August 2026

# QIAmini DNA Tissue/Cells Kit Instructions for Use

For automated purification of genomic DNA from tissue samples and cells using QIAmini

Sample to Insight

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# Kit Contents

| **QIAmini DNA Tissue/Cells Kit**<br>**Catalog no.**<br>**Number of reactions** | **(48)**<br>**591005**<br>**48** |
|---|---|
| Buffer ATL | 14 mL |
| Reagent DX | 1 mL |
| Proteinase K | 2 mL |
| Buffer VXL* | 6 mL |
| QIAmini DNA Tissue/Cells Cartridges* | 48 |
| RNase-free water | 2 × 7 mL |
| QIAmini Rod Covers | 12 |
| Quick-Start Protocol | 1 |

* Contains chaotropic salt. Take appropriate laboratory safety measures and wear gloves when handling. Not compatible with disinfecting agents containing bleach. See the Safety Information section.

# Shipping and Storage

The QIAmini DNA Tissue/Cells Kit is shipped at ambient temperature. Upon receipt, store kit components dry at room temperature (15–25°C).

When stored properly, buffers and reagent cartridges are stable until the expiration date on the kit label.

# Intended Use

The QIAmini DNA Tissue/Cells Kit is intended for research use only. This product is not intended for the diagnosis, prevention, or treatment of a disease.

All due care and attention should be exercised in the handling of the products. We recommend all users of QIAGEN® products to adhere to the NIH guidelines that have been developed for recombinant DNA experiments or to other applicable guidelines.

# Safety Information

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate safety data sheets (SDSs). These are available online in convenient and compact PDF at **www.qiagen.com/safety**, where you can find, view, and print the SDS for each QIAGEN kit and kit component.

**CAUTION** Do not use bleach, or acidic solutions directly to the sample preparation waste.

Buffer VXL and buffers in the QIAmini DNA Tissue/Cells Cartridges contain chaotropic salts, which can form highly reactive compounds when combined with bleach. If liquid containing these buffers is spilled, clean with a suitable laboratory detergent and water. If the spilled liquid contains potentially infectious agents, clean the affected area first with laboratory detergent and water, and then with 1% (v/v) sodium hypochlorite.

If liquid containing potentially infectious agents is spilled on QIAmini, refer to the instrument user manual for decontamination instructions.

# Quality Control

In accordance with QIAGEN's ISO-certified Quality Management System, each lot of the QIAmini DNA Tissue/Cells Kit is tested against predetermined specifications to ensure consistent product quality.

# Introduction

This instructions for use describes the use of the QIAmini DNA Tissue/Cells Kit with QIAmini. For detailed description of QIAmini, refer to the *QIAmini User Manual* (**www.qiagen.com/HB-3799**) and the *QIAmini Suite User Guide* (**www.qiagen.com/HB-3800**). The QIAmini DNA Tissue/Cells Kit enables automated purification of DNA from the following sample materials using QIAmini:

- Fresh, frozen tissue
- Stabilized tissue
- Cultured cells
- Buccal swabs

The QIAmini DNA Tissue/Cells Kit can be used to purify DNA from tissue samples, cultured cells, and buccal swabs. Magnetic-particle technology enables purification of high-quality nucleic acids free of proteins, nucleases, and other impurities. The purified nucleic acids are ready to use for highly sensitive detection in downstream assays, such as amplification or other enzymatic reactions. QIAmini can process up to eight samples per run.

## Principle and procedure

The QIAmini DNA Tissue/Cells Kit includes materials for use with an automated protocol for purification of DNA from tissue samples, cultured cells, and buccal swabs on QIAmini. Sample type-dependent homogenization and lysis are performed before loading the sample onto QIAmini. QIAmini with the QIAmini DNA Tissue/Cells Kit combines the speed and efficiency of silica-based nucleic acid purification with the convenience of magnetic-particle handling. The automated purification procedure, in combination with pre-filled extraction cartridges, is designed to ensure reproducible processing of up to 8 samples and comprises the binding, washing, and elution steps. Sample preparation is performed before loading QIAmini.

