

LabChip 90 RNA Assay Quick Guide

RNA Chip Preparation

1. Allow the chip and reagents to equilibrate to room temperature for about 20-30 minutes before use.
The Dye Concentrate must be completely thawed and vortexed before use. The RNA ladder should be kept on ice. It is recommended that you aliquot the RNA ladder into five 4 μL lots for individual use.
2. Prepare Gel-Dye by adding **425 μL RNA Gel Matrix** to **75 μL RNA Dye Concentrate** using a Reverse Pipetting Technique. Vortex and transfer to a spin filter. Centrifuge at **9200 rcf for 10 minutes at RT**. Make sure that all of the gel has passed through the filter and then discard the filter.
3. Add Gel-Dye (as shown in Figure 1) using a Reverse Pipetting Technique.
4. Add RNA Storage Buffer to the chip (as shown in Figure 1).
5. Place the chip in the priming station and prime for 4 minutes. (For automated priming station use setting B3.)
6. Aspirate the contents of chip wells 3 and 4 using vacuum.
7. Add Gel-Dye to chip well 3 (as shown in Figure 2) using a Reverse Pipetting Technique.
8. Add RNA Marker to chip well 4 (as shown in Figure 2).
9. Clean both sides of the chip window with the supplied clean room cloth dampened with 70% isopropanol.

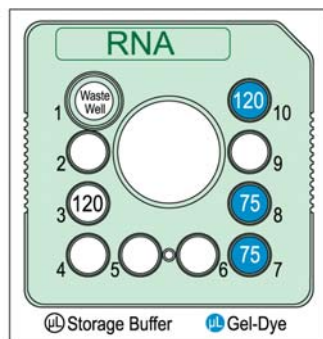


Figure 1

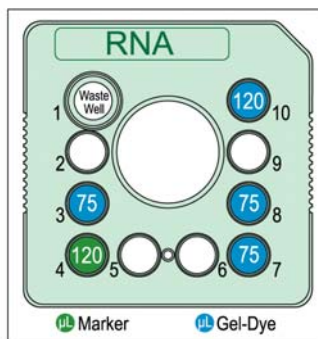


Figure 2

RNA Sample, Ladder, and Buffer Strip Preparation

1. Prepare sample buffer by adding **620 μL RNA Sample Buffer Concentrate** to **5580 μL DEPC treated water**.
2. Pipette **2 μL (HT RNA Std Sens)** or **6 μL (HT RNA High Sens)** sample into individual microtiter plate wells (cover with PCR strip caps) or RNase-free microcentrifuge tubes.
3. Transfer **4 μL RNA Ladder** to an RNase-free microcentrifuge tube. Heat the ladder and samples at **70°C for 2 minutes**.
4. Snap cool the samples and ladder by immediately placing the tubes and/or microtiter plate on **ice for 5 minutes**.
5. Add **46 μL (HT RNA Std Sens)** or **19 μL (HT RNA High Sens)** prepared sample buffer to each sample. Cover the samples with PCR strip caps and spin down the plate.
6. Add **96 μL prepared sample buffer** to the ladder and vortex the solution.
7. Transfer **100 μL prepared ladder** to Well A of the ladder strip (as shown in Figure 3).
8. Add **200 μL prepared sample buffer** to each well of the buffer strip (as shown in Figure 4).

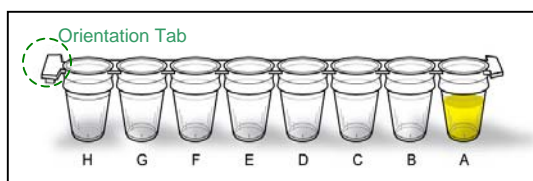


Figure 3

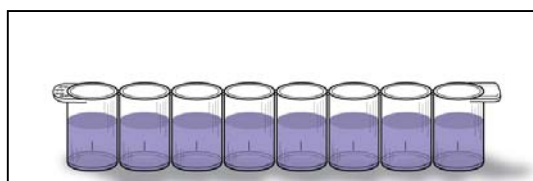


Figure 4