March 2026

QIAsprint® DNA Tissue/Cells Application Guide

For automated purification of genomic DNA from tissue samples and cells

Sample to Insight

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Required Kits and Components

For isolation of DNA from cells, tissues, and buccal swabs, the following kits and components are required:

Required kit/component name	Cat. no.
QIAsprint DNA Tissue/Cells PrepSet (384)	587449
QIAsprint Essential Kit C (384)	587009
QIAsprint Prep Cover (8)	582103
QIAsprint Prep Plate Insert (32)	582226
QIAsprint Elution Plate (10)	583204

Optional kit/component name	Cat. no.
RNase A*	19101
Proteinase K†	19134
Buffer ATL†	19076

* For all protocols
† For DNA isolation from buccal swabs

Kit Contents

The QIAsprint Connect offers the possibility of a modular kit concept, and the following combination is recommended for purification of genomic DNA (gDNA) from tissue samples, cells, and buccal swabs.

QIAsprint DNA Tissue/Cells PrepSet **Catalog no.** **Number of preps**	**(384)** **587449** **384**
Buffer ATL	2 × 50 mL
Reagent DX	1 mL
Proteinase K	10 mL
Buffer VXL*	2 × 30 mL
Buffer ACB* (concentrate)	3 × 30 mL

* Contains a chaotropic salt. Take appropriate laboratory safety measures and wear gloves when handling. Not compatible with disinfectants containing bleach. See page 8 for Safety Information.

QIAsprint Essential Kit C **Catalog no.** **Number of preps**	**(384)** **587009** **384**
Buffer MW1* (concentrate)	3 × 77 mL
RNase-free water	30 mL
RNase-free water	50 mL
MagG Bead Suspension	12 mL

* Contains a chaotropic salt. Take appropriate laboratory safety measures and wear gloves when handling. Not compatible with disinfectants containing bleach. See page 8 for Safety Information.

Shipping and Storage

The QIAsprint DNA Tissue/Cells PrepSet and QIAsprint Essential Kit C are shipped at ambient temperature.

All buffers and reagents should be stored at room temperature (15–25°C) until the expiration date printed on the box label.

Intended Use

The QIAsprint DNA Tissue/Cells PrepSet is intended for molecular biology applications. 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 format at **www.qiagen.com/safety**, where you can find, view, and print the SDS for each QIAGEN kit and components.

CAUTION DO NOT add bleach or acidic solutions directly to the sample preparation waste.



Buffers VXL, ACB, and MW1 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.

Quality Control

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

Introduction

The application guide describes processing of the QIAsprint DNA Tissue/Cells PrepSet and the QIAsprint Essential Kit C with the QIAsprint Connect instrument. For a detailed description of the QIAsprint Connect instrument, refer to the respective user manual (**www.qiagen.com/HB- 3708**) and quick- start guide (**www.qiagen.com/HB- 3709**). The QIAsprint DNA Tissue/Cells application enables automated high-throughput purification of DNA from the following sample materials using the QIAsprint Connect instrument:

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

The QIAsprint DNA Tissue/Cells PrepSet and the QIAsprint Essential Kit C can be used to purify DNA from tissue samples, cultured cells, and buccal swabs. Magnetic- particle technology enables purification of high- quality nucleic acids that are 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. The QIAsprint Connect can process up to 96 samples per run, and subsequent runs allow handling of up to 192 samples in a single session.

Automated purification on QIAsprint Connect

Nucleic acid purification is fully automated on the QIAsprint Connect platform. The advanced technology integrated into QIAsprint Connect ensures efficient purification of nucleic acids for a wide range of applications while offering exceptional flexibility to allow customers to customize their purification protocols according to specific requirements.

QIAsprint Connect provides comprehensive protocols and purification guides for plasmid DNA, gDNA, RNA, and viral/bacterial nucleic acids.



Figure 1. The QIAsprint Connect instrument.