## Sample lysis

Lysis of tissue samples, cultured cells, and buccal swabs for processing with QIAmini DNA Tissue/Cells Kit is performed before loading the samples onto QIAmini. For all sample types, lysis buffer in combination with Proteinase K is used at elevated temperature. Depending on the sample type, mechanical disruption and homogenization may be recommended. After lysis, the sample is transferred to the QIAmini DNA Tissue/Cells Cartridges and loaded onto QIAmini for automated extraction.

To reduce foaming during mechanical disruption, 100 µL Reagent DX may be added to 15 mL Buffer ATL, if desired. Mix well after the addition of Reagent DX. You may upscale or downscale the volume accordingly (for 14 ml Buffer ALT, add 93 µl of Reagent DX). After preparation, the mixture is stable for 6 months at room temperature.

Precipitates may form in Buffer ATL or Buffer VXL* during storage at room temperature or below. Dissolve the precipitates by incubating the bottles at 37°C for 15 min and shaking them manually twice within this incubation period.

## Binding to magnetic particles

After lysis, pre-filled cartridges containing the sample, binding buffer, and RNase-free water for elution are transferred to the instrument for automated processing. Magnetic particles are then added to the samples, and thorough mixing ensures optimal adsorption of DNA to the silica surface of the magnetic particles. DNA is isolated from the lysates by binding to the silica surface of the magnetic particles in the presence of a chaotropic salt. The magnetic particles are subsequently separated from the lysates using a magnet.

## Washing of bound nucleic acids

While DNA remains bound to the magnetic particles, contaminants are efficiently washed away during a sequence of wash steps.

*Contains a chaotropic salt. Take appropriate laboratory safety measures and wear gloves when handling. Not compatible with disinfectants containing bleach. See page 5 for Safety Information.

## Elution of purified nucleic acids

In a single step, purified DNA is eluted in RNase-free water. Protocols for the QIAmini DNA Tissue/Cells Kit include two elution volume options. For tissue and cell samples, elution in 200 µL is recommended to maximize DNA recovery. For low-biomass samples, such as buccal swabs, a protocol with a 50 µL elution volume is available. The use of magnetic particles may result in a slight reduction in eluate volume because of the inherent dead volume of the particles. To compensate for this, for the low-biomass protocol, loading 60 µL into well 5 of the QIAmini DNA Tissue/Cells Cartridges is recommended to achieve a target elution volume of 50 µL. The purified DNA can be used immediately in downstream applications or stored for future use.

# Equipment and Reagents Supplied by User

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, consult the appropriate safety data sheets (SDSs), available from the product supplier. These are available online in convenient and compact PDF at **www.qiagen.com/safety** where you can find, view, and print the SDS kit for each QIAGEN kit and kit component.

The following materials are not included in the kit and are to be supplied by the user:

## All protocols

- Pipettes and sterile, RNase-free pipette tips
- Disposable gloves
- Thermal shaker or heated water bath
- Microcentrifuge (with rotor for 2 mL tubes)
- 1.5 mL tubes
- **Optional**: RNase A (17,500 U) (cat. no. 19101)

## For tissue and cultured cells protocol

- **Optional**: Equipment for sample disruption and homogenization. Depending on the method chosen, one or more of the following are required:
  - TissueLyser III (cat. no. 9003240) with adapter sets for use with 2 mL Safe-lock tubes (TissueLyser Adapter Set 2 × 24 [cat. no. 69982] (see the Ordering Information section)
  - Vortex-Genie® 2 and Vortex Adapter for 24 (1.5–2 mL) tubes (cat. no. 13000-V1-24)
  - 5 mm stainless steel beads (see the Ordering Information section)
  - TissueRuptor® II (see the Ordering Information section) or similar rotor–stator homogenizer

## For buccal swab protocol

Because of the increased volume of Buffer ATL required, up to 30 buccal swab samples can be processed with QIAmini DNA Tissue/Cells Kit. Additional materials may be required and can be purchased separately:

- Buffer ATL (cat. no. 19076 or 939011)

# Important Notes

## Starting material

The purification procedure is optimized for the extraction of DNA from tissue, cells, and buccal swabs.

