



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

INSTRUCTION MANUAL

ZR Genomic DNA™-Tissue MicroPrep

Catalog No. **D3040 & D3041**

Highlights

- For high quality DNA purification from small amounts of solid tissue (e.g., tailsnips, earpunches, adipose tissue, etc.), whole blood, plasma, serum, buffy coat, lymphocytes, cultured cells, FFPE tissues, semen, hair, and other biological sources.
- Combines Proteinase K digestion with innovative *Fast-Spin* column purification technology.
- Isolated DNA is ideal for PCR, endonuclease digestion, Southern blotting, bisulfite conversion/methylation detection, sequencing, genotyping, etc.

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Satisfaction of all Zymo Research products is guaranteed. If you are not satisfied with this product please call 1-888-882-9682.

Product Contents

| ZR Genomic DNA™-Tissue MicroPrep (Kit Size) | D3040 (50 Preps.) | D3041 (200 Preps.) | Storage Temperature |
|---|-------------------|--------------------|---------------------|
| Proteinase K & Storage Buffer* | 2 x 5 mg | 2 x 20 mg | -20°C(after mixing) |
| 2X Digestion Buffer** | 5 ml | 20 ml | Room Temp. |
| Genomic Lysis Buffer*** | 50 ml | 2 x 100 ml | Room Temp. |
| DNA Pre-Wash Buffer** | 15 ml | 50 ml | Room Temp. |
| g-DNA Wash Buffer | 50 ml | 100 ml | Room Temp. |
| DNA Elution Buffer | 10 ml | 50 ml | Room Temp. |
| Zymo-Spin™ IC Columns | 50 columns | 200 columns | Room Temp. |
| Collection Tubes | 100 tubes | 400 tubes | Room Temp. |
| Instruction Manual | 1 | 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.

* The Proteinase K is stable as shipped. Add 260 µl (1,040 µl for D3041) **Proteinase K Storage Buffer** to the **Proteinase K** tube prior to use. The final concentration of **Proteinase K** after the addition of **Proteinase K Storage Buffer** is ~20 mg/ml.

** The **2X Digestion Buffer** and **DNA Pre-Wash Buffer** may have formed a precipitate. If this is the case, incubate at 37°C to solubilize.

***.For optimal performance, add beta-mercaptoethanol to 0.5%(v/v) i.e., 250 µl per 50 ml or 500 µl per 100 ml.

Specifications

- **Sample Sources** – Solid tissues (e.g., tailsnips, earpunches, adipose tissue, etc.), whole blood, plasma, serum, buffy coat, lymphocytes, cultured cells, FFPE tissues, semen, hair, and other biological sources are effectively processed using this kit.
- **DNA Purity** – High quality DNA for PCR, endonuclease digestion, Southern blotting, bisulfite conversion/methylation detection, sequencing, genotyping, etc., is eluted with **DNA Elution Buffer** or water. ($A_{260}/A_{280} \geq 1.8$)
- **DNA Size** – Capable of recovering genomic and mitochondrial DNA sized fragments from 100 bp to ≥ 40 kb. If present, parasitic, microbial, and viral DNA will also be recovered. Typical fragment sizes range from 25 kb-35 kb.
- **DNA Yield** – The DNA binding capacity of the column is 5 µg. Typically, mammalian tissues yield: 1-3 µg DNA per mg skeletal, heart, and brain tissues and 3-5 µg DNA per mg liver, kidney and lung tissues. Human whole blood will yield 3-7 µg DNA per 100 µl blood sampled. DNA is eluted into ≥ 10 µl **DNA Elution Buffer** or water.
- **Product Detergent Tolerance** – $\leq 5\%$ Triton X-100, $\leq 5\%$ Tween-20, $\leq 5\%$ Sarkosyl, $\leq 0.1\%$ SDS.
- **Equipment** – Water bath or heat block (55°C), microcentrifuge, and vortex.

