

Instruction Insert

VWR 1X dsDNA High Sensitivity Quantification Kit

Cat. No. VWRI210-000160.

Product Description

The VWR 1X dsDNA High Sensitivity (HS) Quantification Kit provides a simple, sensitive, and accurate method for quantifying small amounts of dsDNA. It includes a ready-to-use assay reagent and dsDNA standards, ensuring both convenience and reliability. The kit is highly selective for dsDNA and detects concentrations ranging from 0.2 to 100 ng, offering superior reagent stability, a broader linear dynamic range, and enhanced sensitivity compared to traditional DNA quantification methods. The assay is performed at room temperature—simply mix your sample with the Working Solution and measure the DNA concentration using a fluorometer or a fluorescent plate reader. For more details on plate reader compatibility, please contact us. Additionally, the kit exhibits high tolerance to common contaminants, including proteins, salts, solvents, and detergents, ensuring accurate and consistent results.

Contents and Storage:

Material	Amount	Concentration	Storage	Stability
1X dsDNA HS Working Solution (Component A)	20 mL	1X	4 °C Protected From Light	Product Stable for at least 6 months when stored as directed
1X dsDNA HS Standard 1 (Component B)	0.2mL	0 ng/μL in TE Buffer		
1X dsDNA HS Standard 2 (Component C)	0.2 mL	10 ng/μL in TE Buffer		

Critical Assay Parameters:

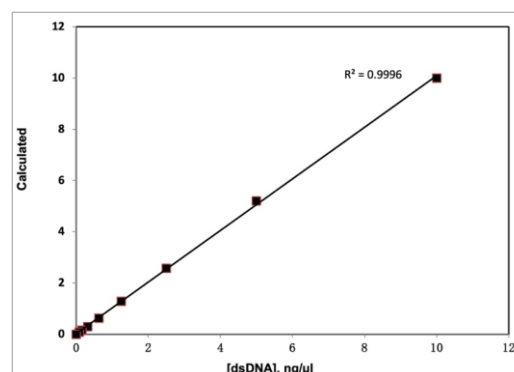
Incubation Time: For optimal detection of target molecules, incubate the standards and samples with the VWR 1X dsDNA HS Working Solution for 2–3 minutes in the dark at room temperature.

Fluorometer Calibration: Users may use a previous calibration or perform a new one. However, we recommend calibrating the fluorometer before each assay to ensure accuracy and minimize variability.

Assay Temperature: The VWR1X dsDNA HS Quanti-cation Kit is designed for optimal performance at room temperature. Therefore, all reagents must be fully equilibrated to room temperature before use.

Assay Selectivity: The VWR 1X dsDNA HS Quanti-cation Kit is highly tolerant to common contaminants, including proteins, salts, solvents, and detergents, ensuring reliable and accurate results.

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



Reagent, Standards and Sample Preparation

This protocol provides instructions on how to use VWR 1X dsDNA HS Quantification kit with the VWR and Qubit Fluorometers.

1. Allow all components of the VWR 1X dsDNA HS 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 μ L of the VWR 1x dsDNA HS Working Solution to each standard tube and 180-199 μ L to sample tubes dependent on the volume of unknown sample (refer to the diagram on the reverse page)
5. Add 10 μ L of 1X dsDNA HS Standard 1 and Standard 2 and unknown samples to corresponding tubes (refer to the diagram on the reverse page)
6. Mix samples by vortexing tubes for 3 seconds and incubate all tubes at room temperature for 1-3 minutes in the dark, thereafter.

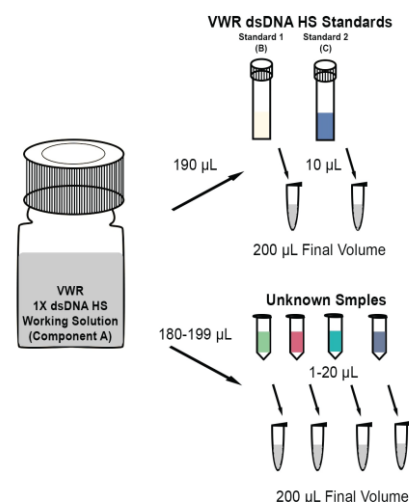


Figure 2: Reagent, Standards and Sample Preparation

Standards and Sample Measurements

Standard Curve:

1. On the VWR Fluorometer Home screen, select dsDNA, then choose dsDNA High Sensitivity.
2. Follow the on-screen instructions to insert Standard 1, then select Read Standard 1.
3. Once the reading is complete, remove Standard 1, and insert Standard 2. After the reading is complete, remove Standard 2.

Note: On the screen, fluorescence readings for both Standard 1 and Standard 2 will be displayed. Select Chart to view a standard curve that plots Relative Fluorescence Units (RFU) as a function of concentration (μ g/mL).

Sample Quantification:

1. On the Fluorometer screen, select Read Tube, then choose the volume of the unknown sample in the test tube and select the appropriate units.
2. Select Start Experiment.
3. Once the fluorometer completes the quantification, the sample concentration will be displayed on the screen.
4. Remove the sample, insert the next sample into the test chamber, and select Read Tube. 5. Repeat Step 4 until all samples have been quantified.

Quantification Kits Available from VWR

Cat No.	Description	Qty
VWRI210-000159.	VWR dsDNA High Sensitivity Quantification Kit	100 Assays
VWRI210-000160.	VWR 1X dsDNA High Sensitivity Quantification Kit, 100 Assays	100 Assays
VWRI210-000161.	VWR dsDNA Broad Range Quantification Kit, 100 Assays	100 Assays
VWRI210-000162.	VWR 1X dsDNA Broad Range Quantification Kit, 100 Assays	100 Assays
VWRI210-000163.	VWR ssDNA Quantification Kit, 100 Assays	100 Assays
VWRI210-000164.	VWR RNA High Sensitivity Quantification Kit, 100 Assays	100 Assays
VWRI210-000165.	VWR RNA Broad Range Quantification Kit, 100 Assays	100 Assays
VWRI210-000166.	Fluorometer Tubes, 0.5 mL Pack of 250	250 tubes

VWR Fluorometer Instrument

Cat No.	Description
VWRI210-000157.	VWR Fluorometer 115-230V