### Tissue samples

DNA can be isolated from fresh, frozen, and stabilized tissues. The most accurate method is to weigh the tissue sample. In general, up to 50 mg of fresh or frozen tissue can be processed. Ensure that the correct amount of starting material is used as overloading the system may impact performance. For tissues such as spleen, which contain a high number of cells for a given tissue mass, use no more than 5–10 mg of tissue as the starting material. For stabilized tissue samples, use half the amount of starting material.

Several disruption and homogenization methods are available for tissue samples. These include mechanical disruption using TissueLyser III with the dedicated adapters or a vortex adapter for 2 mL tubes in combination with 5 mm stainless steel beads. Another option recommended for mechanical disruption is the use of a rotor–stator homogenizer such as the TissueRuptor II. All mechanical disruption and homogenization methods are combined with Proteinase K digestion to optimize sample lysis. Alternatively, enzymatic lysis alone can be used. In this case, increase the Proteinase K incubation time to overnight or until the lysate is visibly clear. This gentle approach recovers more intact DNA molecules. Efficient lysis is crucial for subsequent DNA isolation.

Especially when using high amounts of input material it may be required to use a mechanical disruption method and/or to adapt lysis settings to reduce viscosity of the lysate. High viscosity may impact DNA extraction. If sample material is used for the first time, it is

recommended to start with less than the maximum amount and increase sample size in subsequent preparation.

If RNA-free DNA is required, using RNase A is recommended. Transcriptionally active tissues, such as liver and kidney, contain high levels of RNA, which copurifies with genomic DNA.

## Cultured cells

The maximum amount of cells used should not exceed $5 \times 10^6$ cells. Counting cells is the most accurate method to determine the amount of starting material. Ensure that an appropriate number of cells is used in the procedure.

Cells can be processed from a fresh or frozen pellet. For this, harvest the cells and spin at 300 × *g* for 5 min to generate cell pellets. When working with a frozen cell pellets, allow cells to thaw slightly before adding Buffer ATL. Dislodge the pellet by gently flicking the tube. Using mechanical homogenization is recommended when processing $\geq 1 \times 10^6$ cells or cell lines with a high degree of ploidy to reduce viscosity of the lysate, as high viscosity may impact DNA extraction. Recommended methods may include, for instance, using TissueLyser III with the dedicated adapters or a vortex adapter, both in combination with 5 mm stainless steel beads. For cell lines with a high degree of ploidy, it is recommended to start out with fewer than the maximum number of cells and then increase the cell number in subsequent preparations.

If RNA-free DNA is required, the use of RNase A is recommended as RNA may copurify.

## Buccal swabs

To collect samples, scrape firmly against the inside of each cheek 6 times. Place the swabs immediately into a sterile transport tube. Different kinds of swabs, such as cotton swabs or 4N6FLOQSwabs (cat. no. WB100100 or WB100101), can be used. Ensure that the person

providing the sample has not consumed any food or drink during the 30 min before sample collection.

Because of the increased volume of Buffer ATL required during lysis, up to 30 buccal swab samples can be processed with the QIAmini DNA Tissue/Cells Kit. Additional Buffer ATL can be purchased separately.

If RNA-free DNA is required, the use of RNase A is recommended because RNA may copurify.

## Elution volumes and eluate handling

In the final step of the purification procedure, DNA is eluted in RNase-free water. For extraction from tissue samples and cells, a 200 µL elution is recommended.

For lower-biomass samples, such as buccal swabs, a dedicated protocol with a lower elution volume is available. To achieve a target volume of approximately 50 µL, pipet 60 µL of RNase-free water into well 5 of the QIAmini DNA Tissue/Cells cartridge. Because of the dead volume of magnetic beads, a slight reduction in volume occurs, thus resulting in 50 µL of available eluate.

## Storing DNA

For short-term storage (up to 24 h), we recommend storing the purified DNA at 2–8°C. For long-term storage (more than 24 h), we recommend storage at –90°C to –65°C (preferred) or at –30°C to –15°C.

