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Quick-Start Protocol

QIAXcel[®] DNA Fast Analysis Kit

For electrophoretic analysis of DNA samples using the QIAXcel system

The QIAXcel DNA Fast Analysis Cartridge should be stored at 2–8°C upon arrival. The QX Intensity Calibration Marker, QX Alignment Marker 15 bp/3 kb, and QX DNA Size Marker 50 bp – 1.5 kb should be stored at 2–8°C. All remaining buffers and kit components can be stored at room temperature (15–25°C).

Further information

- *QIAXcel DNA Handbook*: www.qiagen.com/HB-0286
- *QIAXcel Connect System User Manual*: www.qiagen.com/HB-2890
- Safety Data Sheets: www.qiagen.com/safety
- Technical assistance: support.qiagen.com

Notes before starting

- For instrument and software installation, cartridge calibration, creating user profiles, creating a new process profile, and run analysis, see the *QIAXcel Connect System User Manual*.

Procedure

Preparing the gel cartridge and buffer tray

1. Allow the gel cartridge to equilibrate to room temperature (15–25°C) for at least 20 min.
2. Prepare the buffer tray:
 - a. Wash the buffer tray with hot water and rinse thoroughly with deionized water.
 - b. Fill the WP and WI positions each with 8 mL QX Wash Buffer and add 2 mL mineral oil.
 - c. Fill the buffer position with 18 mL QX FA Separation Buffer and add 4 mL mineral oil.
3. Place the buffer tray into the instrument.

4. Remove the QIAxcel cartridge from its packaging and carefully wipe off any soft gel debris from the metal capillary tips using a soft tissue.
5. **Important:** Remove the purge cap seal from the back of the cartridge (see Figure 1).
6. Place the cartridge into the instrument and insert the smart key. Refer to “Loading/Installing a QIAxcel gel cartridge and smart key” section of the *QIAxcel Connect System User Manual* or *QIAxcel Advanced User Manual*.

Optional: Prepare the QX Intensity Calibration Marker

1. When the QIAxcel DNA gel cartridge is being used for the first time, intensity calibration should be performed.
2. Load 15 μL of the QX Intensity Calibration Marker in each tube of a 12-Tube strip (colored or non-colored).
3. Place the 12-Tube strip into position MARKER 2 of the buffer tray (see Figure 2).
4. Start the calibration from the Service environment of the software and acknowledge the calibration results afterwards (takes approx. 15 min). Refer to “Calibrating a cartridge” section of the *QIAxcel Connect System User Manual* or *QIAxcel Advanced User Manual*.



Figure 1. Removal of purge cap seal.



Figure 2. Buffer tray setup.

Prepare the QX DNA Alignment Marker 15 bp/3 kb

1. Load 15 μL of the alignment marker in each tube of a 12-Tube strip and add one drop of mineral oil to prevent evaporation.
2. Place the 12-Tube strip into position MARKER 1 of the buffer tray.

Prepare the DNA samples and QX DNA Size Marker 50 bp – 1.5 kb

1. If required, dilute DNA samples with QX DNA Dilution Buffer. For each sample, pipet 6–10 μL of sample into a corresponding position of a 0.2 mL 12-Tube strip or a 96-well plate.
2. Pipet 6–10 μL of the QX DNA Size Marker 50 bp – 1.5 kb into another position of the 12-Tube strip or 96-well plate.

Note: The minimum sample and size marker volume required for analysis is 6 μL with the QIAxcel Connect instrument and 10 μL for the QIAxcel Advanced instrument, the predecessor of QIAxcel Connect.

Note: If working with less than 10 μL of samples or size marker, or if the samples or markers are left in the instrument for prolonged time, add one drop of mineral oil.

Note: If analyzing less than 12 samples, fill empty positions with QX DNA Dilution Buffer to protect the capillaries from damage.

Perform the run

1. Switch on the QIAxcel instrument.
2. Switch on the computer linked to the instrument and open the QIAxcel ScreenGel® Software.
3. Log in to the software in the DNA mode and navigate to the **Process** environment.
4. **Optional:** Select a process profile from the drop-down list. Open the Run Parameters dialog box. Click **Preview** to check or change the pre-selected marker and sample positions in the Sample Row Selection panel. Skip step 5.
5. Open the Run Parameters dialog box. Add a run method and mark the rows containing samples by clicking the **Sample Row Selection** panel. If running the size marker side by side with the samples, define the position of the size marker by right-clicking the corresponding position.
6. Open the Sample Selection dialog box and name the experiment.
7. **Optional:** Open the Sample Selection dialog box and name the samples.
8. Open the **Run Check** dialog box and confirm that samples and markers are loaded correctly. Click **Run** to start the run. For information on analysis settings, refer to *QIAxcel Connect System User Manual* or *QIAxcel Advanced User Manual*.

Document Revision History

| Date | Changes |
|---------|-----------------|
| 05/2026 | Initial release |



Scan 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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