Accuris BR dsDNA Quantification Kit

Product Description:

The Accuris dsDNA Broad Range (BR) Quantification kit makes DNA quantification easy and accurate. This assay kit is highly sensitive and selective for dsDNA due to the dye's high quantum yield and large molar extinction coefficient — capable of detecting dsDNA between 2 and 1000 ng. The kit offers advantages in stability, linear dynamic range, and sensitivity over other traditional broad -range dsDNA quantification kits. The assay is performed at room temperature — simply mix reagent with the buffer, add your sampels and measure fluorescence using a fluorometer or a fluorescent plate reader (contact us for more details on using this kit with a plate reader). Additionally, the kit is highly tolerant to common contaminants such as proteins, salts,solvents, and detergents, ensuring accurate and consistent results.

Contents and Storage

Material	Amount	Concentration	Storage	Stability
Accuris dsDNA BR Reagents (Component A)	100 µL	200X in DMSO	4 °C Protected From Light	Product Stable for at least 6 months when stored as directed
Accuris dsDNA BR Buffer (Component B)	20 mL	1X		
Accuris dsDNA Standard #1 (Component C)	100 µL	0 ng/µL in TE Buffer		
Accuris dsDNA Standard #2 (Component D)	100 µL	100 ng/µL in TE Buffer		

Critical Assay Parameters:

Incubation Time: For optimal detection of target molecules, incubate the standards or samples with the working solution for 2-3 minutes in the dark at room temperature.

Fluorometer Calibration: Users can either use a previous calibration or perform a new calibration. We recommend performing a new calibration for each assay to ensure accuracy.

Assay Temperature: The Accuris BR dsDNA Quantification Kit performs optimally at room temperature. Therefore, all reagents must be equilibrated to room temperature before use.

Assay Selectivity: The Accuris BR dsDNA Quantification Kit offers strong selectivity for dsDNA over RNA.

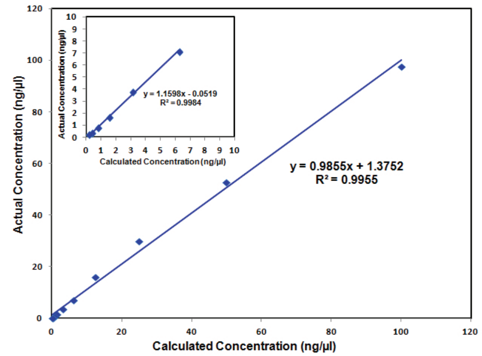


Figure: The data represents DNA selectivity of Accuris BR dsDNA Quantification kit.

Standards and Sample Preparation:

This protocol provides instructions on how to use the Accuris HS dsDNA Quantification kit with the Accuris Smart Q and Qubit fluorometers.

1. Allow all components of the Accuris BR dsDNA Quantification kit to reach room temperature.
2. Inspect the Accuris BR dsDNA reagent for any precipitation. If small precipitates or particles are observed, warm the tube in a water bath until fully dissolved.
3. Prepare the required number of assay tubes accounting for two standards (Use ONLY thin-wall clear 0.5 mL PCR tubes).
4. Label the sample and standard tubes on the lid.
5. Prepare the working solution by diluting the HS Reagent in the HS dsDNA buffer at a 1:200 ratio. For example, for eight samples plus two standards, dilute 10 µL of the Accuris dsDNA reagent in 1,990 µL of Accuris BR dsDNA Buffer.
6. Mix thoroughly and immediately add the working solution to the fluorometer tubes:

A. Add 10 µL of Standard 1 and Standard 2 to appropriately labeled tubes (according to diagram on the back of this page).
B. Add 1-50 µL of each sample to appropriately labeled tubes.

7. Thoroughly mix the samples and standards, then incubate the tubes at room temperature in the dark for 2-3 minutes before proceeding with sample quantification.

