May 2026

Quick-Start Protocol

QIAsprint® DNA Plant Application

For use with QIAsprint Connect

The QIAsprint DNA/RNA Plant PrepSet (cat. no. 580669) and the QIAsprint Essential Kit A (384) (cat. no. 585009) are shipped at room temperature (15–25°C). All kit components should be stored dry at room temperature.

Further information

- *QIAsprint DNA Plant Application Guide*: **www.qiagen.com/HB-3716**
- Safety Data Sheets: **www.qiagen.com/safety**
- Technical assistance: **support.qiagen.com**

Notes before starting

- Buffer RLT and Buffer AW1 contain guanidine salt and are therefore not compatible with disinfecting reagents containing bleach.
- If necessary, redissolve any precipitate in Buffers RLT and AW1 by warming.
- Equilibrate buffers to room temperature.
- All steps should be performed at room temperature. Work quickly.
- Add ethanol (96–100%) to Buffers AW1 and AW2 concentrates before use (see bottle label for volume).
- **Optional**: Prepare a fresh Buffer AW1/RNase solution (2 µL RNase for each 700 µL Buffer AW1).

Procedure

Homogenization and lysis of plant samples

Plant samples can be disrupted and homogenized using various methods, which may differ between laboratories. For optimal results, our recommendation is to use the TissueLyser III:

1. Add up to 50 mg of fresh or frozen plant tissue and 400 µL Buffer RLT in a collection microtube (racks) or to a 2 mL tissue disruption tube (based on the number of your samples).

   Note: We recommend that the tissue be cut into small pieces before loading into the tube. For tough plants or seeds, pre-grinding the material may increase yield.
2. Handling plants with TissueLyser III:
   - Use the TissueLyser Adapter Set 2 × 96.
   - Place one or two 3 mm stainless steel beads in each tube.
   - Load the samples into the TissueLyser III and run at 30 Hz for 2 min.
   - Rotate the adapter so the side closest to the machine body is now furthest away and run again at 30 Hz for another 2 min.
   - Repeat the procedure if the tissue still recognizable in the lysate.

   Note: For challenging materials like certain roots or oily leaves, add Buffer ATL (cat. no. 19076 or 939011) to the lysate. For this, use 300 µL Buffer RLT, 100 µL Buffer ATL, and 1 µL Reagent DX (antifoaming, cat. no. 19088), then disrupt and homogenize the sample.
3. Centrifuge the tissue disruption tubes at 6000 × *g* or high speed for 5 min.
4. Transfer approximately 300 µL clear supernatant to the lysate plate (see below).

Plates preparation

5. Ensure sufficient resuspension of the MagG Bead Suspension by pipetting or vortexing.
6. Prepare the plate as described in the table below:

Plate	Content	Volume (µL)
Lysate Plate	Lysate supernatant Ethanol 100% MagG Bead Suspension	300 300 20
Wash Plate 1	Buffer AW1/RNase	700/2
Wash Plate 2	Buffer AW2	650
Wash Plate 3	Buffer AW2	500
Elution Plate	RNase-free Water	100 (+20 µL to recover a 100 µL eluate)

Procedure on QIAsprint Connect

7. Turn on the QIAsprint Connect instrument and log in.
8. Navigate to the Protocols screen with the tab in the upper part of the home screen.
9. Locate the desired protocol for the DNA plant application, and press ⋮ and Run protocol.

   Optional: Enter the run information in the Run details screen. This information will be displayed in the run report.
10. Close the hood and press **Confirm** to get to the loading screen.
11. 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.
12. Open the hood and place the hotels on their platforms, taking care not to mix up the left and right hotels.
13. **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.

14. Press **Execute run** to start the run.
15. 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.

Document Revision History

Date	Description
03/2026	Initial release
05/2026	Updated to match the Essential Kit configuration.

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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