

Qubit 1X dsDNA HS Assay Kit



Green benefits

- Less waste and use of fewer resources—up to 9% less plastic material in kit; 9% less plastic waste generated

Introduction

We are committed to designing our products with the environment in mind—it's part of how we enable our customers to make the world healthier, cleaner, and safer. This fact sheet provides the rationale behind the environmental claim that the Invitrogen™ Qubit™ 1X dsDNA High-Sensitivity (HS) Assay Kit uses less material and generates less waste than the Invitrogen™ Qubit™ dsDNA HS Assay Kit.

Product description

The Qubit 1X dsDNA HS Assay Kit is a DNA quantitation kit designed specifically for use with Invitrogen™ Qubit™ fluorometers. The assay is highly selective for double-stranded DNA (dsDNA) over RNA and is designed to be accurate for initial sample concentrations from 10 pg/μL to 100 ng/μL. The “1X” dsDNA HS assay kit provides the reagent and



buffer in a formulation that is stable as a ready-to-use solution for up to 6 months after being received by the user. Simply add your sample (in any volume between 1 μL and 20 μL) to the 1X working solution, mix, and read the concentration using a Qubit 2.0, 3, or 4 Fluorometer. Common contaminants such as salts, free nucleotides, solvents, detergents, and proteins are well tolerated in the assay.

Green features

Less waste and use of fewer resources

With the Qubit 1X dsDNA HS Assay Kit, instead of supplying the assay reagent and dilution buffer in separate bottles as was done with the Qubit dsDNA HS Assay Kit, we have reformulated the components to supply these reagents in a single bottle. This offers a simplified workflow while reducing the number of

tubes in this kit, therefore reducing the amount of plastic usage by up to 9% (Table 1). Additionally, by combining the reagents, we are also eliminating a step in the procedure where the assay reagent needs to be added to the dilution buffer. This means less time is spent preparing the assay, and fewer pipette tips are needed. We estimate that by making these changes to our Qubit dsDNA kit, we will prevent over

75 kg of plastic waste from going to landfill each year, which translates to 215 kg of CO₂ equivalents, or the CO₂ emissions from burning 236 pounds of coal [1]. Designing our products to use less material is one small way we are helping our customers reduce their environmental footprint.

Table 1. Less material used in the Qubit 1X dsDNA HS Assay Kit than in the Qubit dsDNA HS Assay Kit.

No. of assays	Qubit dsDNA HS Assay Kit		Qubit 1X dsDNA HS Assay Kit		
	Total mass of plastic packaging (g)	Cat. No.	Total mass of plastic packaging (g)	Cat. No.	Plastic reduced in 1X dsDNA assay (%)
100	17.492	Q32851	15.865	Q33230	9
500	28.284	Q32854	26.657	Q33231	6
1,000	41.300	Q33120	39.673	Q33232	4

Reference

1. US EPA: Greenhouse Gas Equivalencies Calculator (accessed November 12, 2017). <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

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