## Working with QIAmini

The main features of QIAmini include the following:

- Purification of high-quality nucleic acids from a wide variety of sample types
- Flexible throughput, allowing processing of up to eight samples per run
- Simple, low-complexity automation of magnetic, particle-based bind–wash–elute workflows
- Pre-filled reagent cartridges enabling convenient load-and-go operation
- Compact footprint, designed to fit on any laboratory bench and allow rapid implementation
- User-friendly operation, making automated nucleic acid purification accessible even for occasional users
- Browser-based application for protocol management
- UV decontamination to help reduce sample carryover from run-to-run and allow pathogen decontamination on worktable surface

**Note**: UV decontamination helps reduce possible pathogen contamination on QIAmini worktable surfaces. The efficiency of inactivation must be determined for each specific organism and depends on factors such as sample type and contaminant load. QIAGEN cannot guarantee complete eradication of specific pathogens.

# Protocol: Purification of DNA from Tissue

This protocol is intended for the purification of DNA from fresh, frozen, or stabilized tissue samples.

## Important notes before starting

- A list of all imported protocols is available in the Run menu list view.
- For detailed protocol descriptions and the latest overview of all available QIAmini protocols, refer to the *QIAmini Protocol Overview* (**www.qiagen.com/HB-3870**), available for download separately.
- Download the appropriate protocol file from **www.qiagen.com/QIAmini** or from QIAmini Suite (**www.qiagen.com/QIAminiSuite**), and transfer to your QIAmini instrument.

## Procedure

1. Excise the tissue sample or remove it from storage, and determine the amount of tissue.

   Weighing in the tissue is the most accurate way to determine the amount. Up to 50 mg of fresh frozen or 25 mg of stabilized tissue can be used.

   **Note**: For tissues, such as spleen, with a very high number of cells for a given mass of tissue, no more than 10 mg starting material should be used.

   **Important**: Adhere to the guidelines on page 12. We recommend cutting the tissue into small pieces to enable more efficient lysis. Place the tissue sample in a tube suitable for your preferred lysis option.

2. Add 180 µL Buffer ATL to the tissue sample. Choose one of the options listed in Table 1.

**Table 1. Overview of recommended tissue lysis methods**

| Lysis method | Procedure |
|---|---|
| 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 15 Hz for 20 s. Reorient the adapter so the side closest to the machine body becomes furthest from it, and then run the TissueLyser III again at 15 Hz for 20 s. Lysis settings may be adjusted as needed. |
| TissueRuptor II | Use TissueRuptor II according to instructions until tissue is lysed. |
| Vortex Adapter | Secure 2 mL tube containing a 5 mm stainless steel bead to a Vortex Adapter (cat. no. 13000-V1-24) and vortex at maximum speed for 10 min. |
| Proteinase K | Add 20 µL Proteinase K and incubate overnight or until the samples are completely lysed at 56°C. |

3. When choosing mechanical lysis method, afterwards, add 20 µL Proteinase K and mix by vortexing or pipetting. Incubate at 56°C until cleared or up to 60 min. Vortex occasionally during incubation to disperse the sample or place in a thermal mixer, in a shaking water bath, or on a rocking platform.
4. **Optional**: For RNA-free DNA, add 4 µL RNase A and incubate for 2 min at room temperature. Transcriptionally active tissues, such as liver and kidney, contain high levels of RNA, which copurifies with genomic DNA. If residual RNA is not a concern, RNase A digestion is not necessary.
5. Transfer resulting lysate into a well 1 of the prepared cartridges according to step 10.

### Cartridge preparation

6. Invert the pre-filled cartridge(s) to resuspend magnetic beads. Flick down to remove reagents and bead suspension from under the foil.
7. Place the cartridge(s) into the cartridge frame. Make sure to keep the pull tab accessible. Ensure that the cartridge(s) are fully inserted into the cartridge frame.

   **Important**: Carefully remove the sealing foil. Avoid splashing of reagents.

   **Note**: Solid residue may be present in well 2 of the cartridge after opening. This does not affect performance.
8. Add 100 µL Buffer VXL to well 1 of the cartridge.
9. Transfer 200 µL 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.
10. Transfer approximately 200 µL lysate from step 5 into well 1 of the cartridge.

    **Note**: At times, precipitation may form after this step. This does not affect performance.
11. Proceed with step 1 of "Procedure on QIAmini".

# Protocol: Purification of DNA from Cultured Cells

This protocol is intended for the purification of DNA from cultured cells.