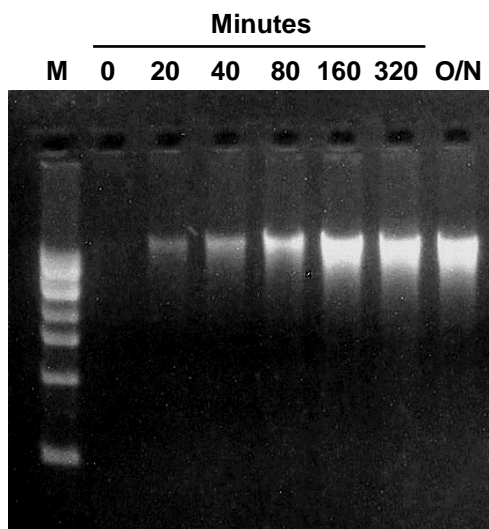
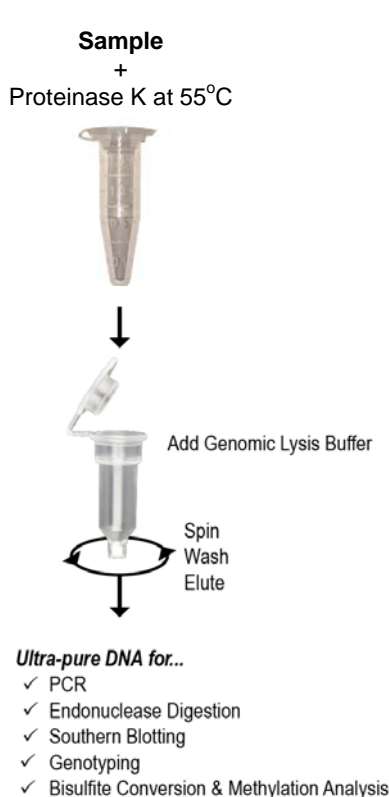
Note - ™ Trademarks of Zymo Research Corporation. This product is for research use only and should only be used by trained professionals. It is not intended for use in diagnostic procedures. Some reagents included with this kit are irritants. Wear protective gloves and eye protection. Follow the safety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

For purification of up to 25 µg DNA/prep, use the **ZR Genomic DNA™-Tissue MiniPrep** (D3050, D3051). For high throughput purification (96-well), use the **ZR-96 Genomic DNA™-Tissue Miniprep** (D3055, D3056, D3057).

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Product Description

The **ZR Genomic DNA™-Tissue MicroPrep** is a simple procedure for the rapid isolation of total DNA (e.g., genomic, mitochondrial, parasitic, microbial, viral) from a variety of solid tissues that are either fresh, frozen, or FFPE. This product has been optimized for maximal recovery of ultra-pure DNA without RNA contamination and is also compatible with buffy coat, bone marrow, cells from culture, whole blood (fresh or stored), serum, plasma, and many biological liquid samples. For processing, simply digest the sample with the supplied **Proteinase K** then add the **Genomic Lysis Buffer**, vortex, and transfer the mixture to the supplied Zymo-Spin™ column/filter assembly. PCR inhibitors are effectively removed during the purification process and purified DNA is suitable for downstream applications including: PCR, Southern blotting, DNA sequencing, endonuclease digestion, bisulfite conversion/methylation analysis, etc.



High yield/quality DNA is successfully isolated from porcine muscle using the **ZR Genomic DNA™-Tissue MiniPrep**. Equivalent amounts (25 mg) of muscle tissue were processed using the **ZR Genomic DNA™-Tissue MiniPrep** after incubation with Proteinase K at 55°C for the indicated times (in minutes) or overnight (O/N). Equal volumes of eluted DNA were then analyzed in a 0.8% (w/v) TAE/agarose/ethidium bromide gel. The size marker "M" is a 1 kb ladder (Zymo Research).

Zymo Research offers the following for rapid, precise DNA methylation detection...

1.) **EZ DNA Methylation™ Kit** (D5001, D5002, D5003)

2.) **EZ DNA Methylation-Gold™ Kit** (D5005, D5006, D5007, D5008)

3.) **EZ DNA Methylation-Direct™ Kit** (D5020, D5021, D5022, D5023)

Please visit:

www.zymoresearch.com
for a comprehensive list of
genomic DNA purification
products.

