

# INSTRUCTION MANUAL

## Quick-DNA™ 96 Kit

Catalog Nos. **D3010, D3011, & D3012**

### Highlights

- Quick, high throughput (96-well) purification of DNA from whole blood, plasma, serum, body fluids, buffy coat, lymphocytes, swabs or cultured cells in less than 25 minutes.
- Compatible with commonly used anticoagulants (i.e., EDTA, heparin, citrate).
- Unique extraction technology excludes the use of Proteinase K and organic denaturants.
- Isolated DNA is ideal for PCR, endonuclease digestion, 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.

For spin-column DNA purification from biological fluids, cell cultures, and solid tissues utilizing Proteinase K, use the **Quick-DNA™ Miniprep Plus Kit** (D4068, D4069).

For high-throughput DNA purification from biological fluids, cell cultures, and solid tissues utilizing Proteinase K (96-well, 5 µg DNA/well), use the **Quick-DNA™ 96 Kit** (D4070, D4071).

## Product Contents

<b>Quick-DNA™ 96 Kit</b> (Kit Size)	<b>D3010</b> (2 x 96)	<b>D3011</b> (4 x 96)	<b>D3012</b> (10 x 96)	<b>Storage Temperature</b>
<b>Genomic Lysis Buffer*</b>	100 ml	2 x 100 ml	5 x 100 ml	Room Temp.
<b>DNA Pre-Wash Buffer**</b>	50 ml	2 x 50 ml	5 x 50 ml	Room Temp.
<b>g-DNA Wash Buffer</b>	100 ml	2 x 100 ml	5 x 100 ml	Room Temp.
<b>DNA Elution Buffer</b>	10 ml	2 x 10 ml	50 ml	Room Temp.
<b>Silicon-A™ Plate</b>	2	4	10	Room Temp.
<b>Collection Plate</b>	2	4	10	Room Temp.
<b>Elution Plate</b>	2	4	10	Room Temp.
<b>Instruction Manual</b>	1	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.

\* Recommended: 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

- **Sample Sources** – Whole blood, plasma, or serum from humans, mice, rats, etc. Also, cells from culture, buccal cells, as well as a variety of biological liquids are effectively processed using this kit. Tissue already digested with Proteinase K or mechanically homogenized can also be processed.
- **Workflow Overview** – Unique lysis buffer system omits the need for Proteinase K digestion for biological fluids and cell culture samples.
- **DNA Purity** – High-quality DNA is eluted with **DNA Elution Buffer** or water. DNA is especially well suited for PCR and other downstream applications.  $A_{260}/A_{280} > 1.8$
- **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** – Up to 5 µg/well total DNA is eluted into ≥30 µl **DNA Elution Buffer** or water. Human whole blood will typically yield 3-7 µg DNA per 100 µl blood sampled. Mammalian tissues already homogenized yield: 1-3 µg DNA per mg skeletal, heart, and brain tissues and 3-5 µg DNA per mg liver, kidney and lung tissues.
- **Product Detergent Tolerance** – ≤5% Triton X-100, ≤5% Tween-20, ≤5% Sarkosyl, ≤0.1% SDS.
- **Equipment** – microcentrifuge, vortex, centrifuge w/ microplate carriers

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.

## ZYMO RESEARCH CORP.

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## Product Description

The **Quick-DNA™ 96 Kit** features a simple, high throughput (96-well) procedure for the rapid isolation of total DNA (e.g., genomic, mitochondrial, viral) from a variety of biological sample sources. This product has been optimized for maximal recovery of ultra-pure DNA without RNA contamination and is compatible with whole blood (fresh or stored), serum, plasma, buffy coat, buccal cells, cells from culture, and many biological liquid samples.

For processing, simply add the specially formulated **Genomic Lysis Buffer** to the samples, vortex, and transfer the mixtures to the wells of the supplied **Silicon-A™ Plate**. There is no need for organic denaturants or Proteinase K digestion because of the unique chemistries featured in the kit. Instead, the product yields high-quality, purified DNA in just minutes (see below). PCR inhibitors are effectively removed during the purification process. DNA purified using the **Quick-DNA™ 96 Kit** is suitable for PCR, nucleotide blotting, DNA sequencing, restriction endonuclease digestion, bisulfite conversion/methylation analysis, and other downstream applications.