Principle and procedure

The QIAsprint DNA Tissue/Cells application combines the speed and efficiency of silica-based nucleic acid purification with the convenient handling of magnetic particles. The purification procedure is designed to ensure reproducible handling of samples and comprises the steps: bind, wash, and elute, while preparation of the respective samples is carried out before loading the QIAsprint Connect instrument.

Sample lysis

Lysis of tissue samples, cultured cells and buccal swabs to be processed with the QIAsprint DNA Tissue/Cells application occurs before loading onto the QIAsprint Connect instrument. For all samples, lysis buffer in combination with Proteinase K at elevated temperature is used. Depending on the sample material, mechanical disruption and homogenization may be recommended.

Binding to magnetic particles

The QIAsprint DNA Tissue/Cells PrepSet together with the Essential Kit C includes material to be used with an automated protocol for purification of DNA from tissue samples, cultured cells, and buccal swabs. Based on the sample material, homogenization and lysis are carried out before loading the QIAsprint Connect instrument. After lysis, the sample and a binding mixture are transferred onto the instrument. Here, they are thoroughly mixed to ensure optimal adsorption of DNA to the silica surface of the magnetic particles.

Washing of bound nucleic acids

While DNA remains bound to the magnetic particles, contaminants are efficiently washed away during a sequence of wash steps using first Buffer MW1 and then 80% ethanol twice.

Elution of purified nucleic acids

In a single step, purified DNA is eluted in RNase-free water. Protocols for the DNA Tissue/Cells application include two options regarding elution volume. For tissue and cell samples, the 200 µL elution is recommended to maximize DNA recovery. For low biomass samples such as buccal swabs, a protocol with a 50 µL elution is available. The use of magnetic particles may lead to a slight reduction in volume for the eluate due to the inherent dead volume of the particles. To counteract this, for the low biomass protocol, loading 70 µL into the elution plate is recommended to achieve the target volume of 50 µL. The purified DNA can be either used immediately in downstream applications or stored for future use.

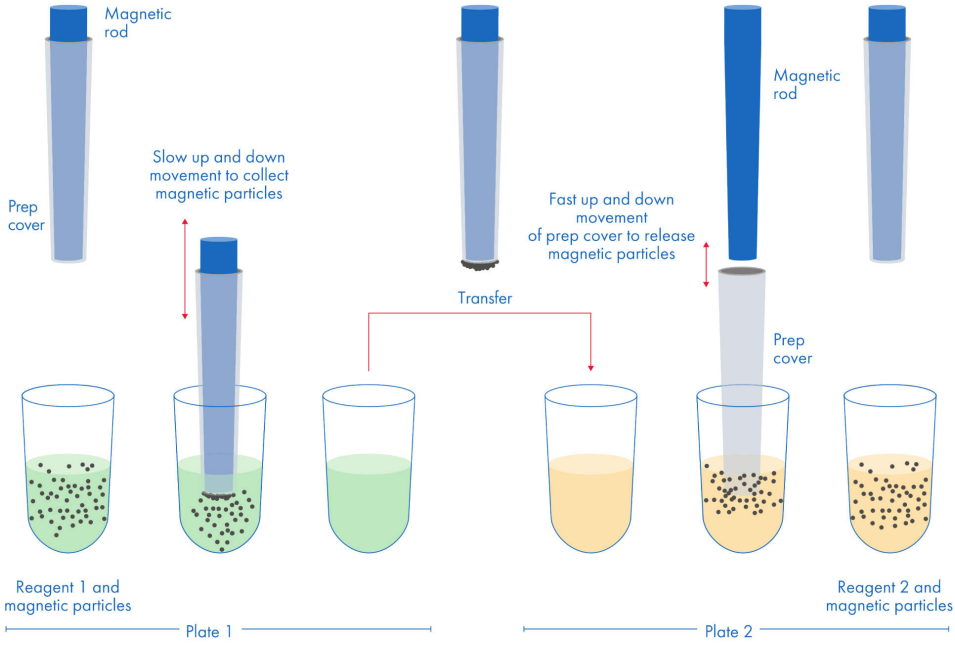


Figure 2. Handling of magnetic particles by the QIAsprint Connect instrument.

Equipment and Reagents to Be 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.