## Important notes before starting

- A list of all imported protocols is available in the Run menu list view.
- For detailed protocol descriptions and the latest overview of all available QIAmini protocols, refer to the *QIAmini Protocol Overview* (**www.qiagen.com/HB-3870**), available for download separately.
- Download the appropriate protocol file from **www.qiagen.com/QIAmini** or from QIAmini Suite (**www.qiagen.com/QIAminiSuite**), and transfer to your QIAmini instrument.

## Procedure

1. Harvest up to 5 × $10^6$ cells as a cell pellet. Cell pellets may be used fresh or frozen. When working with a frozen cell pellet, allow cells to thaw slightly before adding Buffer ATL. Dislodge the pellet by gently flicking the tube. Resuspend the pellet in 180 µL Buffer ATL by pipetting.

   **Note**: For cell numbers ≥1 × $10^6$ cells or cell lines with a high degree of ploidy, lysates may be viscous. It is recommended to use a mechanical homogenization method. For options, refer to Table 2 and proceed to step 2 afterward. Otherwise, proceed to step 2 directly.

**Table 2. Overview of recommended homogenization methods for viscous cell samples**

| Lysis method | Procedure |
|---|---|
| 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 25 Hz for 60 s. Reorient the adapter so the side closest to the machine body becomes furthest from it, and then run the TissueLyser III again at 25 Hz for 60 s. Lysis settings may be adjusted as needed. |
| Vortex Adapter | Secure 2 mL tube containing a 5 mm stainless steel bead to a Vortex Adapter (cat. no. 13000-V1-24) and vortex at maximum speed for 10 min. |

2. Add 20 µL Proteinase K and mix by vortexing or pipetting. Incubate at 56°C for 15 min. Vortex occasionally during incubation to disperse the sample or place in a thermal mixer, in a shaking water bath, or on a rocking platform.

   **Optional**: For RNA-free DNA, add 4 µL RNase A and incubate for 2 min at room temperature. If residual RNA is not a concern, RNase A digestion is not necessary.

3. Transfer resulting lysate into well 1 of the prepared cartridges according to step 8.

## Cartridge preparation

4. Invert the pre-filled cartridge(s) to resuspend magnetic beads. Flick down to remove reagents and bead suspension from under the foil.

5. Place the cartridge(s) into the cartridge frame. Make sure to keep the pull tab accessible. Ensure that the cartridge(s) are fully inserted into the cartridge frame.

   **Important**: Carefully remove the sealing foil. Avoid splashing of reagents.

   **Note**: Solid residue may be present in well 2 of the cartridge after opening. This does not affect performance.

6. Add 100 µL Buffer VXL to well 1 of the cartridge.

7. Transfer 200 µL 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.

8. Transfer approximately 200 µL lysate from step 3 into well 1 of the cartridge.

   **Note**: At times, precipitation may form after this step. This does not affect performance.

9. Proceed with step 1 of "Procedure on QIAmini".

# Protocol: Purification of DNA from Buccal Swabs

This protocol is intended for the purification of DNA from buccal swabs.

## Important notes before starting

- A list of all imported protocols is available in the Run menu list view.
- For detailed protocol descriptions and the latest overview of all available QIAmini protocols, refer to the *QIAmini Protocol Overview* (**www.qiagen.com/HB-3870**), available for download separately.
- Download the appropriate protocol file from **www.qiagen.com/QIAmini** or from QIAmini Suite (**www.qiagen.com/QIAminiSuite**), and transfer to your QIAmini instrument.

## Procedure

1. To collect a sample, scrape the swab firmly against the inside of each cheek 6 times. Air-dry the swab for at least 2 h after collection. Ensure that the person providing the sample has not consumed any food or drink in the 30 min before sample collection.
2. Place the swab into a 2 mL microcentrifuge tube and cut or break off the stem.
3. Add 450 µL Buffer ATL to the sample.
4. Add 30 µL Proteinase K and mix by vortexing or pipetting. Close the lid to prevent evaporation.
5. Incubate at 56°C for 30 min. Mix occasionally during incubation to disperse the sample or place in a thermal mixer or shaking water bath.