General Considerations When Purifying Genomic DNA

Zymo Research offers a range of genomic DNA isolation kits that are suitable for extracting high molecular weight DNA from a wide variety of sample types. Kits are tailor-made for specific applications and feature chemical, Proteinase K, and/or mechanical lysis technologies depending on the starting material (see table below).

| DNA Extraction Method | Applications |
|---|---|
| Chemical | <i>Soft tissue samples</i> from humans, mice, etc., including: whole blood, plasma, serum, cells, buffy coat, buccal cells, biological liquids, crude homogenates, etc. |
| Proteinase K & Chemical | <i>Solid tissue samples</i> from humans, mice, etc., including: tailsnips, earpunches, hair*, feathers*, and FFPE* samples, as well as all of the above. |
| Mechanical Homogenization & Chemical | <i>Tough tissues and organisms</i> including: insects, arthropods, fungi, gram (+/-) bacteria, and microorganisms in soil, sludge, feces, or water, as well as most of the above. |

The **ZR Genomic DNA™-Tissue MicroPrep** includes Proteinase K digestion and chemical lysis for the rapid, efficient purification of DNA (up to 5 µg/prep.) from soft and solid tissues, cells, and a range of biological liquids (see table below for sample types and protocol recommendations).

| Recommended Protocol | Sample Types |
|--|---|
| Solid Tissue | <i>Solid tissue samples</i> from humans, mice, etc., including: tailsnips, earpunches, hair*, feathers*, and FFPE* samples. (pg. 4) |
| Whole Blood, Serum, and Plasma | Whole blood, plasma, and serum. (pg. 5) |
| Cell Monolayer | Monolayer cells ($\leq 1 \times 10^6$) from culture. (pgs. 6) |
| Biological Liquids and Cell Suspensions | Biological liquids including: semen, CSF, buffy coat, body fluids. Cell suspensions containing less than 1×10^6 cells (e.g., buffy coat, suspension cultured cells, etc.) (pg. 7) |

* With protocol modification. See Alternative Protocols **(pg. 8.)**

Starting Material: The quality of the sampled material will affect both the yield and quality of the purified DNA. Freshly sampled tissues and cells yield the highest quantity/quality DNA. If sampling from “stored” sources and/or if samples have been subject to repeated freeze/thawing, yields may decrease and the purified DNA may be degraded (e.g., FFPE).

Removal of PCR Inhibitors: The **ZR Genomic DNA™-Tissue MicroPrep** has been designed for the efficient removal of PCR inhibitors during DNA purification from the samples listed in the tables above. However, some environmental samples including soil, plants, and manure (feces) will require alternative technologies (see sidebar) for the effective removal of polyphenolic PCR inhibitors.

Storage of Purified DNA: The eluted DNA can be used immediately for molecular-based applications or stored $\leq -20^\circ\text{C}$.

The **ZR Soil Microbe DNA DNA Kit™** (D6001), **ZR Fecal DNA DNA Kit™** (D6010), and **ZR Plant/Seed DNA DNA Kit™** (D6020) can be used for the purification of inhibitor-free DNA from soil, feces, and plants, respectively.

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Reagent Preparation

- Add 260 μl (1,040 μl for D3041) **Proteinase K Storage Buffer** to the 5 mg **Proteinase K** tube prior to use. The final concentration of Proteinase K after the addition of Proteinase K Storage Buffer is ~ 20 mg/ml.
- For optimal performance, add beta-mercaptoethanol (user supplied) to the **Genomic Lysis Buffer** to a final dilution of 0.5%(v/v) i.e., 250 μl per 50 ml or 500 μl per 100 ml.

Protocols

Solid Tissue – Including: tailsnips, earpunches, biopsies, etc.

The following is for the purification of DNA from up to 5 mg fresh or frozen tissue. Typical yields are: 1-3 μg DNA per mg skeletal, heart, and brain tissues and 3-5 μg DNA per mg liver, kidney, and lung tissues. For hair, feathers and FFPE tissues follow **Alternative Protocols I** and **II** on page 8, respectively.