All protocols

- Pipettes and sterile, RNase-free pipette tips
- Disposable gloves
- 96–100% Ethanol*
- Isopropanol
- Thermal shaker or heated water bath
- **Optional**: Vortexer
- **Optional**: QIAsprint Frame Shield (100) (cat. no. 580010)

  Note: If desired, use QIAsprint Frame Shield to minimize adhesions of beads to the QIAsprint Prep Cover Frame (cat. no. 582111). For this, place QIAsprint Frame Shield into the QIAsprint Prep Cover Frame before loading the QIAsprint Prep Cover. After the run, discard the QIAsprint Frame Shield.
- QIAsprint Connect consumables (see Table 1)

Table 1. QIAsprint Connect consumables

Item	Cat. no.	Pieces required for 4 × 96 samples
QIAsprint Prep Cover (8)	582103	4
QIAsprint Prep Plate Insert (32)	582226	16
QIAsprint Elution Plate (10)	583204	4

* Do not use denatured alcohol, which contains other substances such as methanol or methyl ethyl ketone.

For tissue protocol

- **Optional**: RNase A (cat. no. 19101)
- **Optional**: Equipment for sample disruption and homogenization (see page 22)

  Depending on the method chosen, one or more of the following are required:

  - TissueLyser III including adapter sets (see Ordering Information, page 33)
  - Collection Microtubes rack (10 × 96) (cat. no. 19560) and Collection Microtube Caps (120 × 8) (cat. no. 19566) or preferred format for sample disruption
  - Vortex Adapter for 24 (1.5–2.0 mL) tubes (see Ordering Information, page 33)
  - 5 mm stainless steel beads (see Ordering Information, page 33)
  - TissueRuptor® II (see Ordering Information, page 33) or similar rotor– stator homogenizer

For cultured cells protocol

- **Optional**: RNase A (cat. no. 19101)
- **Optional**: Equipment for sample disruption and homogenization (see page 25)

  Depending on the method chosen, one or more of the following are required:

  - TissueLyser III including adapter sets (see Ordering Information, page 33)
  - Collection Microtubes rack (10 × 96) (cat. no. 19560) and Collection Microtube Caps (120 × 8) (cat. no. 19566) or preferred format for sample disruption
  - Vortex Adapter for 24 (1.5–2.0 mL) tubes (see Ordering Information, page 33)
  - 5 mm stainless steel beads (see Ordering Information, page 33)

For buccal swab protocol

Due to the required increase in volume for Buffer ATL and Proteinase K, fewer than 384 buccal swab samples can be processed with the QIAsprint DNA Tissue/Cells PrepSet. Additional material may be required and can be purchased separately:

- Buffer ATL (cat. no. 19076 or 939011)
- Proteinase K (cat. no. 199134)
- **Optional**: RNase A (cat. no. 19101)

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 way is to weigh the tissue sample. Generally, up to 50 mg of fresh, frozen tissue can be processed. Ensure that the correct amount of starting material is used. For tissues, such as spleen, with a very high amount of cells for a given mass of tissue, no more than 5–10 mg tissue sample should be used as a starting point. For stabilized tissue samples, half the amount of input should be used.

For tissue samples, different disruption and homogenization methods are offered. These include mechanical disruption using the 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 an enzymatic digest using Proteinase K to optimize sample lysis. It is also possible to work with enzymatic lysis only. For this, the incubation time with Proteinase K will be increased up to overnight incubation or until the lysate is visibly cleared. This gentle approach will recover more intact DNA molecules.

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

Cultured cells

The maximum amount of cells used should not exceed 5×10^6 cells. Counting cells is the most accurate way to quantify 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 cells and spin at 300 × *g* for 5 min to generate cell pellets. When working with a frozen cell pellet, allow cells to thaw slightly before adding Buffer ATL. Dislodge the pellet by gently flicking the tube. Depending on the cell line, using mechanical homogenization methods may be beneficial when processing more than 1×10^6 cells to reduce viscosity. These may include, for instance, using the TissueLyser III with the dedicated adapters or a vortex adapter, both in combination with 5 mm stainless steel beads. Especially, for cell lines with a high degree of ploidy, it is recommended to start out with less 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. Swabs should be placed 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 in the 30 min before sample collection.