   **Optional**: Briefly centrifuge to remove drops from inside the lid.

**Optional**: For RNA-free DNA, add 4 µL RNase A and incubate for 2 min at room temperature.

6. Transfer the remaining liquid (approx. 250 µL) into well 1 of the prepared QIAmini DNA Tissue/Cells Cartridge and proceed with step 11.

### Cartridge preparation

7. Invert the pre-filled cartridge(s) to resuspend magnetic beads. Flick down to remove reagents and bead suspension from under the foil.
8. Place the cartridge(s) into the cartridge frame. Make sure to keep the pull tab accessible. Ensure that the cartridge(s) are fully inserted into the cartridge frame.

   **Important**: Carefully remove the sealing foil. Avoid splashing of reagents.

   **Note**: Solid residue may be present in well 2 of the cartridge after opening. This does not affect performance.
9. Add 100 µL Buffer VXL to well 1 of the cartridge.
10. Transfer 60 µL RNase-free water into well 5 of the cartridge according to the selected protocol.

    **Note**: For low-biomass samples, a target elution volume of 50 µL is recommended. To achieve this with the inherent dead volume of magnetic particles, pipet 60 µL of RNase-free water.
11. Transfer approximately 250 µL lysate from step 6 into well 1 of the cartridge.

    **Note**: At times, precipitation may form after this step. This does not affect performance.
12. Proceed with step 1 of “Procedure on QIAmini”.

# Procedure on QIAmini

1. Turn on QIAmini.
2. Select the desired protocol.

   **Note**: A list of all imported protocols is available in the Run menu list view.

   **Note**: For detailed protocol descriptions and the latest overview of all available QIAmini protocols, refer to the *QIAmini Protocol Overview* (**www.qiagen.com/HB- 3870**), available for download separately.
3. Open the instrument door. Load the cartridge frame holding the cartridge(s) into the instrument.

   **Note**: Ensure that the cartridge frame is placed in correct orientation. Press the cartridges down to fully engage with the heater block.
4. Slide rod cover(s) into the rod cover holder.

   **Note**: Press the clip down to allow full insertion of the rod cover holder.
5. Close the instrument door, press , and confirm that consumables have been installed correctly to initiate the protocol run.
6. The display shows “End of run” when the run is completed. Select **Confirm** and press  .
7. 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 reaction tube (e.g., 1.5 mL tube). Discard the cartridge(s).

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

# Troubleshooting Guide

This troubleshooting guide may be helpful in solving any problems that may arise. For more information, see also the Frequently Asked Questions page at our Technical Support Center: **www.qiagen.com/FAQ/FAQList.aspx** (for contact information, visit **support.qiagen.com**).

| | Comments and suggestions |
|---|---|
| **General handling** | |
| Error message in instrument | Refer to the *QIAmini User Manual* (**www.qiagen.com/HB-3799**). |
| **DNA yield too low** | |
| Magnetic particles not completely resuspended | Ensure to invert the QIAmini DNA Tissue/Cells Cartridges before use. |
| Low yield in amplification-based quantification | When using high volumes of undiluted eluate in a very sensitive downstream assay, consider extending air dry step to remove residual alcohol. |
| **Precipitate in buffers** | |
| Precipitate in Buffer ATL or Buffer VXL | Precipitate may form after storage at low temperature or after prolonged storage. To dissolve precipitate, incubate Buffer ATL or Buffer VXL at 37°C with occasional shaking. |
| **RNA present in eluate** | |
| Include optional RNase A digest | With the QIAmini DNA Tissue/Cells Kit, RNA may be copurified. For RNA-free DNA, include RNase A digest. |
| **Beads in eluate** | |
| Too much input material used | Adhere to the instructions regarding sample material, and carry out initial tests with lower amounts. Too much material may increase viscosity of the sample that can impact bead handling throughout the protocol. |
| Too much input material used | When using high amounts of sample material, more vigorous lysis such as the listed mechanical lysis options may be required. More rigorous disruption may result in DNA shearing. |

