Accuris 1X BR dsDNA Quantification Kit

Product Description:

The Accuris 1X BR Double-Stranded DNA (dsDNA) Quantification Kit provides a highly sensitive, precise, and efficient method for quantifying dsDNA concentrations. This kit includes a ready-to-use assay working solution and dsDNA standards, ensuring both reproducibility and ease of application. Designed for optimal specificity, the assay selectively binds to dsDNA, detecting concentrations ranging from 2 to 1000 ng, thereby offering exceptional stability, an extended linear dynamic range, and enhanced sensitivity compared to conventional DNA quantification techniques. The assay is conducted at room temperature by simply mixing the sample with the working solution and measuring fluorescence using either a fluorometer or a fluorescent plate reader (for plate reader-specific instructions, please contact the manufacturer). Additionally, the kit demonstrates high resistance to common contaminants, including proteins, salts, solvents, and detergents, ensuring robust and reliable performance across diverse experimental conditions.

Contents and Storage:

Material	Amount	Concentration	Storage	Stability
Accuris 1X BR dsDNA Working Solution (Component A)	20 mL	1X	4 °C Protected From Light	Product Stable for at least 6 months when stored as directed
Accuris 1X BR dsDNA Standard 1 (Component B)	0.2 mL	0 ng/µL in TE Buffer		
Accuris 1X BR dsDNA Standard 2 (Component B)	0.2 mL	100 ng/µL in TE Buffer		

Critical Assay Parameters:

Incubation Time: For optimal detection of target molecules, incubate the standards and samples with the Accuris 1X BR dsDNA working solution for 2–3 minutes in the dark at room temperature.

Fluorometer Calibration: Users may utilize a previous calibration or perform a new calibration before each assay. However, we recommend conducting a new calibration for optimal accuracy.

Assay Temperature: The Accuris 1X BR dsDNA Quantification Kit performs optimally at room temperature. Therefore, all reagents should be fully equilibrated to room temperature before use to ensure accurate results.

Assay Selectivity
The Accuris 1X BR dsDNA Quantification Kit exhibits high tolerance to common contaminants, including proteins, salts, solvents, and detergents, ensuring reliable performance across various sample conditions.

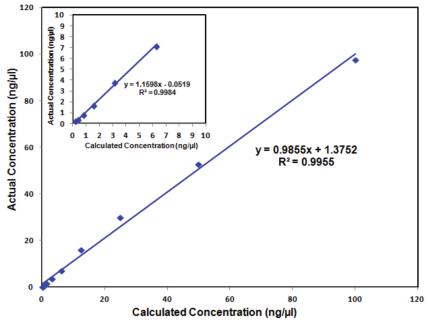


Figure: The data represents DNA quantificaiton using the Accuris 1X BR dsDNA Quantification kit.

Standards and Sample Preparation:

This protocol provides instructions on how to use the Accuris 1X BR dsDNA Quantification kit with the Accuris Smart Q and Qubit Fluorometers

1. Allow all components of the Accuris 1X BR dsDNA quantification kit to reach room temperature.
2. Prepare the required number of assay tubes accounting for the two standards (Use only thin-wall , clear 0.5 mL PCR tubes).
3. Label the tubes on the lid.
4. Add 190 µL of the Accuris 1x BR dsDNA Working solution to each standard tube and 180-199 µL to sample tubes dpendent on on the volume of unknown sample (refer to table below).
5. Add 10 µL of dsDNA Standard 1 and Standard 2 and user defined volume ofsamples to corresponding tubes (refer to table below).
6. Mix samples by vortexing tubes for 3 seconds and incubate all tubes at toom temperature for 1-3 minutes, thereafter.

