

GreenQuant dsDNA Kit

High selective fluorescent quantitation of double-stranded DNA

NAGS299,1000 – 1000 assays

NAGS299,0025 – 25 assays

The GreenQuant dsDNA Kit contains a fluorescent proprietary DNA-binding dye (488nmEx/522nmEm, **Fig.1**) that allows accurate and sensitive quantitation of small amounts of double-stranded DNA (dsDNA) in a purified sample.

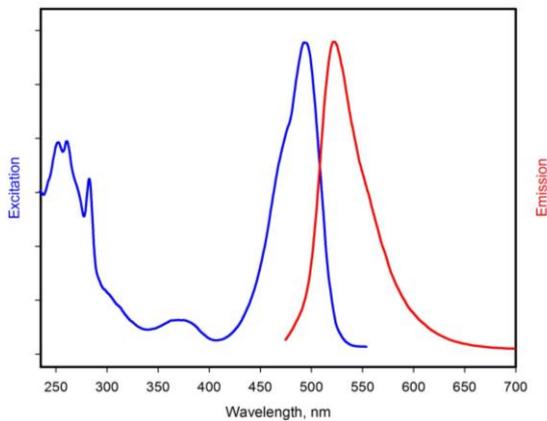


Fig.1 Abs/Em spectra of GreenQuant Dye bound to dsDNA.

The assay is highly selective for dsDNA over RNA (**Fig. 2**) and provides a linear range between 0.2 and 200 ng of dsDNA input, which corresponds to sample concentrations of 0.1 ng/μL to 100 ng/μL. For more concentrated DNA samples, it is recommended to dilute the samples with GreenQuant Buffer 1X. Compared to spectrophotometric DNA quantitation, the assay provides key advantages such as significantly increased sensitivity, high selectivity for double-stranded DNA (dsDNA) over single-stranded DNA (ssDNA) or RNA, and improved contaminant tolerance (protein and carbohydrate molecules). The kit is ideal for quantifying DNA from low-concentration or precious samples, and for quantifying DNA for use in sensitive applications such as Next-Generation Sequencing (NGS) or digital PCR.

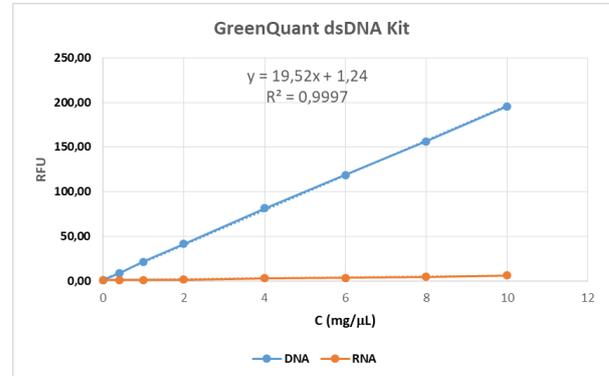


Fig.2 High selectivity of GreenQuant dsDNA Kit for dsDNA over RNA. dsDNA and RNA from yeast samples (10 μL) were assayed in triplicate with GreenQuant dsDNA kit. Fluorescence was plotted against the concentration of RNA or DNA. Background fluorescence had not been subtracted and the y-intercept was set at the RFU of the blank.

The GreenQuant dsDNA Kit includes concentrated GreenQuant Dye, dilution buffer 100X, and λ DNA (20 ng/μL) to prepare serial dilutions for standard curve. The kit is intended to be used in combination with any fluorometer (as Qubit™ Thermo Fisher Scientific) and any fluorescence microplate reader at the appropriate excitation and emission wavelengths. The signal is stable for up to 4-6 hours when the samples are protected from light.

The kit is sufficient for 25 or 1000 assays.

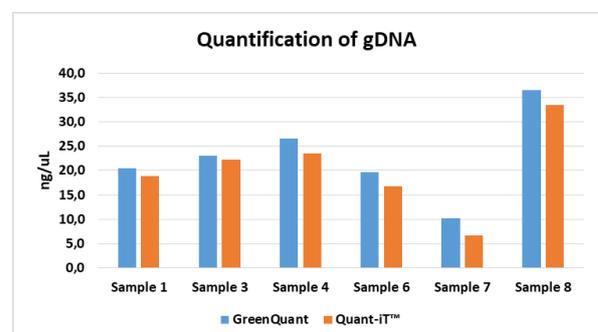


Fig.3 Comparison of quantification of gDNA samples using GreenQuant dsDNA kit and Quant-iT™ 1X dsDNA HS Assay Kit (Thermo Fisher, Cod. Q33232). Readings by VICTOR® Nivo™ Multimode Plate Reader, PerkinElmer.