 ml	Room Temp.	
Zymo-Spin™ III-F Filters	50	Room Temp.	
Zymo-Spin™ IICR Columns	50	Room Temp.	
Collection Tubes	150	Room Temp.	
Instruction Manual	1	-	

For optimal performance, add beta-mercaptoethanol to 0.5%(v/v) *i.e.*, 500 µl per 100 ml.
 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, Spin Column Purification
- Sample Sources 50 100 mg (wet weight) fungi or bacteria; this equates to approximately 10<sup>9</sup> bacterial cells and 10<sup>8</sup> yeast cells. Spores, pollen, nematodes, as well as other microorganisms can also be sampled.
- **DNA Purity** High quality DNA is eluted with **DNA Elution Buffer** making it perfect for PCR (A<sub>260</sub>/A<sub>280</sub> >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 25 μg total DNA is eluted into 100 μl (35 μl minimum) DNA Elution Buffer per sample.
- **Equipment** Microcentrifuge, Vortex, Cell Disrupter/Pulverizer (recommended)

#### **Product Description**

The Quick-DNA™ Fungal/Bacterial Miniprep Kit is designed for the simple, rapid 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 positive and Gram negative bacteria. The procedure is easy and can be completed in as little as 15 minutes: fungal and/or bacterial samples are added directly to a ZR BashingBead™ Lysis Tube (0.1 & 0.5 mm) and rapidly and efficiently lysed by bead beating without using organic denaturants or proteinases. The DNA is then isolated and purified using our Zymo-Spin<sup>™</sup> Technology and is ideal for downstream molecular-based applications including PCR, array, etc. A schematic of the Quick-DNA™ Fungal/Bacterial Miniprep Kit procedure is shown below.



PCR Ready, Ultra-Pure DNA

E. coli using the Quick-DNA™ Fungal/Bacteria Kit was high-quality and structurally intact. Equivalent amounts of yeast and bacteria were processed using the Quick-DNA™ Fungal/Bacterial Kit or the Supplier A kit. Equal volumes of eluted DNA were analyzed on a 0.8% (w/v) agarose gel stained with EtBr.

DNA/RNA Shield™ (R1100-50, R1100-250) can be used to stabilize nucleic acids and inactivate infectious agents in a variety of samples, without the need for reagent removal.

For rapid, robust, and simple purification of high guality, inhibitor-free DNA from any sample including feces, soil, water, biofilms, swabs, saliva, body fluids, etc. use the ZymoBIOMICS™ DNA Miniprep Kit (D4300).

#### 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.*, 500 µl per 100 ml.

- Add 50 100 mg (wet weight) fungal or bacterial cells<sup>1</sup> that have been resuspended in up to 200 µl of water or isotonic buffer (*e.g.*, PBS) to a ZR BashingBead<sup>™</sup> Lysis Tube (0.1 mm & 0.5 mm). Add 750 µl BashingBead<sup>™</sup> Buffer to the tube<sup>2</sup>.
- 2. Secure in a bead beater fitted with a 2 ml tube holder assembly and process at maximum speed for ≥ 5 minutes.

**Note**: Required processing time will vary depending on the device and application and therefore should be evaluated on a case by case basis.

For example, processing times may be as little as 3 minutes when using high-speed cell disrupters (e.g., the portable TerraLyzer™ Sample Processor, FastPrep® -24, or similar) or as long as 20 minutes when using lower speeds (e.g., Disruptor Genie™, or standard benchtop vortexes). See manufacturer's literature for operating information.

- 3. Centrifuge the **ZR BashingBead™ Lysis Tube (0.1 & 0.5 mm)** in a microcentrifuge at 10,000 x g for 1 minute.
- 4. Transfer up to 400 µl supernatant to a **Zymo-Spin™ III-F Filter** in a **Collection Tube** and centrifuge at 8,000 x g for 1 minute.
- 5. Add 1,200 µl of **Genomic Lysis Buffer** to the filtrate in the **Collection Tube** from Step 4.
- 6. Transfer 800  $\mu$ I of the mixture from Step 5 to a **Zymo-Spin<sup>™</sup> IICR Column**<sup>3</sup> in a **Collection Tube** and centrifuge at 10,000 x *g* for 1 minute.
- 7. Discard the flow through from the **Collection Tube** and repeat Step 6.
- Add 200 µl DNA Pre-Wash Buffer to the Zymo-Spin<sup>™</sup> IICR Column in a <u>new</u> Collection Tube and centrifuge at 10,000 x g for 1 minute.
- 9. Add 500 µl **g-DNA Wash Buffer** to the **Zymo-Spin™ IICR Column** and centrifuge at 10,000 x g for 1 minute.

<sup>1</sup> This equates to approximately 10<sup>9</sup> bacterial cells and 10<sup>8</sup> yeast cells.

<sup>2</sup> Cap tube tightly to prevent leakage.

<sup>3</sup> The Zymo-Spin™ IICR Column has a maximum capacity of 800 µl.

10. Transfer the **Zymo-Spin™ IICR Column** to a clean 1.5 ml microcentrifuge tube and add 100 μl (35 μl minimum) **DNA Elution Buffer** directly to the column matrix. Centrifuge at 10,000 x *g* for 30 seconds to elute the DNA.

Ultra-pure DNA is now ready for use in your experiments.

## **Ordering Information**

Product Description	Catalog No.	Size
Quick-DNA™ Fungal/Bacterial Microprep Kit	D6007	50 Preps.
Quick-DNA™ Fungal/Bacterial Miniprep Kit	D6005	50 Preps.
Quick-DNA™ Fungal/Bacterial Midiprep Kit	D6105	25 Preps.
Quick-DNA™ Fungal/Bacterial 96 Kit	D6006	2 x 96 Preps.

Individual Kit Components	Catalog No.	Amount
Genomic Lysis Buffer	D3004-1-100	100 ml
BashingBead™ Buffer	D6001-3-40	40 ml
DNA Pre-Wash Buffer	D3004-5-15	15 ml
g-DNA Wash Buffer	D3004-2-50	50 ml
DNA Elution Buffer	D3004-4-10	10 ml
ZR BashingBead™ Lysis Tubes (0.1 & 0.5 mm)	S6012-50	50 Tubes
Zymo-Spin™ III-F Filters	C1057-50	50 Pack
Zymo-Spin™ IICR Columns	C1078-50	50 Pack
Collection Tubes	C1001-50 C1001-500 C1001-1000	50 Pack 500 Pack 1,000 Pack

Lysis Instruments		Catalog No.	Amount
	Disruptor Genie™, 120V w/ 2 ml tube holder assembly.	S6001-2-120	1 Unit
	Disruptor Genie™, 230V w/ 2 ml tube holder assembly.	S6001-2-230	1 Unit
	TurboMix Attachment, 2 ml Permanently mounts to most existing Vortex Genie™ mixers converting them to a Disruptor Genie™.	S6004	1 Unit

The **Disruptor Genie™** with 2 ml tube holder assembly from Scientific Industries, Inc. (Cat. No. S6001-2-120 from Zymo Research Corp.)



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