For routine plasmid DNA purification from *E. coli*, Zymo Research offers the **Zippy™ Plasmid Miniprep Kit** (D4036) and the **ZymoPURE™ Midi, Maxi, and Gigaprep Kits** (D4200, D4202, and D4204).

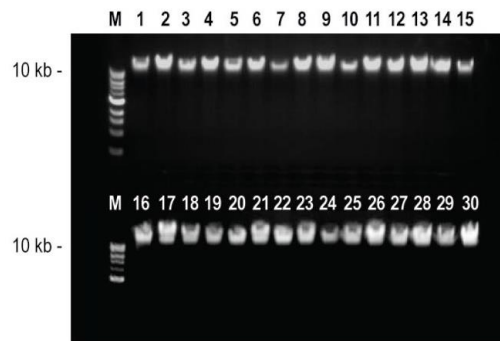
Zymo Research offers the **EZ DNA Methylation-Lightning™ Kit** (D5030, D5031) for rapid, precise DNA methylation detection and a comprehensive selection of other epigenetic tools.

Looking to isolate RNA? For RNA isolation from TRIzol®, the **Direct-zol™ RNA Miniprep Kits** (R2050, R2051, R2052, R2053) offer total RNA purification without phase separation in only 7 minutes!



Silicon-A Plate™

High-Throughput  
Genomic DNA Isolation



**Genomic DNA isolated from mouse tails using the Quick-DNA™ 96 Kit.** A total of 30 mouse tailsnips were homogenized with Zymo Research's Squisher-8™ then processed using the Quick-DNA™ 96. About one third of the number of eluted DNAs was then separated in a 0.8% w/v agarose gel (shown in lanes 1 to 30)

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

Step 1 can be performed directly in the Silicon-A™ Plate. Mixing is performed by pipetting the samples up and down repeatedly.

The capacity of each well of the Silicon-A™ Plate is ~600 µl.

For the inclusion of small DNAs from serum, add 0.3 volumes isopropanol to the mixture. (For example, to a 500 µl mixture of serum and Genomic Lysis Buffer add 150 µl isopropanol.)

Elution of DNA from the Silicon-A™ Plate 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.

## **Buffer Preparation**

- ✓ **Recommended:** 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**

### ***Whole Blood, Serum, and Plasma Samples***

*The following is for the purification of DNA from 50 µl whole blood, serum or plasma (the volumes can be adjusted up to 100 µl (max.) depending on your requirements). Fresh, frozen, or preserved blood (in EDTA, citrate, or heparin) can be used. If material cannot be processed immediately, the sample can be “stabilized” for later processing (as noted below) although the immediate processing of blood samples is recommended.*

1. Add 200 µl of **Genomic Lysis Buffer** to 50 µl of blood, serum, or plasma (4:1). Mix completely by vortexing 4-6 seconds, then let stand 5-10 minutes at room temperature.  
  
**Note:** Add 200 µl Genomic Lysis Buffer to all samples < 50 µl. For samples larger than 50 µl, add a proportional amount (4:1) of Genomic Lysis Buffer (e.g., Add 400 µl Genomic Lysis Buffer to 100 µl blood).
2. Transfer the mixtures to the wells of a **Silicon-A™ Plate** on a **Collection Plate**. Centrifuge at ≥ 2,500 x g (5,000 x g max.) for 5 minutes.
3. Add 200 µl **DNA Pre-Wash Buffer** to each well and centrifuge at ≥ 2,500 x g for 5 minutes. Discard the flow through.
4. Add 300 µl of **g-DNA Wash Buffer** to each well and centrifuge at ≥ 2,500 x g for 5 minutes.
5. Transfer the **Silicon-A™ Plate** onto an **Elution Plate**. Add ≥30 µl **DNA Elution Buffer** or water to each well. Incubate 2-5 minutes at room temperature, then centrifuge at ≥ 2,500 x g for 5 minutes to elute the DNA. The eluted DNA can be used immediately for molecular based applications or stored ≤-20°C for future use.