Due to the higher volumes required during lysis, fewer than 384 buccal swab samples can be processed with the QIAsprint DNA Tissue/Cells PrepSet; additional Buffer ATL and Proteinase K may be purchased separately.

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

Preparing lysis and binding buffers

Precipitates may form in Buffer ATL, VXL,* or ACB* concentrate 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.

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.

Add the required volume of isopropanol to Buffer ACB* concentrate, as described on the bottle. Tick the checkbox on the label to indicate that isopropanol has been added. Mix again before starting the purification process.

Preparation of Buffer MW1 and 80% ethanol

Add the required volume of ethanol (96–100%) to Buffer MW1* concentrate, as described on the bottle. Tick the checkbox on the label to indicate that ethanol has been added.

Prepare 80% ethanol from 96–100% ethanol and nuclease-free water. Do not use denatured alcohol, which contains other substances such as methanol or methyl ethyl ketone.

Note: Always mix reconstituted Buffer MW1 and 80% ethanol by shaking before starting the purification procedure.

* Contains a chaotropic salt. Take appropriate laboratory safety measures and wear gloves when handling. Not compatible with disinfectants containing bleach. See page 8 for Safety Information.

Elution volumes and eluate handling

In the final step of the purification procedure, the 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 is available with a lower elution volume. To recover a target volume of approximately 50 µL, it is recommended to pipet 70 µL RNase-free water into the elution plate. Due to the dead volume of beads, a slight reduction in volume will occur, thus resulting in 50 µL of available eluate.

Storing DNA

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

Working with the QIAsprint Connect

Procedure on the QIAsprint Connect

1. Turn on the QIAsprint Connect instrument and log in.
2. Navigate to the Protocols screen with the tab in the upper part of the home screen.
3. Locate the desired protocol for the DNA tissue and cells application, and press ⋮ and Run protocol.

   Optional: Enter run information in the Run details screen. This information will be displayed in the run report.
4. Close the hood and press **Confirm** to get to the loading screen.

5. With the plate hotels located on the lab bench, insert the plates according to the screen instructions into the hotels.
    - The QIAsprint Prep Cover must be located in the metal prep cover frame.

      Note: If desired, use the QIAsprint Frame Shield to minimize adhesions of beads to the QIAsprint Prep Cover Frame. For this, place QIAsprint Frame Shield into the QIAsprint Prep Cover Frame before loading the QIAsprint Prep Cover. After the run, discard the QIAsprint Frame Shield.
    - All QIAsprint Prep Plates need to sit firmly in their metal frames.
    - The QR codes need to face the user.
6. Open the hood and place the hotels on their platforms, taking care not to mix up the left and right hotels.
7. **Optional**: If you have heating or cooling steps during your protocol run and the thermal adapter is not already located on the heater–cooler, place the thermal adapter in one of the slots of the thermal adapter platform with the QR code facing the user. The instrument will install it automatically during the run.
8. Press **Start run** to start the run.
9. After the end of the run, remove the plate hotels from the instrument. Store the elution plate safely or use it directly in your downstream applications.

Protocol: Purification of DNA from Tissue

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

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 guidelines on page 17. We recommend cutting the tissue into small pieces to enable more efficient lysis. Place the tissue sample in a tube or plate suitable for your preferred lysis option.

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

Table 2. 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 or 96-well plate, 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.
TissueRuptor II	Use TissueRuptor II according to instructions until tissue is lysed.
Vortex Adapter	Secure 2 mL tube or plate 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, 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 will copurify with genomic DNA. If residual RNA is not a concern, RNase A digestion is not necessary.
5. If not used during lysis step, transfer lysate into a prep plate (Lysate Plate) and proceed with step 6.
6. Prepare a binding master mix (*x* + 10% samples) containing 100 µL Buffer VXL, 350 µL Buffer ACB, and 30 µL MagG Bead Suspension per sample.