| | Comments and suggestions |
|---|---|
| **Lysate is very viscous** | |
| High amount of cells used | Especially for polyploid cell line, start out with lower cell numbers. |
| High amount of cells used | When processing more than 1 × $10^6$ cells of certain cell lines, additional mechanical homogenization may be required to reduce viscosity of the lysate. More vigorous lysis setting will reduce viscosity but may result in DNA shearing. |
| High amount of tissue used | Reduce the amount of tissue sample and test increasing amounts in subsequent experiments. Use more rigorous lysis conditions, i.e. mechanical disruption or adapting the settings during mechanical disruption. |
| Enzymatic lysis of tissue not sufficient | Consider using a mechanical homogenization and lysis option. If this is not possible, extend the incubation time with Proteinase K or use less tissue sample. More vigorous lysis setting will reduce viscosity but may result in DNA shearing. |

# Ordering Information

| Product | Contents | Cat. no. |
|---|---|---|
| QIAmini DNA Tissue/Cells Kit (48) | For 48 DNA preparations from tissue or cell samples: Buffer ATL, Reagent DX, Proteinase K, Buffer VXL ,QIAmini DNA Tissue/Cells Cartridges and RNase-free water | 591005 |
| **Related products** | | |
| QIAmini | Benchtop instrument for automated isolation of nucleic acids; includes 1 year warranty on parts and labor | Varies* |
| QIAmini Rod Covers (2) | Set of 2 rod cover frames for use with QIAmini | 1137997 |
| Buffer ATL | Lysis buffer | 19076 or 939011 |
| RNase A (17,500 U) | 2.5 mL solution for removal of RNA | 19101 |
| Vortex Adapter for 24 (1.5–2.0 mL) tubes | For vortexing 1.5 and 2 mL tubes using the Vortex-Genie 2 Vortex. | 13000-V1-24 |
| **TissueLyser** | | |
| TissueLyser III | Bead mill, 100–120/220–240 V, 50/60 Hz; requires the TissueLyser Adapter Set 2 × 24 or TissueLyser Adapter Set 2 × 96 | 9003240 |
| TissueLyser Adapter Set 2 × 24 | Two sets of adapter plates and two racks for use with 2 × 24 samples in 2 mL microcentrifuge tubes on the TissueLyser III | 69982 |
| Stainless Steel Beads, 5 mm (200) | 200 stainless steel beads (5 mm diameter), suitable for use with TissueLyser systems | 69989 |
| TissueLyser Single-Bead Dispenser, 5 mm | For dispensing individual beads (5 mm diameter) | 69965 |

* Contact your QIAGEN sales team or local distributor to determine the instrument available in your country.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit instructions for use or user manual. QIAGEN kit instructions for use and user manuals are available at **www.qiagen.com** or can be requested from QIAGEN Technical Service or your local distributor.

# Document Revision History

| Date | Description |
|---|---|
| 08/2026 | Initial release |

### Limited License Agreement for QIAmini DNA Tissue/Cells Kit

Use of this product signifies the agreement of any purchaser or user of the product to the following terms:

1. The product may be used solely in accordance with the protocols provided with the product and this Instructions for Use and for use with components contained in the kit only. QIAGEN grants no license under any of its intellectual property to use or incorporate the enclosed components of this panel with any components not included within this panel except as described in the protocols provided with the product, this Instructions for Use, and additional protocols available at **www.qiagen.com**. Some of these additional protocols have been provided by QIAGEN users for QIAGEN users. These protocols have not been thoroughly tested or optimized by QIAGEN. QIAGEN neither guarantees them nor warrants that they do not infringe the rights of third-parties.
2. Other than expressly stated licenses, QIAGEN makes no warranty that this panel and/or its use(s) do not infringe the rights of third-parties.
3. This panel and its components are licensed for one-time use and may not be reused, refurbished, or resold.
4. QIAGEN specifically disclaims any other licenses, expressed or implied other than those expressly stated.
5. The purchaser and user of the panel agree not to take or permit anyone else to take any steps that could lead to or facilitate any acts prohibited above. QIAGEN may enforce the prohibitions of this Limited License Agreement in any Court, and shall recover all its investigative and Court costs, including attorney fees, in any action to enforce this Limited License Agreement or any of its intellectual property rights relating to the panel and/or its components.

For updated license terms, see **www.qiagen.com**.

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