**Delayed Processing (Stabilization) of Blood Samples:** The immediate processing of blood with this kit is recommended. However, if blood cannot be processed immediately, samples can be “stabilized” in **Genomic Lysis Buffer** for processing at a later time. To do this, add *four* volumes of **Genomic Lysis Buffer** to *each* volume of whole blood (4:1), then vortex. Blood samples mixed with **Genomic Lysis Buffer** can be stored at room temperature for 1-2 weeks, 0-4°C for 1-2 months, -20°C for 6 months to a year, or <-70°C for many years. Samples stored at ≤4°C should reach room temperature prior to processing. Begin at Step 2 in the standard protocol (above) when purifying DNA from blood samples stabilized in **Genomic Lysis Buffer**.

## Buccal Cells and Swabs

*Buccal cells can be isolated using a rinse- or swab-based isolation method.*

- A. **Rinse Method:** Vigorously rinse 10-20 ml of saline solution or mouthwash orally for 30 seconds. The more vigorous the rinsing action, the more cells that will be recovered. Spit the saline into a 50 ml tube and pellet the cells at 1,500 rpm for 5 minutes. Discard the supernatant without disturbing the cell pellet. Add 500 µl of **Genomic Lysis Buffer** to the pellet then vortex 4-6 seconds, then let stand at room temperature for 5-10 minutes.
  - B. **Swab Isolation Method:** Thoroughly rinse mouth out before isolating cells. Brush the inside of the cheek with a buccal swab for 15 seconds (approximately 20 brushes), making sure to cover the entire area of the inner cheek. Rinse the brush with 500 µl of **Genomic Lysis Buffer** into a microcentrifuge tube, vortex 4-6 seconds, and then let stand at room temperature for 5-10 minutes.
1. Transfer the mixtures to the wells of a **Silicon-A™ Plate** on a **Collection Plate**. Centrifuge at  $\geq 2,500 \times g$  (5,000  $\times g$  max.) for 5 minutes.
  2. Add 200 µl **DNA Pre-Wash Buffer** to each well and centrifuge at  $\geq 2,500 \times g$  for 5 minutes. Discard the flow through.
  3. Add 300 µl of **g-DNA Wash Buffer** to each well and centrifuge at  $\geq 2,500 \times g$  for 5 minutes.
  4. Transfer the **Silicon-A™ Plate** onto an **Elution Plate**. Add  $\geq 30$  µl **DNA Elution Buffer** or water to each well. Incubate 2-5 minutes at room temperature, then centrifuge at  $\geq 2,500 \times g$  for 5 minutes 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 capacity of each well of the Silicon-A™ Plate is ~600 µl.

## Solid Tissue Samples

**Note:** For Proteinase K digested materials (e.g., tailsnips) follow the protocol for **Cell Suspensions and Proteinase K Digested Samples** (pg. 6). Otherwise, mechanically homogenize up to 5 mg of fresh or frozen tissue in 500 µl of **Genomic Lysis Buffer**.

1. Centrifuge the lysates to pellet insoluble material. Making sure not to disturb the pelleted debris, transfer the supernatants to the wells of a **Silicon-A™ Plate** on a **Collection Plate**. Centrifuge at  $\geq 2,500 \times g$  (5,000  $\times g$  max.) for 5 minutes.
2. Add 200 µl **DNA Pre-Wash Buffer** to each well and centrifuge at  $\geq 2,500 \times g$  for 5 minutes. Discard the flow through.

For solid tissues, Proteinase K treatment or mechanical homogenization is required. For high-throughput purification of DNA utilizing Proteinase K, use the **Quick-DNA™ 96 Plus Kit** (D4070, D4071).

Soft tissue samples are readily homogenized using our **Squisher™-Single**, **Squisher™-8**, and **Squisher™-96** products.