   Note: Ensure sufficient resuspension of the MagG Bead Suspension before distribution by thorough vortexing.

Plate preparation

7. Transfer 480 µL of this binding master mix to approximately 200 µL lysate.

   Note: At times, precipitation may form; this does not affect the performance.

8. Prepare the plates as described in the table below:

Plate	Content	Volume (µL)
Lysate Plate	Lysate Binding master mix	200 480
Wash Plate 1	Buffer MW1	650
Wash Plate 2	80% Ethanol	650
Wash Plate 3	80% Ethanol	700
Elution Plate	RNase-free water	200*

* Or as indicted in the selected protocol.

   Note: Residual adhesive can lead to instrument crash. If you cover plates with adhesive foil after plate preparation, ensure that no adhesive remains on the plate surface after removal of the foil.

9. Proceed to the purification protocol (page 20).

   Using the following protocols is recommended: QIAsprint DNA Tissue-Cells 200 µL or QIAsprint DNA Tissue-Cells 200 µL extended air dry. Before loading, remove the cover from the Elution Plate unless the cover is specified in the protocol.

Protocol: Purification of DNA from Cultured Cells

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

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.

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

   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 method. For options, refer to Table 3 and proceed to step 2 afterward. Otherwise, proceed to step 2 directly.

   Table 3. 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 or 96-well plate, 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. Time may be increased if necessary.
Vortex Adapter	Secure 2 mL tube or plate 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, shaking water bath or on a rocking platform.

3. If not used during lysis step, transfer lysate into a prep plate (Lysate Plate) and proceed with step 4.
4. Prepare a binding master mix (*x* + 10% samples) containing 100 µL Buffer VXL, 350 µL Buffer ACB, and 30 µL MagG Bead Suspension per sample.

   Note: Ensure sufficient resuspension of the MagG Bead Suspension before distribution by thorough vortexing.

Plate preparation

5. Transfer 480 µL of this binding master mix to approximately 200 µL lysate.

   Note: At times, precipitation may form; this does not affect the performance.
6. Prepare the plates as described in the table below:

Plate	Content	Volume (µL)
Lysate Plate	Lysate Binding master mix	200 480
Wash Plate 1	Buffer MW1	650
Wash Plate 2	80% Ethanol	650
Wash Plate 3	80% Ethanol	700
Elution Plate	RNase-free water	200*

* Or as indicted in the selected protocol.

Note: Residual adhesive can lead to instrument crash. If you cover plates with adhesive foil after plate preparation, ensure that no adhesive remains on the plate surface after removal of the foil.

7. Proceed to the purification protocol (page 20).

   Using the following protocols is recommended: QIAsprint DNA Tissue-Cells 200 µL or QIAsprint DNA Tissue-Cells 200 µL extended air dry. Before loading, remove the cover from the Elution Plate unless the cover is specified in the protocol.

Protocol: Purification of DNA from Buccal Swabs

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

Procedure

1. To collect a sample, scrape the swab firmly against the inside of each cheek six times. Air-dry the swab for at least 2 hours 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, prep plate, or preferred consumable, 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. Cover (i.e., 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 remaining liquid (approx. 250 µL) into a prep plate (Lysate Plate) and proceed with step 7.
7. Prepare a binding master mix (*x* + 10% samples) containing 100 µL Buffer VXL, 350 µL Buffer ACB, and 30 µL MagG Bead Suspension per sample.

   Note: Ensure sufficient resuspension of the MagG Bead Suspension before distribution by thorough vortexing.

Plate preparation

8. Transfer 480 µL of this binding master mix to approximately 250 µL lysate.

   Note: At times, precipitation may form; this does not affect the performance.

9. Prepare the plates as described in the table below:

Plate	Content	Volume (µL)
Lysate Plate	Lysate Binding master mix	250 480
Wash Plate 1	Buffer MW1	650
Wash Plate 2	80% Ethanol	650
Wash Plate 3	80% Ethanol	700
Elution Plate	RNase-free water	70*

* Or as indicted in the selected protocol. For low biomass samples such as buccal swabs, it is recommended to add 70 µL to reach the target volume of 50 µL.

