Quick-DNA™ Miniprep Plus Kit

Catalog Nos. D4068 & D4069

ZYMO RESEARCH
The Beauty of Science is to Make Things Simple

Biological Fluids & Cells Protocol

Biological Fluids: ≤ 200 µl
Total DNA from whole blood, buffy coat, saliva, sputum, semen, etc. See the Instruction Manual page 2 for other samples and special considerations.

Cultured Cells: ≤ 5x10^6 cells
Total DNA from *E. coli*, insect, or mammalian cells (e.g. HeLa cells, buccal cells, HEK-293 cells, etc.). See the Instruction Manual page 2 for special considerations and sample preparation information.

Note: *Pellet cells and discard supernatant. Resuspend cell pellets using* ***DNA Elution Buffer*** *or an isotonic buffer (e.g. PBS):*
< 1 x 10^6 cells in 100 µl
1-5 x 10^6 cells in 200 µl

**Add 1,040 µl of Storage Buffer to each 20 mg tube of Proteinase K. Store at -20°C.*

1. Add up to 200 µl sample to a microcentrifuge tube and add:
   200 µl **BioFluid & Cell Buffer (Red)**
   20 µl **Proteinase K**

   Note: *For inputs < 200 µl biological fluid, proportionally decrease BioFluid & Cell Buffer (Red), Proteinase K, and Genomic Binding Buffer.*

2. Mix thoroughly and then incubate the tube at 55ºC for 10 minutes.

3. Add 1 volume **Genomic Binding Buffer** to the digested sample. Mix thoroughly.
   Example: *Add 420 µl Genomic Binding Buffer to the 420 µl digested sample.*

4. Transfer the mixture to a **Zymo-Spin™ IIC-XLR Column** in a **Collection Tube**. Centrifuge (≥ 12,000 *x g*) for 1 minute. Discard the Collection Tube with the flow through.

5. Add 400 µl **DNA Pre-Wash Buffer** to the column in a new Collection Tube and centrifuge for 1 minute. Empty the Collection Tube.

6. Add 700 µl **g-DNA Wash Buffer** and centrifuge for 1 minute. Empty the Collection Tube.

7. Add 200 µl **g-DNA Wash Buffer** and centrifuge for 1 minute. Discard the Collection Tube with the flow through.

8. To elute the DNA, transfer to a clean microcentrifuge tube. Add ≥ 50 µl **DNA Elution Buffer**, incubate for 5 minutes, and then centrifuge for 1 minute.

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Solid Tissues Protocol

Solid Tissues: ≤ 25 mg
Total DNA from tail snips, ear punches, organ biopsies (brain, liver, heart, kidney, muscle, stomach, bladder, intestine, etc.).

For special sample types including FFPE, hair and feather, see the Instruction Manual page 3.

**Add 1,040 µl of Storage Buffer to each 20 mg tube of Proteinase K. Store at -20°C.*

1. To a tissue sample (≤ 25 mg) in a microcentrifuge tube, add a solution of:
   95 µl Water
   95 µl **Solid Tissue Buffer (Blue)**
   10 µl **Proteinase K**

2. Mix thoroughly and then incubate the tube at 55°C for 1-3 hours or until tissue solubilizes. Mix thoroughly.
   Note: *To remove insoluble debris, pellet by centrifugation at ≥ 12,000 x g for 1 minute. Transfer aqueous supernatant to a clean tube.*

3. Add 2 volumes **Genomic Binding Buffer** to the supernatant. Mix thoroughly.
   Example: *Add 400 µl Genomic Binding Buffer to the 200 µl supernatant.*

4. Transfer the mixture to a **Zymo-Spin™ IIC-XLR Column** in a **Collection Tube**. Centrifuge (≥ 12,000 *x g*) for 1 minute. Discard the Collection Tube with the flow through.

5. Add 400 µl **DNA Pre-Wash Buffer** to the column in a new Collection Tube and centrifuge for 1 minute. Empty the Collection Tube.

6. Add 700 µl **g-DNA Wash Buffer** and centrifuge for 1 minute. Empty the Collection Tube.

7. Add 200 µl **g-DNA Wash Buffer** and centrifuge for 1 minute. Discard the Collection Tube with the flow through.

8. To elute the DNA, transfer to a clean microcentrifuge tube. Add ≥ 50 µl **DNA Elution Buffer**, incubate for 5 minutes, and then centrifuge for 1 minute.