

Measuring dsDNA Concentration Using the Quantus™ Fluorometer with the QuantiFluor® dsDNA System

Promega Corporation



Materials Required

- QuantiFluor® dsDNA System (Cat.# E2670)
- Quantus™ Fluorometer (Cat.# E6150)
- 0.5ml PCR Tubes (Cat.# E4941)

Caution: We recommend the use of gloves, lab coats and eye protection when working with these or any chemical reagents.

Protocols: *Quantus™ Fluorometer Operating Manual #TM396* and *QuantiFluor® dsDNA System Technical Manual #TM346* are available at: www.promega.com/protocols/

Accurate quantitation of DNA is critical for many applications. Traditional spectrophotometric assays cannot determine DNA concentration below 2µg/ml; however, many isolated DNA samples have concentrations well below that level. Using the Quantus™ Fluorometer (Cat.# E6150) with QuantiFluor® dsDNA System (Cat.# E2670) provides a fast, easy and sensitive method for determining DNA concentration. The QuantiFluor® dsDNA System contains a fluorescent DNA-binding dye that enables sensitive and specific quantitation of small amounts of double-stranded DNA (dsDNA) in solution. The dye shows minimal binding to single-stranded DNA (ssDNA) and RNA. Using the QuantiFluor® dsDNA System, we have detected sample dsDNA concentrations as low as 10pg/µl using 1µl of sample input per assay. It is possible to quantitate more dilute samples by adding more sample per assay. Up to 100µl of sample may be measured per 200µl assay.

For the complete protocol, see the *QuantiFluor® dsDNA System Technical Manual #TM376*.

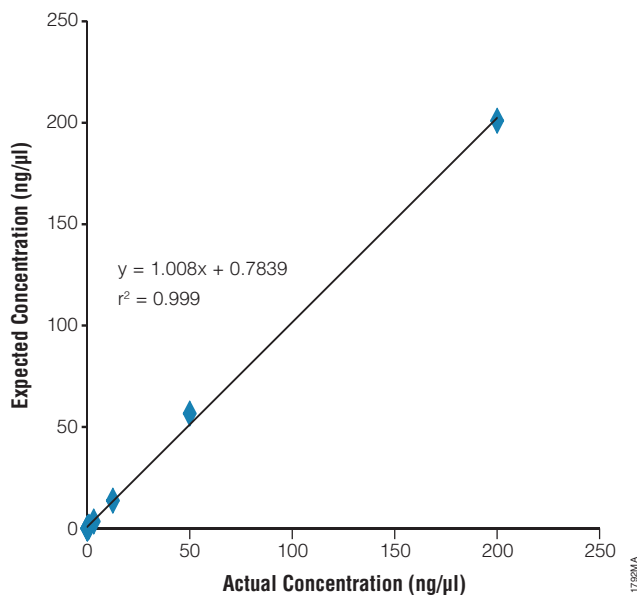


Figure 1. Measuring dsDNA concentration using the QuantiFluor® dsDNA System and the Quantus™ Fluorometer. The standard curve demonstrates assay linearity. The values presented correspond to assay tube dsDNA concentration and not starting sample concentration.

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