August 2026

Quick-Start Protocol

QIAmini DNA Tissue/Cells Kit

For use with the QIAmini instrument

The QIAmini DNA Tissue/Cells Kit (48) (cat. no. 591005) is shipped at ambient temperature. All reagents and kit components should be stored at room temperature (15–25°C).

Further information

- *QIAmini DNA Tissue/Cells Kit Handbook*: **www.qiagen.com/HB-3801**
- *QIAmini User Manual*: **www.qiagen.com/HB-3799**
- *TissueLyser III User Manual*: **www.qiagen.com/HB-3241**
- Safety Data Sheets: **www.qiagen.com/safety**
- Technical assistance: **support.qiagen.com**

Equipment and reagents supplied by the user

- Thermal shaker or heated water bath
- 1.5 mL tubes
- **Optional**: Equipment for sample disruption and homogenization.
  Depending on the sample type and method chosen, one of the following may be required:
  - TissueLyser III including adapter sets (cat. no. 9003240)
  - Vortex-Genie® 2 and Vortex Adapter for 24 (1.5 –2.0 mL) tubes (cat. no. 13000-V1-24)
  - 5 mm stainless steel beads (cat. no. 69989) and Collection Microtube or 2 mL microcentrifuge tubes
  - TissueRuptor® II (cat. no. 9002755) or similar rotor-stator homogenizer
- **Optional**: RNase A (cat. no. 19101)
- **Optional**: Vortexer

Notes before starting

- Buffer VXL and the QIAmini DNA Tissue/Cells cartridge contain guanidine salt and are therefore not compatible with disinfecting reagents containing bleach.
- If necessary, dissolve any precipitate that may have formed in Buffer ATL or Buffer VXL by incubation at 37°C with occasional mixing.
- If desired, add 100 µL Reagent DX to 15 mL Buffer ATL. Mix well after the addition of Reagent DX. You may upscale or downscale the volume accordingly. After preparation, the mixture is stable for 6 months at room temperature (15–25°C).
- Equilibrate buffers and cartridges to room temperature.
- Unless stated otherwise, perform all steps at room temperature (15–25°C). Work quickly.
- In the following procedure, text marked with ● denotes homogenization and lysis of cells, and text marked with ▲ denotes homogenization and lysis of tissue samples.
- Up to eight cartridges can be processed in one run.

Procedure

Homogenization and lysis of tissue or cell samples

1. ● Harvest up to 5 × 10^6 cells as a cell pellet. Resuspend the pellet in 180 µL Buffer ATL.

   For cell numbers ≤1 × 10^6, proceed with step 2.

   Note: For cell numbers ≥1 × 10^6 cells or polyploid cell lines, lysates may be viscous. It may be required to use a mechanical homogenization and disruption method. Choose one of the options listed in Table 1. For details, refer to the *QIAmini DNA Tissue/Cells Kit Handbook* (**www.qiagen.com/HB-3801**).

   ▲ Add 180 µL Buffer ATL to up to 50 mg frozen or 25 mg stabilized tissue sample. Choose one of the options listed in Table 1. For details, refer to the *QIAmini DNA Tissue/Cells Kit Handbook* (**www.qiagen.com/HB-3801**).

Table 1. Overview of recommended lysis methods for tissue samples and cell numbers ≥1 × 10^6

Sample Type	Disruption method	Procedure
Cells and tissue samples	TissueLyser III	Samples can be lysed with TissueLyser III and the respective adapter sets. When using 5 mm stainless steel beads in a 2 mL safe-lock tube, place samples into the TissueLyser III and run at desired setting. Reorient the adapter so the side closest to the machine body becomes furthest from it, and then run the TissueLyser III again. For settings, please refer to the handbook. Settings may be adjusted, if desired.
Cells and tissue samples	TissueRuptor II	Use TissueRuptor II according to instructions until sample is lysed.
Cells and tissue samples	Vortex Adaptor	Secure 2 mL tube containing a 5 mm stainless steel beads to a Vortex Adapter (cat. no. 13000-V1-24) and vortex at maximum speed for 10 min.
Tissue samples	Proteinase K	Add 20 µL Proteinase K and incubate overnight at 56°C.

2. For cell pellets with ≤ 1 × 10^6 cells and samples processed with one of the mechanical disruption options listed in Table 1, add 20 µL Proteinase K, and mix by pipetting or vortexing. Incubate at 56°C for ● 15 min or ▲ up to 60 min or until tissue sample is lysed.
   Optional: For RNA-free DNA, add 4 µL RNase A and incubate for 2 min.
3. Transfer resulting lysate into a well 1 of the prepared cartridges according to step 9.

Cartridge preparation

4. Invert pre-filled cartridge(s) to resuspend magnetic beads. Flick down to remove reagents and bead suspension from under the foil.
5. Place cartridge(s) into the Cartridge Frame. Make sure to keep the pull-tab accessible.
   Ensure cartridge(s) are fully inserted into the Cartridge Frame.
6. **Important**: Carefully remove the sealing foil. Avoid splashing of reagents.
7. Add 100 µL Buffer VXL to well 1 of the cartridge.
8. Transfer RNase-free water into well 5 of the cartridge according to the selected protocol.
   Note: For low biomass samples, an elution volume lower than 200 µL is recommended.
9. Transfer about 200 µL lysate from step 2 into well 1 of the cartridge.
   Note: At times, precipitation may form after this step; this does not affect the performance.

Procedure on the QIAmini instrument

10. Turn on the QIAmini instrument.
11. Select the desired protocol.

    Note: Find a list of all imported protocols in the list view of the run menu.

    Note: For details on the protocol selection, refer to the *QIAmini DNA Tissue/Cells Kit Handbook* (**www.qiagen.com/HB-3801**).
12. Open the instrument door. Load the Cartridge Frame holding the cartridge(s) into the instrument.

    Note: Ensure that the Cartridge Frame is placed in the correct orientation. Press the cartridges down to fully engage with the heater block.
13. Slide the Rod Covers into the rod cover holder of the instrument.

    Note: Press the clip down to allow full insertion of the rod cover holder.
14. Close the instrument door, press  , and confirm that consumables have been installed correctly to initiate the protocol.
15. The display shows "End of run" when the run is completed. Select **Confirm** and press  . Open the instrument door. Remove and discard the Rod Cover(s). Then remove the Cartridge Frame holding the cartridge(s) and transfer the purified nucleic acids from well 5 of each cartridge into a new 1.5 mL tube. Discard the cartridge(s).

    Recommended: Clean the instrument and perform a UV decontamination of the instrument chamber.

Document Revision History

Date	Description
08/2026	Initial release

Scan the QR code for handbook.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual.

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