   Note: Residual adhesive can lead to instrument crash. If you cover plates with adhesive foil after plate preparation, ensure that no adhesive remains on the plate surface after removal of the foil.

10. Proceed to the purification protocol (page 20).

    Using the following protocol is recommended: QIAsprint DNA Low Biomass Sample 50 µL. Before loading, remove the cover from the Elution Plate unless the cover is specified in the protocol.

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 *QIAsprint Connect User Manual* (**www.qiagen.com/HB-3708**).
DNA yield too low	
Magnetic particles not completely resuspended	Ensure to mix MagG Bead Suspension as well as the binding master mix well before pipetting.
Buffer ACB, Buffer MW1, or 80% ethanol prepared incorrectly	Check that Buffer ACB and Buffer MW1 concentrates were diluted as indicated on the bottle with the correct volume of isopropanol or ethanol, respectively. Use 96–100% ethanol. Do not use denatured alcohol, which contains other substances such as methanol or methyl ethyl ketone. Repeat the purification protocol with new samples.
Low yield in amplification-based quantification	When using high volumes of undiluted eluate in a very sensitive downstream assay, consider using the extended air dry protocol to remove residual alcohol.
Precipitate in buffers	
Precipitate in Buffer ATL, Buffer VXL, and Buffer ACB concentrate	Precipitate may form after storage at low temperature or after prolonged storage. To dissolve precipitate, incubate Buffer ATL, Buffer VXL, or Buffer ACB concentrate at 37°C with occasional shaking.
RNA present in eluate	
Include optional RNAse A digest	With the QIAspint DNA Tissue/Cells application, RNA may be copurified. For RNA-free DNA, include RNAse A digest.
Discolored eluates	
Wash steps	For tissue samples with residual blood content, eluates may appear yellow. Use of Buffer RDW (cat. no. 584006) in the second wash step instead 80% ethanol may remove discoloration.

	Comments and suggestions
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.
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.
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.

Contact Information

For technical assistance and more information, please see our Technical Support Center at **www.qiagen.com/Support** or contact one of the QIAGEN Technical Service Departments or local distributors (visit **support.qiagen.com**).

Ordering Information

Product	Contents	Cat. no.
QIAsprint DNA Tissue/Cells PrepSet (384)	For 384 RNA preparations from tissue or cell samples: Buffer RLT, Proteinase K, and RNase-free water	587449
QIAsprint Essential Kit C (384)	For 384 preps for purification of nucleic acids: MagG Bead Suspension, Buffer MW1, and nuclease-free water	587009
QIAsprint Prep Cover (8)	Set of 8 prep covers for use with QIAsprint Connect	582103
QIAsprint Prep Plate Insert (32)	Set of 32 prep plate inserts for use with QIAsprint Connect	582226
QIAsprint Elution Plate (10)	Set of 10 elution plates for use with QIAsprint Connect	583204
Related products		
QIAsprint Connect	Benchtop instrument for automated isolation of nucleic acids; includes 1 year warranty on parts and labor	9001234
QIAsprint Frame Shield (100)	Set of 100 frame shields for use with QIAsprint Connect	580010
QIAsprint Prep Cover Frame (2)	Set of 2 prep cover frames for use with QIAsprint Connect	582111
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
Buffer RDW	Alternative wash buffer	584006
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
TissueLyser Adapter Set 2 × 96	Two sets of adapter plates for use with Collection Microtubes (racked) on the TissueLyser III	69984
Plate Adapter Set	Two sets of adapter plates and two racks for use with two 96-well plates on the TissueLyser III	11990

Product	Contents	Cat. no.
2 mL Tube Holder Set	For sample homogenization of up to 2 × 48 samples in 2 mL bead tubes on the TissueLyser III	11993
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
TissueLyser 5 mm Bead Dispenser, 96-Well	For dispensing 96 beads (5 mm diameter) in parallel	69975

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Document Revision History

Date	Description
03/2026	Initial release

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