

ZR Genomic DNA™-Tissue MiniPrep

Rapid Isolation of Total DNA from a Variety of Solid Tissues

- High quality DNA from solid tissue (e.g., tailsnips, earpunches, etc).
- Optimized for maximal recovery of ultra-pure DNA without RNA contamination.
- Isolated DNA is ideal for PCR, endonuclease digestion, Southern blotting, bisulfite conversion/methylation detection, sequencing, genotyping, etc.



The ZR Genomic DNA™-Tissue MiniPrep is a simple procedure for the rapid isolation of total DNA (e.g., genomic, mitochondrial, parasitic, microbial, viral) from a variety of solid tissues. 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 specially formulated **Genomic Lysis Buffer**, vortex, and transfer the mixture(s) to a supplied column or plate. The product features *Fast-Spin* column technology to yield high-quality, purified DNA (see reverse). PCR inhibitors are effectively removed during the purification process. DNA purified using the ZR Genomic DNA™-Tissue MiniPrep is suitable for PCR, Southern blotting, DNA sequencing, endonuclease digestion, bisulfite conversion/methylation analysis, and other downstream applications.

Outline of the ZR Genomic DNA™-Tissue MiniPrep Procedure

Input

Solid tissue samples from humans, mice, rats, etc. Also, whole blood, plasma, or serum and cells from culture, as well as a variety of biological liquids are effectively processed using this kit.

DNA Yield

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 Purity

High-quality DNA ($A_{260}/A_{280} \geq 1.8$) is eluted with DNA Elution Buffer or water.

Formats

Spin column (25 µg binding capacity) & 96-well plate (5 µg binding capacity/well)

Sample
+
Proteinase K at 55°C



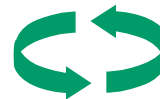
OR



Zymo-Spin™ IIC



Silicon-A™ Plate



Spin
Wash
Elute



Ultra-pure DNA is ideal for...

- PCR
- Endonuclease Digestion
- Southern Blotting
- Genotyping
- Bisulfite Conversion & Methylation Analysis



ZYMO RESEARCH

The Beauty of Science is to Make Things Simple

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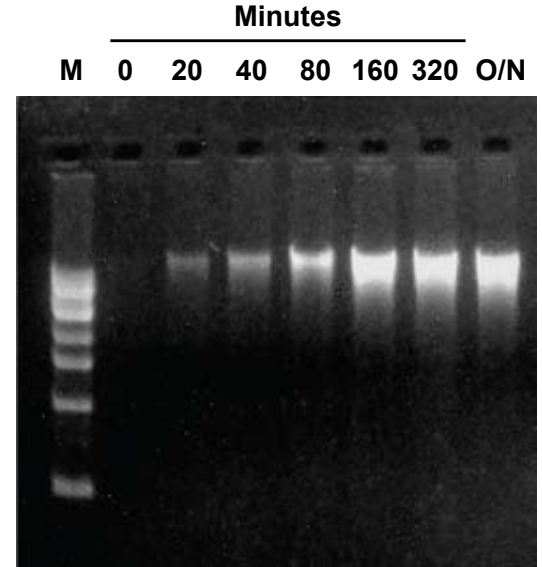
ZR Genomic DNA™-Tissue MiniPrep

ZR Genomic DNA™-Tissue MiniPrep Short Protocol

The following is for the purification of DNA from up to 25 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.

- To a tissue sample (≤ 25 mg) in a microcentrifuge tube add a solution of...

H ₂ O	95 µl
2X Digestion Buffer	95 µl
Proteinase K	10 µl
- Mix and then incubate the tube at 55°C for 1-3 hours.
 Note: If required, digesting samples overnight at -20°C with Proteinase K is possible without affecting the outcome of the purification or the integrity of the DNA.
- 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.
- Transfer the supernatant to a **Zymo-Spin™ IIC Column** in a **Collection Tube**. Centrifuge at 10,000 x g for one minute.
- 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.
- Add 400 µl of **g-DNA Wash Buffer** to the spin column. Centrifuge at 10,000 x g for one minute.
- Transfer the spin column to a clean microcentrifuge tube. Add ≥ 50 µl **DNA Elution Buffer** or water.



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 Tissue DNA Kit™ 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).



Providing the Best Quality Genomic DNA for Bisulfite Conversion & PCR

Ordering Information

Spin Column Format	Catalog No.	Kit Size
ZR Genomic DNA™-Tissue MiniPrep	D3050	50 preps.
ZR Genomic DNA™-Tissue MiniPrep	D3051	200 preps.

96-well Format	Catalog No.	Kit Size
ZR-96 Genomic DNA™-Tissue MiniPrep	D3055	2x96 preps.
ZR-96 Genomic DNA™-Tissue MiniPrep	D3056	4x96 preps.
ZR-96 Genomic DNA™-Tissue MiniPrep	D3057	10x96 preps.

Note - ™ Trademarks of Zymo Research Corporation. This product is for research use only and should only be used by trained professionals. 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.