

FitAmp™ General DNA Quantification Kit

Base Catalog # P-1020

PLEASE READ THIS ENTIRE USER GUIDE BEFORE USE

The *FitAmp*™ General DNA Quantification Kit is suitable for quantifying double stranded DNA isolated from any species.

KIT CONTENTS

Components	48 assays P-1020-48	96 assays P-1020-96
DQ1 (50X DNA Assay Solution)**	0.12 ml	0.24 ml
DQ2 (Assay Dilution Buffer)	8 ml	16 ml
DQ3 (DNA Standard, 10 µg/ml)*	0.1 ml	0.2 ml
Microplate	1	1

* For maximum recovery of the products, centrifuge the original vial prior to opening the cap.

** Thaw at room temperature for 5-10 minutes prior to use.

SHIPPING & STORAGE

Upon receipt: (1) Store **DQ1** and **DQ3** at -20°C away from light; (2) Store **DQ2** and the microplate at room temperature ($15-25^{\circ}\text{C}$). The kit is stable for up to 6 months from the shipment date, when stored properly.

GENERAL PRODUCT INFORMATION

Quality Control: EpigenTek guarantees the performance of all products in the manner described in our product instructions.

Product Updates: EpigenTek reserves the right to change or modify any product to enhance its performance and design. The information in this User Guide is subject to change at any time without notice. Be sure to use the latest User Guide for this kit which can be accessed online at www.epigentek.com/datasheet.

Usage Limitation: The *FitAmp*[™] General DNA Quantification Kit is for research use only and is not intended for diagnostic or therapeutic application.

Intellectual Property: *FitAmp*[™] is a trademark of EpigenTek, Inc

A BRIEF OVERVIEW

DNA quantification is common practice in molecular biology, genetics, and epigenetics. Accurate quantification of DNA concentration, especially when DNA is present at low concentrations, is critical in wide variety of biological applications. These applications include standard molecular biology techniques, as well molecular diagnostic techniques. Meanwhile, a rapid and convenient assay method would enable the determination of DNA to be easily performed.

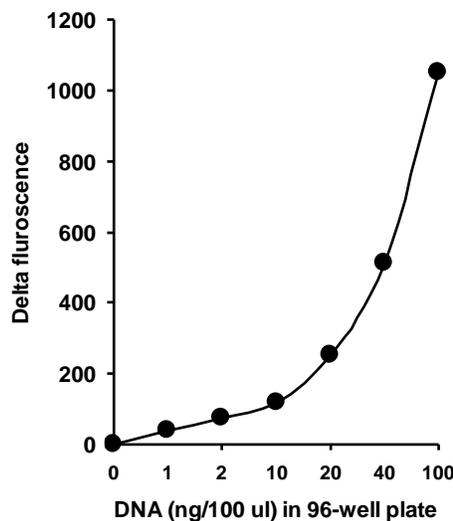
EpigenTek's *FitAmp*[™] General DNA Quantification Kit provides a rapid and convenient method for DNA quantification. The kit has the following features:

- **Very fast procedure.** The assay can be finished within 10 minutes.

- **Sensitive and accurate.** Linear detection range 0.1 ng to 100 ng (1-1000 ng/ml) in 96-well plate assay.
- **No interference.** Fluorescence is only from DNA.

PRINCIPLE & PROCEDURE

The *FitAmp*[™] General DNA Quantification Kit simply applies our proprietary DNA assay solution for DNA quantification. In this assay, the DNA samples are directly fluorescently quantified.



PROTOCOL

1. Dilute DQ1 (50X DNA Assay Solution) with DQ2 (Assay Dilution Buffer) to 1X DNA Assay Solution (ex: add 2 μ l of DQ1 to 98 μ l of DQ2).
2. Add 100 μ l of 1X DNA Assay Solution to each well of a 96-well plate followed by adding 2-5 μ l of DNA sample. Mix lightly. For negative control, add 2-5 μ l of 1X TE (pH7.5) instead of sample. For the standard curve, see *Preparation of Standard Curve* (on next page).
3. Incubate for 2 minutes at room temperature, protected from light, and measure fluorescence at Ex 480-500 and Em 520-550 nm using fluorescence microplate reader. Signal is stable for about 2 hours.
4. Calculation: Plot RFU value versus amount of standard DNA and determine the slope as RFU/ng.

Calculate DNA concentration of sample using the following formula:

$$\text{DNA concentration (ng/ml)} = \frac{\text{Sample RFU} - \text{Blank RFU}}{\text{Sample volume } (\mu\text{l})^* \times \text{slope}} \times 1000$$

* The DNA sample volume added into the well at step 2.

Preparation of Standard Curve

1. Dilute standard DNA (**DQ3**) with **DQ2** at a 1:10 ratio (ex: add 10 μl of standard DNA to 90 μl of **DQ2**).
2. Prepare standard curve:

DQ2 (μl)	Diluted Standard DNA (μl)	50X DNA Assay Solution (μl)
0	100	2
60	40	2
80	20	2
90	10	2
95	5	2
98	2	2
99	1	2

Add each solution to the wells of 96-well plate for measurement of fluorescence. The final concentration of DNA in the mixed solutions should be 100, 40, 20, 10, 5, 2, and 1 ng/100 μl , respectively (from the top to the bottom).

RELATED PRODUCTS

P-1012 FitAmp™ Circulating DNA Quantification Kit