1. To a tissue sample (≤ 5 mg) in a microcentrifuge tube and add a solution of...

| | |
|---------------------|------------------|
| H ₂ O | 95 μl |
| 2X Digestion Buffer | 95 μl |
| Proteinase K | 10 μl |

2. Mix and then incubate the tube at 55°C for 1-3 hours.

Note: If required (e.g. FFPE samples), digesting samples overnight at 55°C with Proteinase K is possible without affecting the integrity of the DNA.

3. Add 700 μl **Genomic Lysis Buffer** to the tube and mix thoroughly by vortexing. Centrifuge at 10,000 x *g* for one minute to remove insoluble debris.
4. Transfer the supernatant to a **Zymo-Spin™ IC Column** in a **Collection Tube**. Centrifuge at 10,000 x *g* for one minute.
5. Add 200 μl of **DNA Pre-Wash Buffer** to the spin column in a new **Collection Tube**. Centrifuge at 10,000 x *g* for one minute.
6. Add 400 μl of **g-DNA Wash Buffer** to the spin column. Centrifuge at 10,000 x *g* for one minute.
7. Transfer the spin column to a clean microcentrifuge tube. Add ≥ 10 μl **DNA Elution Buffer** or water (e.g., add 40 μl if sampling 5 mg tissue) to the spin column. Incubate 2-5 minutes at room temperature, then centrifuge at top speed for 30 seconds to elute the DNA. The eluted DNA can be used immediately for molecular based applications or stored $\leq -20^\circ\text{C}$ for future use.

For **Technical Assistance**, please contact 1-888-882-9682 or E-mail tech@zymoresearch.com.

Incubate 12-16 hours for formalin-fixed deparaffinized samples.

The column capacity is ~ 800 μl .

Elution of DNA from the column is dependent on pH and temperature. If water is used, ensure the pH is > 6.0 . Also, the total yield may be improved by eluting the DNA with Elution Buffer or water pre-equilibrated to 60-70°C or by performing and pooling sequential elutions.

Human whole blood should yield between 3-7 µg DNA per 100 µl.

The column capacity is ~800 µl.

Elution of DNA from the column is dependent on pH and temperature. If water is used, ensure the pH is >6.0. Also, the total yield may be improved by eluting the DNA with Elution Buffer or water pre-equilibrated to 60-70°C or by performing and pooling sequential elutions.

Whole Blood, Serum and Plasma

The following is for the purification of DNA from up to 50 µl whole blood, serum or plasma (the volumes can be adjusted depending on your requirements). Fresh, frozen, or preserved blood (in EDTA, citrate, or heparin) can be used.

1. Adjust total volume of sample (blood, serum, or plasma) to 100 µl with water in a microcentrifuge tube and then add the following...

| | |
|---------------------|-------|
| 2X Digestion Buffer | 95 µl |
| Proteinase K | 5 µl |

Example: Add 60 µl H₂O to 40 µl blood, serum, or plasma prior to adding the 2X Digestion Buffer and Proteinase K.

2. Mix and then incubate the tube at 55°C for 20 minutes.
3. Add 700 µl **Genomic Lysis Buffer** to the tube and mix thoroughly by vortexing.
4. Transfer the supernatant to a **Zymo-Spin™ IC Column** in a **Collection Tube**. Centrifuge at 10,000 x g for one minute.
5. Add 200 µl of **DNA Pre-Wash Buffer** to the spin column in a new **Collection Tube**. Centrifuge at 10,000 x g for one minute.
6. Add 400 µl of **g-DNA Wash Buffer** to the spin column. Centrifuge at 10,000 x g for one minute.
7. Transfer the spin column to a clean microcentrifuge tube. Add ≥10 µl **DNA Elution Buffer** or water (e.g., add 50 µl if sampling 50 µl blood) to the spin column. Incubate 2-5 minutes at room temperature, then centrifuge at top speed for 30 seconds to elute the DNA. The eluted DNA can be used immediately for molecular based applications or stored ≤-20°C for future use.

Cell Monolayer

The following procedure is designed for up to 1×10^6 monolayer cells. Although cell types and culture conditions may vary, the protocol will work with high-density growth cells (e.g., HeLa cells) as well as with low-density growth cells (e.g., neuronal cells). The table (below) is provided as a reference for estimating cell numbers.

