EPIGENTEK
Complete Solutions for Epigenetics

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.

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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
User Guide	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°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.

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

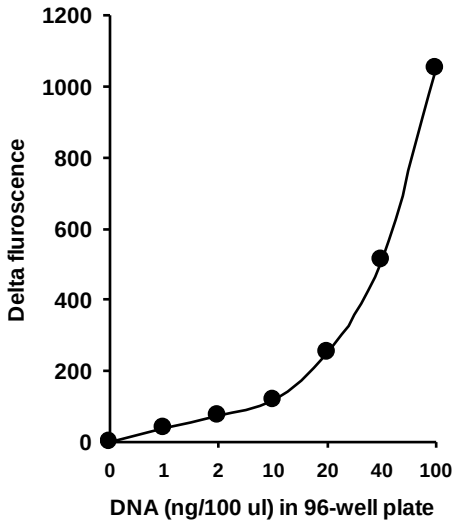
DNA quantification is common practice in molecular biology, genetics, and epigenetics. Accurate quantification of DNA concentration, especially when DNA is present at low concentrations, is critical in wide variety of biological applications. These applications include standard molecular biology techniques, 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 µl of **DQ1** to 98 µl of **DQ2**).

2. Add 100 µl of **1X DNA Assay Solution** to each well of a 96-well plate followed by adding 2-5 µl of DNA sample. Mix lightly. For negative control, add 2-5µl 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:

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

* 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