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Qubit DNA Quantification (Assay)

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Achieve accurate and precise quantification of dsDNA with Qubit dsDNA HS (High Sensitivity) and Qubit dsDNA BR (Broad Range) Assay Kits. These dsDNA quantification kits enable quick and selective detection of low and high abundance DNA samples, and can distinguish dsDNA from ssDNA, RNA, protein, and free nucleotides. Contaminants, such as salts, solvents, or detergents are well-tolerated.

Qubit_dsDNA_HS_Assay_UG.pdf

Qubit_dsDNA_BR_Assay_UG.pdf

Allyson Hirsch, George Testo 2022. Qubit DNA Quantification (Assay). **protocols.io** https://protocols.io/view/qubit-dna-quantification-assay-cajpscmn

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Qubit dsDNA HS Assay Kit

The Qubit dsDNA HS (High Sensitivity) Assay Kit, when used with the Qubit Fluorometer, provides an accurate and selective method for the quantitation of sensitive DNA samples. Depending on sample volume, the assay kit is designed to be accurate for initial DNA sample concentrations of 0.005 to 120 ng/µL, providing a detection range of 0.1–120 ng.

Qubit dsDNA BR Assay Kit

The Qubit dsDNA BR (Broad-Range) Assay Kit, when used with the Qubit Fluorometer, provides an accurate and selective method for the quantitation of DNA samples. Depending on sample volume, the assay kit is designed to be accurate for initial DNA sample concentrations of 0.2 to 2,000 ng/µL, providing a detection range of 4–2,000 ng.

Exercise caution and make sure to use the appropriate PPE (lab coat, gloves, and safety precautions). Some reagents used for this procedure are potentially mutagenic. Dispose of all reagents appropriately.

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- Qubit dsDNA HS and BR Assay kits can be used with any Qubit Fluorometer.
- Use with thin-wall, clear, 0.5-mL PCR tubes (Cat. No. Q32856) for the Qubit 4 Fluorometer and 8 x 200-µL tube strips (Cat. No. Q33252) for the Qubit Flex Fluorometer

Preparing Working Solution + Samples 2m

1 Clean the workstation with DNA Away and Ethanol.

2 Remove the PCR plates from the **-20 °C** freezer to thaw.

3 Prepare two assay tubes for the upper and lower bound standards, and also one tube for each sample to be tested or quantified for DNA concentration.

3.1 Prepare the working solution (can be calculated using the calculator on the Qubit instrument):

Prepare the assay tubes as follows:

- Standards: **190 µL** working solution + **10 µL** standard from kit
- Samples: **198 µL** working solution + **2 µL** sample

4  3s

Vortex all tubes for **00:00:03** .

5 Incubate the tubes for **00:02:00** at **Room temperature** . 2m

Running Qubit 2m

6 On the Qubit 2.0 Fluorometer, select dsDNA High Sensitivity or dsDNA Broad Sensitivity.

7 Run two standards as indicated by the program.

8 Insert the tubes into the instrument and record the amplicon values.

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Once finished, throw all assay tubes into the **Qubit disposal bin** and clean the workstation.

10 Return all PCR plates to the **-20 °C** freezer for storage.