Typical yields are: 1-3 µg DNA per mg skeletal, heart, and brain tissues and 3-5 µg per mg liver, kidney, and lung tissues.

Generally, no more than  $1 \times 10^6$  cells should be sampled, for larger samples will exceed the binding capacity of the Silicon-A™ Plate

It may be necessary to centrifuge the sample mixtures before transferring the supernatants to the Silicon-A™ Plate to remove particulate matter that may clog the matrices.

The capacity of each well of the Silicon-A™ Plate is ~600  $\mu$ l.

3. Add 300  $\mu$ l of **g-DNA Wash Buffer** to each well and centrifuge at  $\geq 2,500 \times g$  for 5 minutes.
4. Transfer the **Silicon-A™ Plate** onto an **Elution Plate**. Add  $\geq 30 \mu$ l **DNA Elution Buffer** or water to each well. Incubate 2-5 minutes at room temperature, then centrifuge at  $\geq 2,500 \times g$  for 5 minutes 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.

### Cell Monolayer Samples

*The following procedure is designed for up to  $1.0 \times 10^6$  (max.) monolayer cells (roughly equal to one well of a 6-well plate). 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 procedure may be scaled up or down for increases or decreases in the amounts of monolayer cells sampled (see the **Guidelines for Monolayer Cell DNA Isolation** below).*

1. Trypsinize or manually scrape adherent cells from the growth surface of a culture flask or plate. Centrifuge the cell suspension at approximately  $500 \times g$  for 5 minutes. Remove the supernatant and add 500  $\mu$ l of **Genomic Lysis Buffer** directly to the pellet. Resuspend pellet by vortexing 4-6 seconds and let stand for 5-10 minutes at room temperature.

**Alternatively:** Cells can be lysed directly in the culture container (plate) by removing the medium and adding the Genomic Lysis Buffer directly to the monolayer surface.

2. Transfer the mixtures to the wells of a **Silicon-A™ Plate** on a **Collection Plate**. Centrifuge at  $\geq 2,500 \times g$  ( $5,000 \times g$  max.) for 5 minutes.
3. Add 200  $\mu$ l **DNA Pre-Wash Buffer** to each well and centrifuge at  $\geq 2,500 \times g$  for 5 minutes. Discard the flow through.
4. Add 300  $\mu$ l of **g-DNA Wash Buffer** to each well and centrifuge at  $\geq 2,500 \times g$  for 5 minutes.
5. Transfer the **Silicon-A™ Plate** onto an **Elution Plate**. Add  $\geq 30 \mu$ l **DNA Elution Buffer** or water to each well. Incubate 2-5 minutes at room temperature, then centrifuge at  $\geq 2,500 \times g$  for 5 minutes 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:** The above procedure can be used for the processing of  $0.1$ - $1.0 \times 10^6$  cells. However, cell numbers (growth densities) can vary between different cell types. Table 1 (pg. 6) provides an approximation of what can be recovered from different culture containers for high-density growth cells like CV1 and HeLa cells.

**Table 1: Culture Plate/Flask Growth Area (cm<sup>2</sup>) and Cell Number**

Culture Container	Well /Flask Surface Area	Cell Number
96-well plate (each well)	0.32-0.6 cm <sup>2</sup>	4-5x10 <sup>4</sup>
24-well plate (each well)	2 cm <sup>2</sup>	1-3x10 <sup>5</sup>
12-well plate (each well)	4 cm <sup>2</sup>	4-5x10 <sup>5</sup>
6-well plate (each well)	9.5 cm <sup>2</sup>	0.5-1x10 <sup>6</sup>
T25 Culture Flask	25 cm <sup>2</sup>	2-3x10 <sup>6</sup>
T75 Culture Flask	75 cm <sup>2</sup>	0.6-1x10 <sup>7</sup>
T175 Culture Flask	175 cm <sup>2</sup>	2-3x10 <sup>7</sup>

### Cell Suspensions and Proteinase K Digested Samples

*The following protocol is designed for up to 100 µl of biological liquid sample including CSF, buffy coat, body fluids (semen), and cell suspensions containing less than 1.0x10<sup>6</sup> cells as well as lysates derived from Proteinase K digested samples.*

1. Add 4 volumes of **Genomic Lysis Buffer** to each volume of liquid sample. (For example, for 100 µl of sample, add 400 µl of **Genomic Lysis Buffer**). Mix briefly by vortexing, then let stand at room temperature for 5-10 minutes.