1. Trypsinize or scrape adherent cells from a culture flask or plate. Centrifuge the suspension at approximately $500 \times g$ for 5 minutes. Remove the supernatant and resuspend the cell pellet in 1 ml PBS (Phosphate Buffered Saline) and then transfer suspension to a centrifuge tube. Centrifuge the suspension at approximately $500 \times g$ for 5 minutes. Remove the supernatant and resuspend the pellet in a solution of...

| | |
|---------------------|------------|
| H ₂ O | 95 μ l |
| 2X Digestion Buffer | 95 μ l |
| Proteinase K | 5 μ l |

2. Incubate the tube at 55°C for 20 minutes.
3. Add 700 μ l **Genomic Lysis Buffer** to the tube and mix thoroughly by vortexing. Centrifuge at $10,000 \times g$ for one minute to remove insoluble debris.
4. Transfer the supernatant to a **Zymo-Spin™ IC Column** in a **Collection Tube**. Centrifuge at $10,000 \times g$ for one minute.
5. Add 200 μ l of **DNA Pre-Wash Buffer** to the spin column in a new **Collection Tube**. Centrifuge at $10,000 \times g$ for one minute.
6. Add 400 μ l of **g-DNA Wash Buffer** to the spin column. Centrifuge at $10,000 \times g$ for one minute.
7. Transfer the spin column to a clean microcentrifuge tube. Add $\geq 10 \mu$ l **DNA Elution Buffer** or water (e.g., add 40 μ l if sampling 1×10^6 cells) to the spin column. Incubate 2-5 minutes at room temperature, then centrifuge at top speed for 30 seconds to elute the DNA. The eluted DNA can be used immediately for molecular based applications or stored $\leq -20^\circ\text{C}$ for future use

Guidelines for Monolayer Cell DNA Isolation: Cell numbers (growth densities) can vary between different cell types. The table (below) provides an approximation of the cell numbers that can be recovered from different culture containers for “high-density” growth cells like CV1 and HeLa cells.

Culture Plate/Flask Growth Area (cm²) and Cell Number

| Culture Container | Well/Flask Surface Area | Cell Number |
|--------------------|--------------------------|---------------------|
| 96-well plate | 0.32-0.6 cm ² | $4-5 \times 10^4$ |
| 24-well plate | 2 cm ² | $1-3 \times 10^5$ |
| 12-well plate | 4 cm ² | $4-5 \times 10^5$ |
| 6-well plate | 9.5 cm ² | $0.5-1 \times 10^6$ |
| T25 Culture Flask | 25 cm ² | $2-3 \times 10^6$ |
| T75 Culture Flask | 75 cm ² | $0.6-1 \times 10^7$ |
| T175 Culture Flask | 175 cm ² | $2-3 \times 10^7$ |

Generally, no more than 1×10^6 cells should be sampled, for larger samples will exceed the binding capacity of the spin column.

The column capacity is $\sim 800 \mu$ l.

Elution of DNA from the column is dependent on pH and temperature. If water is used, ensure the pH is >6.0 . Also, the total yield may be improved by eluting the DNA with Elution Buffer or water pre-equilibrated to $60-70^\circ\text{C}$ or by performing and pooling sequential elutions.

Biological Liquids and Cell Suspensions

Cells should be processed directly from biological fluids or from suspension in PBS, TE, or compatible buffers.

The following protocol is designed for up to 20 μl of biological liquid sample including semen, CSF, buffy coat, body fluids, and cell suspensions containing less than 1×10^6 cells.

