Accuris 1X HS dsDNA Quantification Kit

Product Description:

The Accuris 1X Double-Stranded DNA (dsDNA) Quantification Kit provides a simple, sensitive, and precise method for quantifying small amounts of dsDNA. This kit includes a ready-to-use assay working solution and dsDNA standards, ensuring both convenience and reliability. Engineered for high selectivity, the kit detects dsDNA concentrations ranging from 0.2 to 100 ng, offering exceptional stability, a broader linear range, and enhanced sensitivity compared to conventional DNA quantification kits. The assay is performed at room temperature—simply mix the sample with the reagent and measure DNA concentration using a fluorometer or a plate reader (please contact us for further details on plate reader compatibility). Additionally, the kit demonstrates high tolerance to common contaminants, including proteins, salts, solvents, and detergents, ensuring accurate and consistent results across various sample conditions.

Material	Amount	Concentration	Storage	Stability
Accuris 1X HS dsDNA Working Solution (Component A)	20 mL	1X	4 ºC Protected From Light	Product Stable for at least 6 months when stored as directed
Accuris 1X HS dsDNA Standard 1 (Component B)	0.2 mL	0 ng/µL in TE Buffer		
Accuris 1X HS dsDNA Standard 2 (Component B)	0.2 mL	10 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 HS dsDNA 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 running a new calibration for each assay.
Assay Temperature: The Accuris 1X HS dsDNA Quantification Kit performs optimally at room temperature. Therefore, all reagents must be equilibrated to room temperature before use.
Assay Selectivity: The Accuris 1X HS dsDNA Quantification Kit is tolerant to common contaminants such as proteins, salts, solvents, and detergents.

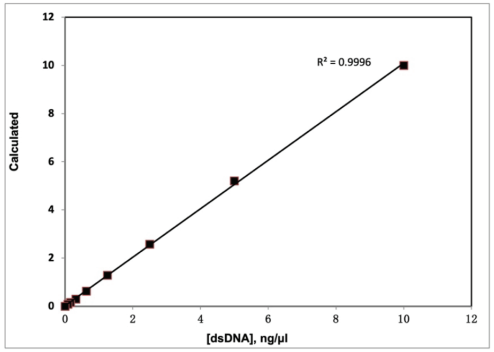


Figure: The data represents DNA quantification using the Accuris 1X HS dsDNA Quantification kit

Standards and Sample Preparation:

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

1. Allow all components of the Accuris 1X HS 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 HS dsDNA working solution to each standard tube and 180-199 µL to sample tubes dpendent on on the volume of unknown sample (according to the figure on the opposite side of this page).
5. Add 10 µL of dsDNA Standard 1 and Standard 2 and unknown samples to corresponding tubes (according to the figure on the opposite side of this page).
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

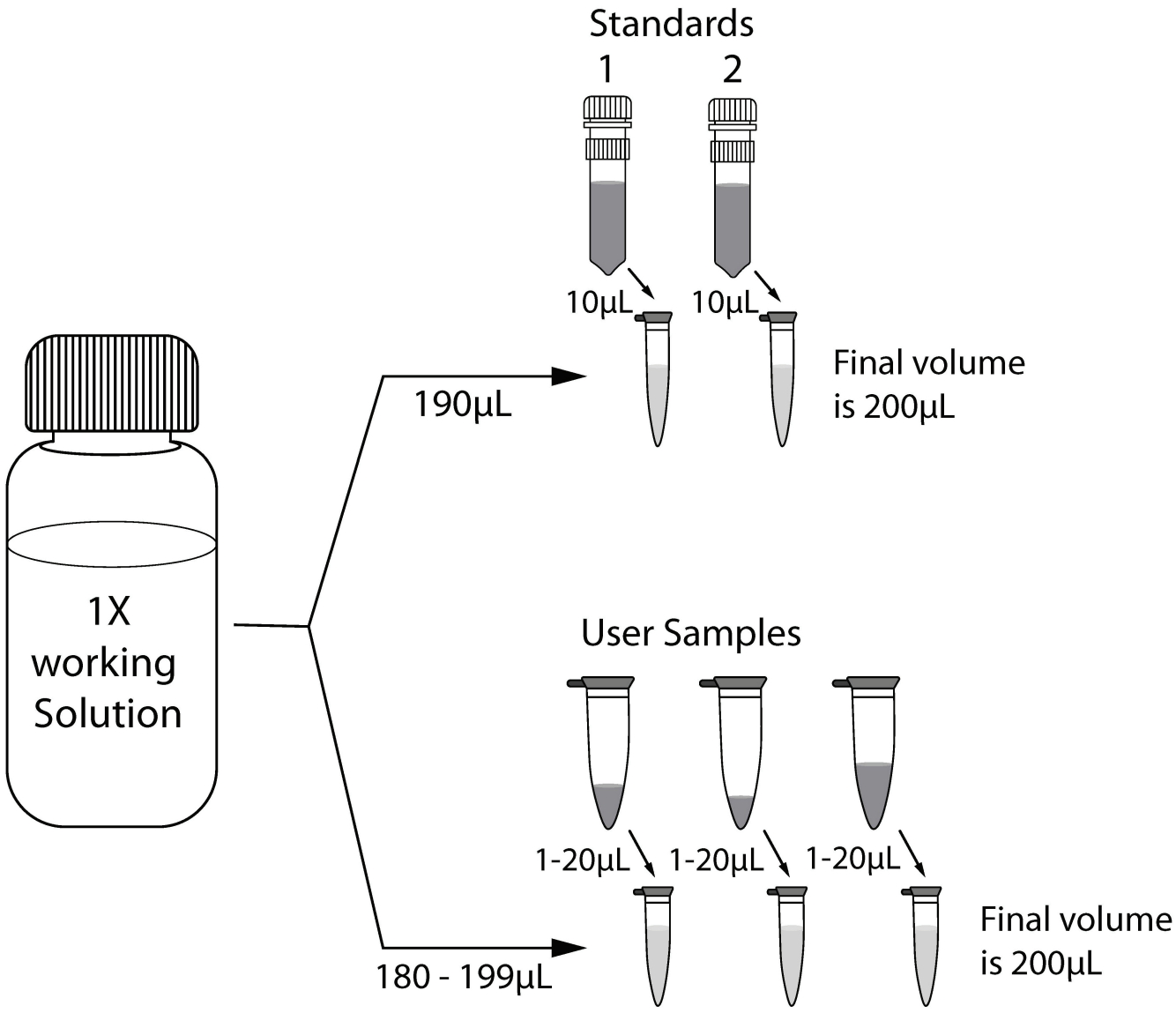
Standard Curve:

1. On the Home screen, select **dsDNA**, then choose **dsDNA: High Sensitivity**.
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 High Sensitivity dsDNA Quantification Kit, 100 Assays.

Cat#: F1000-HS1-100

For Research Use Only

Store at 4 °C upon arrival.