QIAGEN® Genomic DNA Preparation

QIAGEN Genomic-tips available separately (cat. nos. 10223, 10243, and 10262) or in QIAGEN Blood & Cell Culture DNA Kits (cat. nos. 13323, 13343, and 13362) can be stored at room temperature (15–25°C) for up to 2 years. Buffer Y1 (supplied in the Genomic DNA Buffer Set, cat. no. 19060) and Buffer C1 (supplied in the buffer set and kits) should be stored 2–8°C. All other buffers, QIAGEN Protease, and QIAGEN Proteinase K may be stored at either 2–8°C or at room temperature.

For more information, please refer to the *QIAGEN Genomic DNA Handbook*, which can be found at www.qiagen.com/handbooks.

For technical assistance, please call toll-free 00800-22-44-6000, or find regional phone numbers at www.qiagen.com/contact.

Notes before starting

- Prewarm Buffer QF to 50°C to increase yields.
- Symbols: ■ mini-preps using the Genomic-tip 20/G; ▲ midi-preps using the Genomic-tip 100/G; ● maxi-preps using the Genomic-tip 500/G.

Table 1. QIAGEN Genomic-tip capacities

	QIAGEN Genomic-tip		
	20/G	**100/G**	**500/G**
DNA	1–20 µg	10–100 µg	80–500 µg
Blood	0.1–1 ml	1–5 ml	5–20 ml
Cells	5×10^6	2×10^7	1×10^8
Tissue	20 mg	100 mg	400 mg
Yeast	1.5×10^9	7.0×10^9	3.5×10^{10}
Bacteria	4.5×10^9	2.2×10^{10}	1.0×10^{11}

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1. Prepare blood, cultured cells, tissue, yeast, or bacterial samples according to protocols in the *QIAGEN Genomic DNA Handbook*.
2. Equilibrate a QIAGEN Genomic-tip 20/G, Genomic-tip 100/G, or Genomic-tip 500/G with ■ 1 ml, ▲ 4 ml, or ● 10 ml of Buffer QBT, and allow the QIAGEN Genomic-tip to empty by gravity flow.
3. Vortex the sample for 10 s at maximum speed and apply it to the equilibrated QIAGEN Genomic-tip. Allow it to enter the resin by gravity flow.
4. Wash the QIAGEN Genomic-tip with ■ 3 x 1 ml, ▲ 2 x 7.5 ml, or ● 2 x 15 ml of Buffer QC.
5. Elute the genomic DNA with ■ 2 x 1 ml, ▲ 1 x 5 ml, or ● 1 x 15 ml of Buffer QF.
6. Add ■ 1.4 ml, ▲ 3.5 ml, or ● 10.5 ml (0.7 volumes) room-temperature (15–25°C) isopropanol to the eluted DNA. Precipitate the DNA and resuspend in 0.1–2 ml of a suitable buffer (e.g., TE buffer, pH 8.0, or 10 mM Tris·Cl, pH 8.5).

   Precipitate the DNA by inverting the tube 10 to 20 times, and spool the DNA using a glass rod, and immediately transfer the spooled DNA to a microcentrifuge tube containing buffer.

   Alternatively, precipitate the DNA by mixing and centrifuging immediately at >5000 x *g* for at least 15 min at 4°C. Carefully remove the supernatant. Wash the centrifuged DNA pellet with ■ 1 ml, ▲ 2 ml, or ● 4 ml of cold 70% ethanol. Vortex briefly and centrifuge at >5000 x *g* for 10 min at 4°C. Carefully remove the supernatant without disturbing the pellet. Air-dry for 5–10 min, and resuspend the DNA in buffer.
7. Dissolve the DNA overnight on a shaker or at 55°C for 1–2 h.

   Resuspend the DNA pellet by rinsing the walls to recover the DNA. Pipetting the DNA up and down to promote resuspension should be avoided.