1. Adjust total volume of liquid sample to 100 μl with water in a microcentrifuge tube and then add the following...

| | |
|---------------------|------------------|
| 2X Digestion Buffer | 95 μl |
| Proteinase K | 5 μl |

2. Mix and then incubate the tube at 55°C for 20 minutes.
3. Add 700 μl **Genomic Lysis Buffer** to the tube and mix thoroughly by vortexing.
4. Transfer the mixture to a **Zymo-Spin™ IC Column** in a **Collection Tube**. Centrifuge at 10,000 x g for one minute.
5. Add 200 μl of **DNA Pre-Wash Buffer** to the spin column in a new **Collection Tube**. Centrifuge at 10,000 x g for one minute.
6. Add 400 μl of **g-DNA Wash Buffer** to the spin column. Centrifuge at 10,000 x g for one minute.
7. Transfer the spin column to a clean microcentrifuge tube. Add ≥ 10 μl **DNA Elution Buffer** or water (e.g., add 40 μl if sampling liquids containing 1×10^6 cells) to the spin column. Incubate 2-5 minutes at room temperature, then centrifuge at top speed for 30 seconds to elute the DNA. The eluted DNA can be used immediately for molecular based applications or stored $\leq -20^\circ\text{C}$ for future use.

The column capacity is ~800 μl .

Elution of DNA from the column is dependent on pH and temperature. If water is used, ensure the pH is >6.0 . Also, the total yield may be improved by eluting the DNA with Elution Buffer or water pre-equilibrated to 60-70°C or by performing and pooling sequential elutions.

Alternative Protocols:

I.) For Hair, Feathers, or Related Samples: Freshly prepared DTT (dithiothreitol) (not provided) needs to be added to Step 1 of the Solid Tissue Protocol (page 3) as follows...

| | |
|---------------------|-------|
| H ₂ O | 90 µl |
| 2x Digestion Buffer | 90 µl |
| DTT (1 M) | 10 µl |
| Proteinase K | 10 µl |

Then follow with the rest of the procedure as indicated.

II.) For FFPE Samples: Tissues need to be deparaffinized prior to Step 1 of the Solid Tissue Protocol (page 4) by...

- i. Removing (trimming) as much paraffin from the sample(s) as possible.
- ii. Transfer samples to centrifuge tubes. Add 750 µl xylene (not provided) to the samples.
- iii. Vortex and incubate samples at room temperature for 1 hour with gentle rocking.
- iv. Centrifuge for 1 minutes at 10,000 x *g* and remove the xylene from the sample. Repeat steps 2-4.
- v. Wash two times with 1 ml EtOH (100%) for 5 minutes with gentle rocking.
- vi. Wash two times with 1 ml EtOH (95%) for 5 minutes with gentle rocking.
- vii. Wash two times with 1 ml EtOH (75%) for 5 minutes with gentle rocking.
- viii. Wash once with 1 ml ddH₂O for 5 minutes with gentle rocking. Remove as much water from the sample as possible
- ix. Use sample or store at -80°C.

Note: For steps v-viii, add the wash, vortex briefly, and incubate for 5 minutes with gentle rocking. Remove wash from the sample after centrifugation at 1,000 x *g* for 5 minutes.

Troubleshooting:

1. DNA degradation: Check for DNase contamination. All reagents and components supplied with the **ZR Genomic DNA™-Tissue MicroPrep** are DNase-free. However, DNase contamination can result during the processing of some samples. Check pipets, pipet tips, microcentrifuge tubes, etc., and exercise the appropriate precautions during the DNA purification procedure. Make sure Proteinase K digestions are performed at 55°C as indicated.
2. DNA is not performing well in subsequent experiments: Ensure the correct volume of **Genomic Lysis Buffer** has been added to the sample. Also, make sure all centrifugation steps are completed for the indicated times and speeds (rcfs). Failure to do so may result in incomplete washing, which may cause salts to be eluted with the DNA affecting quantitation and subsequent experiments including enzymatic processes like PCR.
3. RNA contamination: The buffers and spin columns provided in this kit are designed to efficiently remove RNA during the DNA purification procedure. However, additional RNA removal (e.g., digestion with RNase A) may be necessary for subsequent applications sensitive to trace amounts of RNA.

