

May 2022

Quick-Start Guide

QIAxcel[®] RNA High-Sensitivity Kit

For quality control of RNA samples using the QIAxcel Connect system. The QIAxcel RNA High-Sensitivity Cartridge and QX RNA Denaturation Buffer should be stored at 2-8°C upon arrival. The QX HS Intensity Calibration Marker, QX RNA HS Alignment Marker, QX RNA Size Marker 200–6000 nt should be stored at –30 to –15°C. All remaining kit components can be stored and room temperature (15–25°C).

Further information

- *QIAxcel RNA High-Sensitivity Kit Handbook*: www.qiagen.com/HB-3068
- Safety Data Sheets: www.qiagen.com/safety
- Technical assistance: support.qiagen.com

Notes before starting

- For instrument and software installation, creating user profiles, and creating a new process profile, see the *QIAxcel Connect User Manual*.

Procedure

Preparing the gel cartridge and buffer tray

1. Allow the QIAxcel RNA Cartridge to equilibrate to room temperature for at least 20 min.
2. Place QX RNA Size Marker 200–6000 nt and QX RNA HS Alignment Marker on ice to defrost.
3. Prepare the buffer tray:
 - 3a. Fill the WP and WI positions each with 8 ml QX HS Wash Buffer and add 2 ml mineral oil.
 - 3b. Fill the buffer position with 18 ml QX HS Separation buffer and cover with 4 ml mineral oil.

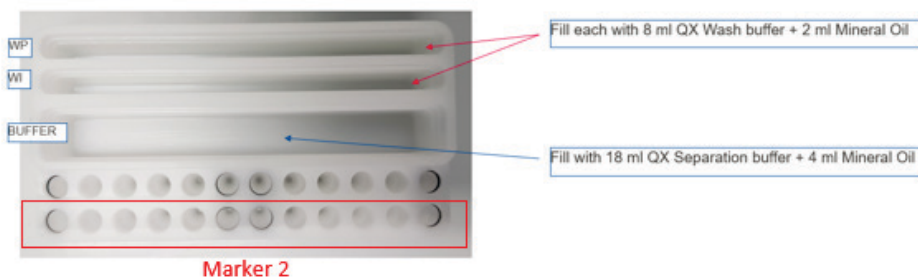


Figure 1. Buffer tray setup

Prepare the calibration marker

1. Dilute the QX HS Intensity Calibration Marker 1:100 with QX RNA HS Dilution Buffer (2 μ l + 198 μ l).
2. Load 15 μ l of the diluted calibration marker in each tube of a 12-tube strip and add 1 drop of mineral oil.
3. Place the tube strip into position Marker 2 of the buffer tray (see Figure 1).
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 6.5.1) of the *QIAxcel Connect User Manual*.

Prepare the QX RNA HS Alignment Marker

1. Dilute the QX RNA HS Alignment Marker 1:100 with QX RNA HS Dilution Buffer (2 μ l + 198 μ l).
2. Load 15 μ l of the diluted alignment marker into each tube of a 12-tube strip and add 1 drop of mineral oil.
3. Place the strip into position Marker 1 of the buffer tray.

Prepare the RNA samples and QX RNA Size Marker 200–6000 nt

Note: Keep samples and markers on ice.

1. Dilute the QX RNA Size Marker 200–6000 nt 1:100 with QX RNA HS Dilution Buffer (less than 100 μ l is not recommended).
2. **Optional:** Dilute RNA with nuclease-free water or QX RNA Booster Buffer (suggested RNA concentration: up to 5 ng/ μ l RNA).
3. For each sample, pipet 1 μ l sample into a corresponding position of a 0.2 ml 12-tube strip or a 96-well plate.

4. Pipet 1 μ l of the diluted Size Marker into another position of the 12-tube strip or 96-well plate.
5. Add an equal volume of QX RNA Denaturation Buffer to each used tube or well. Cover the tubes with caps or the plate with foil.
6. Heat the mixture for 2 min at 70°C on a heating block or in a thermal cycler, and then place the tubes or plate on ice for 1 min.
7. Centrifuge the mixtures briefly to collect any condensation.
8. Bring the total volume of the samples and size marker to 6–10 μ l using QX RNA HS Dilution Buffer or QX RNA Booster Buffer, and mix the solution by gently pipetting up and down a few times.
9. Start the run immediately.

Note: If working with less than 10 μ l of final volume, add 1 drop of mineral oil.

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

Note: The 1:100 dilution of all markers is the working solution for 1 day and should be prepared fresh for each day.

Perform the run

1. Switch on the QIAxcel instrument.
2. Switch on the computer linked to the instrument and open the ScreenGel® software.
3. Log in to the software in the RNA mode and navigate to the **Process environment**.
4. Select an appropriate process profile from the drop-down list.
5. Open the **Sample Selection** dialog and name the experiment.
6. 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
7. Open the **Run Check** dialog and confirm that samples and markers are loaded correctly. Click **Run** to start the run. For information on analysis settings, refer to *QIAxcel Connect User Manual*.

Document Revision History

Date	Changes
05/2022	Initial release



Scan QR code for handbook.

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