Standards and Sample Measurements

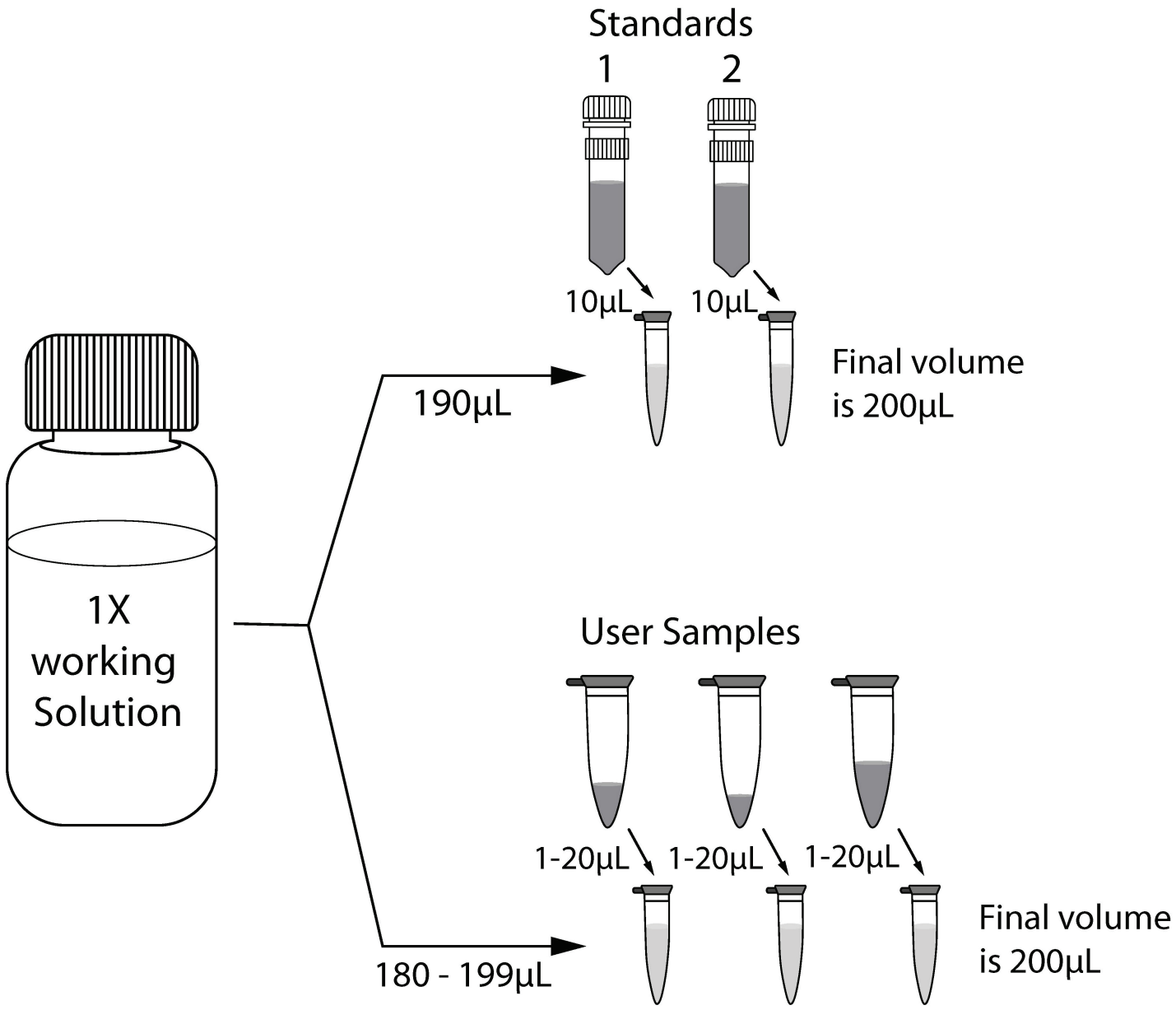
Standard Curve:

1. On the Home screen, select **dsDNA**, then choose **dsDNA: Broad**.
2. Insert standard 1 into a reading chamber and select start symbol followed by pressing the read symbol.
3. After selecting concentration units, choose 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 quantification).
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



ACCURIS™
LIFE SCIENCE REAGENTS

1X Broad Range dsDNA Quantification Kit, 100 Assays.

Cat#: F1000-BR1-100

For Research Use Only

Store at 4 °C upon arrival.

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