Ordering Information

| Product Description | Catalog No. | Kit Size |
|---|-------------|--------------|
| ZR Genomic DNA™-Tissue MicroPrep | D3040 | 50 preps. |
| | D3041 | 200 preps. |
| ZR Genomic DNA™-Tissue MiniPrep | D3050 | 50 preps. |
| | D3051 | 200 preps. |
| ZR Genomic DNA™-Tissue MidiPrep | D3110 | 25 preps. |
| ZR-96 Genomic DNA™-Tissue MiniPrep | D3055 | 2x96 preps. |
| | D3056 | 4x96 preps. |
| | D3057 | 10x96 preps. |

| For Individual Sale | Catalog No. | Amount |
|--|-------------|-------------|
| Proteinase K & Storage Buffer | D3001-2-5 | 5 mg set |
| | D3001-2-20 | 20 mg set |
| 2X Digestion Buffer | D3050-1-5 | 5 ml |
| | D3050-1-20 | 20 ml |
| Genomic Lysis Buffer | D3004-1-50 | 50 ml |
| | D3004-1-100 | 100 ml |
| DNA Pre-Wash Buffer | D3004-5-15 | 15 ml |
| | D3004-5-30 | 30 ml |
| | D3004-5-50 | 50 ml |
| g-DNA Wash Buffer | D3004-2-50 | 50 ml |
| | D3004-2-100 | 100 ml |
| DNA Elution Buffer | D3004-4-4 | 4 ml |
| | D3004-4-10 | 10 ml |
| | D3004-4-50 | 50 ml |
| Zymo-Spin™ IC Columns | C1004-50 | 50 columns |
| | C1004-250 | 250 columns |
| Collection Tubes | C1001-50 | 50 tubes |
| | C1001-500 | 500 tubes |
| | C1001-1000 | 1,000 tubes |

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Popular DNA Purification Products from Zymo Research