Standards and Sample Measurements

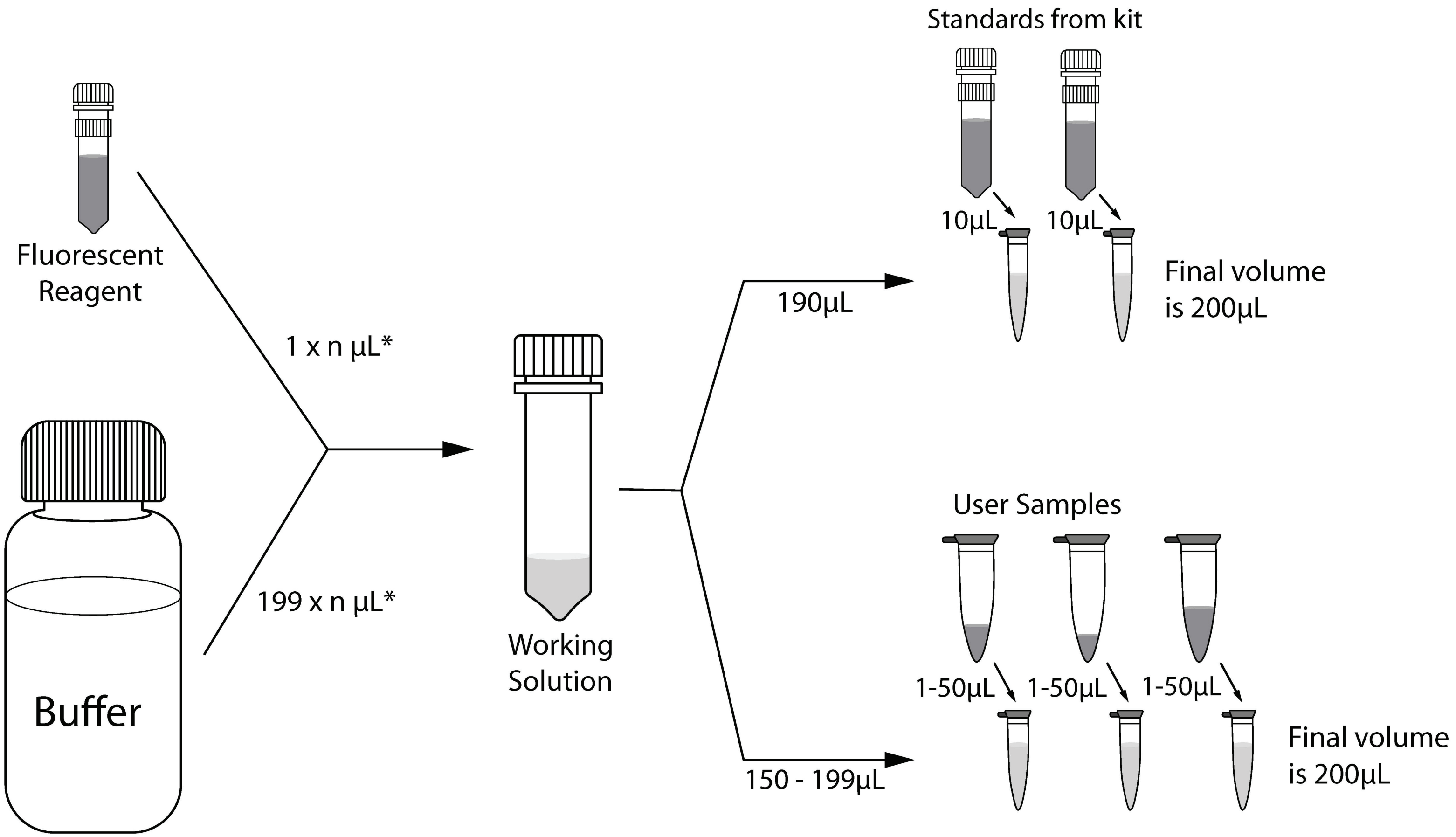
Standard Curve:

1. On the Home screen, select **dsDNA**, then choose **dsDNA: Broad Range**.
2. Insert standard 1 into a reading chamber and select start symbol followed by pressing the read symbol.
3. After selecting concentration units, choose calibrate followed by Read Standards.
4. Replace standard tube 1 with standard 2 and select Read standards to obtain reading for the second standard.
4. Select Save to save the standard curve. Note: this curve may be re-used for subsequent sample readings. We recommend to prepare new standard curve each time assay is performed.

Sample Quantification:

1. On the fluorometer screen, enter the volume of the unknown sample, then select the Start icon.
2. Once the fluorometer completes the quantification, the sample concentration and Relative Fluorescence Units (RFU) will be displayed on the screen.
3. Remove the sample, insert the next sample into the test chamber, and select the Start icon.
4. Repeat Step 3 until all samples have been quantified. Note: At any point during quantification, the fluorometer screen can be swiped left to display all recorded concentrations from the current experiment, with options to print or export the results. Selecting the Calculator function allows users to calculate the molarity of the sample (note: the DNA length must be entered for accurate configuration).
5. After completing the quantification process, turn off the fluorometer.

Additional Kits Available from Accuris	
F1000-HS-100	Accuris dsDNA High Sensitivity Quantification Kit, 100 Assays
F1000-HS1-100	Accuris 1X dsDNA High Sensitivity Quantification Kit, 100 Assays
F1000-BR-100	Accuris dsDNA Broad Range Quantification Kit, 100 Assays
F1000-BR1-100	Accuris 1X dsDNA Broad Range Quantification Kit, 100 Assays
F1000-SD-100	Accuris ssDNA Quantification Kit, 100 Assays
F1000-RHS-100	Accuris RNA High Sensitivity Quantification Kit, 100 Assays
F1000-RBR-100	Accuris RNA Broad Range Quantification Kit, 100 Assays



dsDNA Broad Range Quantification Kit, 100 Assays.

Cat#: F1000-BR-100

For Research Use Only

Store at 4 °C upon arrival.

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