**Note:** For Proteinase K digested material, add 4 volumes of **Genomic Lysis Buffer** to each volume of lysate then mix briefly by vortexing. Centrifuge the mixture at top speed (>10,000 x g) for 5 minutes. Transfer up to 600 µl supernatant to the wells of a Silicon-A™ Plate as in Step 2.

2. Transfer the mixtures to the wells of a **Silicon-A™ Plate** on a **Collection Plate**. Centrifuge at ≥ 2,500 x g (5,000 x g max.) for 5 minutes.
3. Add 200 µl **DNA Pre-Wash Buffer** to each well and centrifuge at ≥ 2,500 x g for 5 minutes. Discard the flow through.
4. Add 300 µl of **g-DNA Wash Buffer** to each well and centrifuge at ≥ 2,500 x g for 5 minutes.
5. Transfer the **Silicon-A™ Plate** onto an **Elution Plate**. Add ≥30 µl **DNA Elution Buffer** or water to each well. Incubate 2-5 minutes at room temperature, then centrifuge at ≥ 2,500 x g for 5 minutes to elute the DNA. The eluted DNA can be used immediately for molecular based applications or stored ≤-20°C for future use.

For solid tissues, Proteinase K treatment or mechanical homogenization is required. For high-throughput purification of DNA utilizing Proteinase K, use the **Quick-DNA™ 96 Plus Kit** (D4070, D4071).

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

The capacity of each well of the Silicon-A™ Plate is ~600 µl.

Typical yields from Proteinase K digested tissues are: 1-3 µg DNA per mg skeletal, heart, and brain tissues and 3-5 µg per mg liver, kidney, and lung tissues.

**Troubleshooting:**

1. DNA degradation: Check for DNase contamination. All reagents supplied with the **Quick-DNA™ 96 Kit** are DNase-free. However, DNase contamination could result during the processing of some samples. Check pipets, pipet tips, microcentrifuge tubes, etc., and exercise the appropriate precautions during the DNA purification procedure.
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 in this kit are designed to efficiently hydrolyze and remove RNA during the DNA purification procedure.

**Ordering Information**

Product Description	Cat. No.	Kit Size
<b>Quick-DNA™ Microprep Kit</b>	D3020	50 preps.
	D3021	200 preps.
<b>Quick-DNA™ Miniprep Kit</b>	D3024	50 preps.
	D3025	200 preps.
<b>Quick-DNA™ 96 Kit</b>	D3010	2x96 well
	D3011	4x96 well
	D3012	10x96 well

For Individual Sale	Catalog No.	Amount
<b>Genomic Lysis Buffer</b>	D3004-1-50	50 ml
	D3004-1-100	100 ml
<b>DNA Pre-Wash Buffer</b>	D3004-5-15	15 ml
	D3004-5-30	30 ml
	D3004-5-50	50 ml
<b>g-DNA Wash Buffer</b>	D3004-2-50	50 ml
	D3004-2-100	100 ml
<b>DNA Elution Buffer</b>	D3004-4-4	4 ml
	D3004-4-10	10 ml
	D3004-4-50	50 ml
<b>Silicon-A™ Plate</b>	C2001	2 plates
<b>Collection Plate</b>	C2002	2 plates
<b>Elution Plate</b>	C2003	2 plates

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## Popular Products From Zymo Research