| Product | Format | Kit Size | Cat No. |
|--|---|---|----------------------------------|
| Fragment DNA Clean-up, Concentration & Recovery | | | |
| DNA Clean & Concentrator™-5 | Spin Column Format (up to 5 µg/prep.) | 50 preps. 200 preps. | D4003*, D4013 D4004*, D4014 |
| DNA Clean & Concentrator™-25 | Spin Column Format (up to 25 µg/prep.) | 50 preps. 200 preps. | D4005*, D4033 D4006*, D4034 |
| DNA Clean & Concentrator™-100 | Spin Column Format (up to 100 µg/prep.) | 25 preps. 50 preps. | D4029 D4030 |
| DNA Clean & Concentrator™-500 | Spin Column Format (up to 500 µg/prep.) | 10 preps. 20 preps. | D4031 D4032 |
| ZR-96 DNA Clean & Concentrator™-5 | 96-Well Format (up to 5 µg/well; deep well) | 2x96 preps. 4x96 preps. | D4023 D4024 |
| Genomic DNA Clean & Concentrator™ | Spin Column Format (up to 10 µg/prep.) | 25 preps. 100 preps. | D4010 D4011 |
| ZR-96 DNA Clean-up Kit™ | 96-Well Format (up to 5 µg/well; shallow well) | 2x96 preps. 4x96 preps. | D4017 D4018 |
| ZR DNA Sequencing Clean-up Kit™ | Spin Column Format (up to 5 µg/prep.) | 50 preps. 200 preps. | D4050 D4051 |
| ZR-96 DNA Sequencing Clean-up Kit™ | 96-Well Format (up to 5 µg/well) | 2x96 preps. 4x96 preps. | D4052 D4053 |
| OneStep™ PCR Inhibitor Removal Kit | Spin Column Format (up to 25 µg/prep.) | 50 preps. | D6030 |
| OneStep-96™ PCR Inhibitor Removal Kit | 96-Well Format (up to 5 µg/well) | 2x96 preps. | D6035 |
| Zymoclean™ Gel DNA Recovery Kit | Spin Column Format (up to 5 µg/prep.) | 50 preps. 200 preps. | D4001 D4002 |
| ZR-96 Zymoclean™ Gel DNA Recovery Kit | 96-Well Format (up to 5 µg/well) | 2x96 preps. 4x96 preps. | D4021 D4022 |
| Zymoclean™ Large Fragment DNA Recovery Kit | Spin Column Format (up to 10 µg/prep.) | 25 preps. 100 preps. | D4045 D4046 |
| Plasmid DNA Isolation | | | |
| Zyppy™ Plasmid Miniprep Kit | Pellet Free, Spin Column Format | 50 preps. 100 preps. 400 preps. 800 preps. | D4036 D4019 D4020 D4037 |
| Zyppy™ Plasmid Midiprep Kit | Pellet Free, Spin Column Format | 25 preps. 50 preps. | D4025 D4026 |
| Zyppy™ Plasmid Maxiprep Kit | Spin/Vacuum Column Format | 10 preps. 20 preps. | D4027 D4028 |
| ZR Plasmid Miniprep™-Classic | Spin Column Format | 100 preps. 400 preps. 800 preps. | D4015 D4016 D4054 |
| ZR BAC DNA Miniprep Kit | BAC/PAC plasmid DNA Isolation. Spin Column Format | 25 preps. 100 preps. | D4048 D4049 |
| Environmental DNA Isolation | | | |
| ZR Soil Microbe DNA MicroPrep™ | Bead Bashing, Spin Column Format (up to 5 µg/prep.) | 50 preps. | D6003 |
| ZR Soil Microbe DNA MiniPrep™ | Bead Bashing, Spin Column Format (up to 25 µg/prep.) | 50 preps. | D6001 |
| ZR Soil Microbe DNA MidiPrep™ | Bead Bashing, Spin Column Format (up to 125 µg/prep.) | 25 preps. | D6101 |
| ZR-96 Soil Microbe DNA Kit™ | Bead Bashing, 96-Well Format (up to 5 µg/well) | 2x96 preps. | D6002 |
| ZR Fungal/Bacterial DNA MicroPrep™ | Bead Bashing, Spin Column Format (up to 5 µg/prep.) | 50 preps. | D6007 |
| ZR Fungal/Bacterial DNA MiniPrep™ | Bead Bashing, Spin Column Format (up to 25 µg/prep.) | 50 preps. | D6005 |
| ZR Fungal/Bacterial DNA MidiPrep™ | Bead Bashing, Spin Column Format (up to 125 µg/prep.) | 25 preps. | D6105 |
| ZR-96 Fungal/Bacterial DNA Kit™ | Bead Bashing, 96-Well Format (up to 5 µg/well) | 2x96 preps. | D6006 |
| ZR Fecal DNA MicroPrep™ | Bead Bashing, Spin Column Format (up to 5 µg/prep.) | 50 preps. | D6012 |
| ZR Fecal DNA MiniPrep™ | Bead Bashing, Spin Column Format (up to 25 µg/prep.) | 50 preps. | D6010 |
| ZR Fecal DNA MidiPrep™ | Bead Bashing, Spin Column Format (up to 125 µg/prep.) | 25 preps. | D6110 |
| ZR-96 Fecal DNA Kit™ | Bead Bashing, 96-Well Format (up to 5 µg/well) | 2x96 preps. | D6011 |
| ZR Tissue & Insect DNA MicroPrep™ | Bead Bashing, Spin Column Format (up to 5 µg/prep.) | 50 preps. | D6015 |
| ZR Tissue & Insect DNA MiniPrep™ | Bead Bashing, Spin Column Format (up to 25 µg/prep.) | 50 preps. | D6016 |
| ZR Tissue & Insect DNA MidiPrep™ | Bead Bashing, Spin Column Format (up to 125 µg/prep.) | 25 preps. | D6115 |
| ZR-96 Tissue & Insect DNA Kit™ | Bead Bashing, 96-Well Format (up to 5 µg/well) | 2x96 preps. | D6017 |
| ZR Plant/Seed DNA MicroPrep™ | Bead Bashing, Spin Column Format (up to 5 µg/prep.) | 50 preps. | D6022 |
| ZR Plant/Seed DNA MiniPrep™ | Bead Bashing, Spin Column Format (up to 25 µg/prep.) | 50 preps. | D6020 |
| ZR Plant/Seed DNA MidiPrep™ | Bead Bashing, Spin Column Format (up to 125 µg/prep.) | 25 preps. | D6120 |
| ZR-96 Plant/Seed DNA Kit™ | Bead Bashing, 96-Well Format (up to 5 µg/well) | 2x96 preps. | D6021 |

* Uncapped Spin Column Format

ZYMO RESEARCH CORP.

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