FitAmp™ General Tissue Section DNA Isolation Kit

Base Catalog # P-1003

PLEASE READ THIS ENTIRE USER GUIDE BEFORE USE

The *FitAmp*™ kits are very suitable for isolating tiny amounts of DNA from microdissection samples, fresh tissue sections, formalin-fixed and paraffin-embedded tissues, plasma, serum, body fluids, etc. The quality of extracted DNA from formalin-fixed and paraffin-embedded tissues may be affected by the quality of the embedded tissue.

The *FitAmp*™ kits allow isolation of DNA size from 50 bp to 20 kb; DNA quantity from 1 ng to 2 μg, optimal at between 10 ng and 1 μg.

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KIT CONTENTS

Components	50 samples P-1003-1	100 samples P-1003-2
S1 (DNA Digestion Solution)	0.3 ml	0.6 ml
S2 (DNA Digestion Powder)	1 vial	1 vial
S3 (DNA Isolation Buffer)	6 ml	11 ml
S4 (DNA Binding Buffer)	12 ml	22 ml
S5 (DNA Elution Solution)	1 ml	2 ml
F-Spin Column	50	100
F-Collection Tube	50	100

SHIPPING & STORAGE

Upon receipt: (1) S2 should be stored at –20°C, or stored at 4°C as soon as it is dissolved in S1 (up to 6 months); (2) Store all other components at room temperature. The kit can be 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*™ kits are for research use only and are not intended for diagnostic or therapeutic application.

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

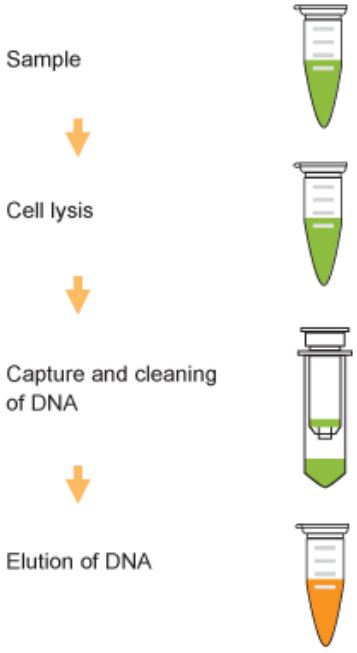
A BRIEF OVERVIEW

The *FitAmp*™ General Tissue Section DNA Isolation Kit is designed for isolating DNA from tissue sections. The kit uses a unique procedure and composition to efficiently isolate DNA in any targeted microscopic tissue area on a slide. The kit has the following features:

- The fastest procedure available, which can be finished within 2 hours, depending on sample types, with consistent isolation conditions.
- High efficiency of DNA isolation from tissue sections containing tiny amounts of DNA (as low as 1 ng).
- Use of non-toxic reagents and no phenol chloroform.

PRINCIPLE & PROCEDURE

The FitAmp™ General Tissue Section DNA Isolation Kit simply applies our proprietary DNA isolation buffer to a selected microscopic tissue area. The area is removed and transferred into a tube. After treatment with DNA digestion buffer, the DNA is easily recovered in 8-20 µl by our specially designed Fast-Spin Column. DNA is ready for down-stream application.



Schematic Procedure for Using the *FitAmp™* General Tissue Section DNA Isolation Kit

PROTOCOL

Note: Always cap spin columns before placing them in the microcentrifuge.

Before starting, prepare the following required solutions (not included): 90% ethanol, and 70% ethanol

1. Add 0.3 ml of **S1** to **S2** in order to create the **S1/S2 solution**. Vortex until solution is clear. Spin the solution down to the bottom.

2. Treat the tissue with the DNA Isolation Buffer:

   For microdissection samples, directly collect the sample into a vial containing 100 µl of **S3**, followed by adding 5 µl of **S1/S2 solution**. Mix well and incubate at 65°C for 60-90 minutes.

   For tissues from fresh sections, add 0.5 µl of **S3** to 1 mm^2 (about 500-1000 cells) of tissue area and immediately remove the tissue area you need (1- 20 mm^2) from the slide with a scalpel.

Transfer it to a 1.5 ml vial containing 100 µl of **S3**, followed by adding 5 µl of **S1/S2 solution**. Mix well and incubate this mixed solution at 65°C for 60-90 minutes or until the tissue is completely lysed (usually it is less than 2 hours). Vortex the sample for 5 seconds every 30 minutes. If tissue is not properly in this mixed solution after vortexing, spin it down into the solution.

For paraffin samples, remove the paraffin first with deparaffin reagents according to the manufacturer's instructions or according to the following procedures:

1) Drop the slide into 100% of *xylene* at room temperature for 10 min. Repeat once with new xylene.
2) Drop the slide in 100% of *ethanol*, 95% and 70% for 5 minutes each. Air dry the slide. Add 0.5 µl of **S3** to 1 mm^2 of tissue area and immediately remove the tissue area you need (1-20 mm^2) from the slide. Transfer it to a vial containing 100 µl of **S3**, followed by adding 5 µl of **S1/S2 solution**. Mix well and incubate this mixed solution at 65°C for 60-90 minutes, or until tissue is completely lysed (it is usually less than 2 hours). Vortex the sample for 5 seconds, every 30 minutes. If tissue is not properly in this mixed solution after vortexing, spin it down into the solution.

3. Place a spin column into a 2 ml collection tube. Vortex the mixture for 5 seconds after incubation. Add 200 µl of **S4** to the mixture and transfer it to the column. Centrifuge at 12,000 rpm for 30 seconds. Discard the flowthrough. Replace the column to the collection tube (***Note****: maximum volume of the column is 600 µl.)*
4. Add 200 µl of *70% ethanol* to the column and centrifuge at 12,000 rpm for 20 seconds. Add 200 µl of *90% ethanol* to the column and centrifuge at 12,000 rpm for 20 seconds. Discard the flowthrough and replace the column to the collection tube.
5. Add an additional 200 µl of *90% ethanol* to the column and centrifuge at 12,000 rpm for 40 seconds.
6. Place the column in a new 1.5 ml vial. Add 8-18 µl of **S5** directly to the column filter and centrifuge at 12,000 rpm for 20 seconds to elute DNA.

RELATED PRODUCTS

P-1004	*FitAmp*™ Plasma/Serum DNA Isolation Kit
P-1009	*FitAmp*™ Paraffin Tissue Section DNA Isolation Kit