Product	Description	Kit Size (Preps)	Catalog No. (Format)
<b>Fragment DNA Purification</b>			
<b>DNA Clean &amp; Concentrator™-5</b>	Clean and concentrate up to 5µg DNA into ≥6 µl elution volume in as little as 2 minutes with no wash residue carryover.	50 200 50 200	<b>D4003</b> (uncapped) <b>D4004</b> (uncapped) <b>D4013</b> (capped) <b>D4014</b> (capped)
<b>DNA Clean &amp; Concentrator™-25</b>	Clean & concentrate 25 µg of DNA into ≥25 µl elution volume in as little as 2 minutes with no wash residue carryover.	50 200 50 200	<b>D4005</b> (uncapped) <b>D4006</b> (uncapped) <b>D4033</b> (capped) <b>D4034</b> (capped)
<b>ZR-96 DNA Clean &amp; Concentrator™-5</b>	Quick (15 minute), high-output recovery of up to 5 µg pure DNA into 10-15 µl minimum elution volume allows for highly concentrated DNA.	2x96 4x96	<b>D4023</b> <b>D4024</b>
<b>Genomic DNA Clean &amp; Concentrator™</b>	Quick (5 minute) clean-up of up to 10 µg high molecular weight DNA (≤200 kb) from any enzymatic reaction or impure preparation without precipitations.	25 100	<b>D4010</b> (capped) <b>D4011</b> (capped)
<b>Zymoclean™ Gel DNA Recovery Kit</b>	Purify DNA from high and low-melting agarose gels in minutes	50 200 50 200	<b>D4001</b> (uncapped) <b>D4002</b> (uncapped) <b>D4007</b> (capped) <b>D4008</b> (capped)
<b>ZR-96 Zymoclean™ Gel DNA Recovery Kit</b>	High-throughput DNA purification from high and low-melting agarose gels.	2x96 4x96	<b>D4021</b> <b>D4022</b>
<b>Zymoclean™ Large Fragment DNA Recovery Kit</b>	Purify high molecular weight DNA (≤200 kb) from high and low-melting agarose gels in minutes	25 100	<b>D4045</b> (capped) <b>D4046</b> (capped)
<b>OneStep™ PCR Inhibitor Removal Kit</b>	Fast, one step procedure for removal of PCR inhibitors such as polyphenolics, humic/fulvic acids, melanin, etc. for successful PCR and other downstream applications.	50 2x96	<b>D6030</b> <b>D6035</b>
<b>Plasmid DNA Purification</b>			
<b>Zyppy™ Plasmid Miniprep Kit</b>	Pellet-Free™ plasmid DNA purification in less than 10 minutes. Recover up to 25 µg DNA in as low as 30 µl.	50 100 400	<b>D4036</b> <b>D4019</b> <b>D4020</b>
<b>Zyppy™-96 Plasmid Miniprep</b>	The fastest and simplest high-throughput method for plasmid purification.	2x96 4x96 8x96	<b>D4041</b> <b>D4042</b> <b>D4043</b>
<b>Zyppy™ Plasmid Midiprep Kit</b>	Pellet-Free™ plasmid DNA purification in 15 minutes in a 150 µl minimum elution volume).	25 50	<b>D4025</b> <b>D4026</b>
<b>ZymoPURE™ Midi, Maxi, and Gigaprep Kits</b>	For transfection-ready, endotoxin-free plasmid DNA in 18minutes.	See Website	<b>D4200, D4201</b> <b>D4202, D4203</b> <b>D4204</b>
<b>Genomic DNA Purification</b>			
<b>Quick-DNA™ 96 Plus Kit</b>	For high-throughput total DNA purification from any biological fluid, cell culture, or solid tissue sample utilizing Proteinase K.	2x96 4x96	<b>D4070</b> <b>D4071</b>
<b>Quick-DNA™ Miniprep Kit</b>	For high quality total DNA purification from any biological fluid, cell culture, or solid tissue sample utilizing Proteinase K and a novel spin-column.	50 200	<b>D4068</b> <b>D4069</b>
<b>Environmental DNA Purification Kits</b>	Unique BashingBead™ technology allows isolation of DNA from samples refractory to conventional lysis procedures including tough-to-lyse tissues, soil samples, feces, plants, seeds, insects, bacteria, yeast, filamentous fungi, unicellular and filamentous algae, and protozoa		<b>Visit website for a comprehensive list</b>

Please visit our website to see our complete line-up of products.

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