

FitAmp™ Urine DNA Isolation Kit

Base Catalog # P-1017

PLEASE READ THIS ENTIRE USER GUIDE BEFORE USE

The *FitAmp*™ Urine DNA Isolation Kit is very suitable for isolating DNA from urine. Typical yield of DNA isolated from urine using this kit varies depending on the input sample.

The *FitAmp*™ Urine DNA Isolation Kit allows isolation of DNA size from 100 bp to 20 kb; DNA quantity from 1 ng to 2 μ g, optimal at between 10 ng and 1 μ g

KIT CONTENTS

Components	50 samples P-1017-050	100 samples P-1017-100
UD1 (Suspending Buffer)	16 ml	2 x 16 ml
UD2 (DNA Digestion Solution)	1.1 ml	2.2 ml
UD3 (DNA Digestion Powder)	1 vial	2 vials
UD4 (DNA Capture Buffer)	16 ml	2 x 16 ml
UD5 (DNA Elution Solution)	1 ml	2 ml
F-Spin Column	50	100
F-Collection Tube	50	100

SHIPPING & STORAGE

The kit can be stored at room temperature (15-22°C) for up to 6 months, with the exception of component **UD3** DNA Digestion Powder. Upon receipt, **UD3** should be stored at -20°C, or stored at 4°C as soon as it is dissolved in **UD2** (stable for up to 6 months).

MATERIALS REQUIRED BUT NOT SUPPLIED

- Waterbath or heat block
- Vortex mixer
- Desktop centrifuge (up to 14,000 rpm)
- Pipettes and pipette tips
- 15 ml conical tube
- 1.5 ml microcentrifuge tubes
- Ethanol (96-100%)

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 Group Inc.

A BRIEF OVERVIEW

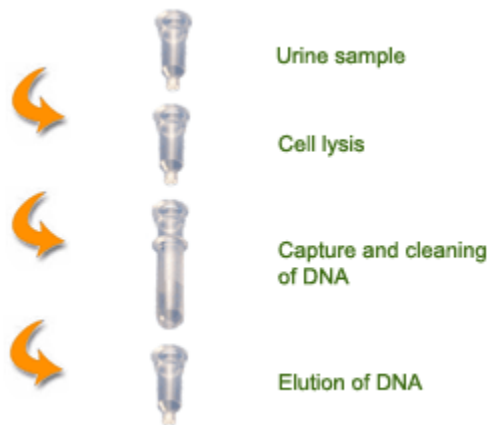
DNA found in urine is mainly derived from cells shed into the urine from the urinary tract. DNA isolated from urine may be used in many different applications in research (ex: DNA methylation identification) and diagnostics (ex: cancer testing). Using urine DNA would have special advantages for diagnostics: (1) the collection of urine is completely non-invasive; (2) technically, isolation of DNA from urine is easier than from blood.

The *FitAmp*[™] Urine DNA Isolation Kit uses a unique procedure and composition to efficiently isolate DNA from urine. The kit also has the following features:

- The fastest procedure available, which can be finished within 20 minutes with consistent isolation conditions.
- High efficiency of DNA isolation from urine.
- Use of non-toxic reagents and no phenol chloroform.

PRINCIPLE & PROCEDURE

The *FitAmp*[™] Urine DNA Isolation Kit simply applies our proprietary DNA isolation buffer to urine sediments. After treatment with DNA digestion buffer, the DNA is easily recovered in 8-20 μ l by our specially designed Fast-Spin Columns. DNA is ready for downstream applications.



Schematic Procedure for Using the *FitAmp*[™] Urine DNA Isolation Kit

PROTOCOL

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

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

1. Collect 5 ml of fresh urine into a 15 ml conical tube and centrifuge at 2000 rpm for 10 minutes to pellet cells.

Note: If the urine sample will not be processed within a day of sample collection, protease inhibitors must be added.

2. Remove supernatant and add 200 μ l of **UD1** to suspend the cell pellet.
3. Add 1 ml of **UD2** to **UD3**. Vortex until solution is clear. Add 4 μ l of the mixed **UD2/UD3 solution** to 200 μ l of cell suspension. Vortex and incubate at 65°C for 15 minutes. Meanwhile, place a spin column into a 2 ml collection tube.
4. Add 300 μ l of **UD4** to the cell suspension, mix, and transfer to the column. Spin for 45 seconds at 12,000 rpm. Discard the flowthrough. Replace the column to the collection tube (**Note:** maximum volume of the column is 600 μ l.)
5. Add 300 μ l of 70% ethanol to the column and centrifuge at 12,000 rpm for 30 seconds. Discard the flowthrough and replace the column to the collection tube. Add 200 μ l of 90% ethanol to the column and centrifuge at 12,000 rpm for 30 seconds.
6. Discard the flowthrough and replace the column to the collection tube. Add an additional 200 μ l of 90% ethanol to the column and centrifuge at 12,000 rpm for 40 seconds.
7. Place the column in a new 1.5 ml vial. Add 8-18 μ l of **UD5** directly to the column filter, and centrifuge at 12,000 rpm for 20 seconds to elute DNA.

DNA is now ready for use or storage at -20°C.

Note: (1) About 6000 white cells may be expected per ml of urine in a healthy sample. Thus, the DNA yielded from 5 ml of urine would generally be a total of 50 to 100 ng or 2.5 to 5 ng/ μ l of eluate. (2) Using 0.5 to 1 μ l of eluate is recommended for PCR analysis of urine DNA in order to reduce PCR inhibition due to possible co-eluted PCR inhibitors.

RELATED PRODUCTS

P-1003-1	FitAmp™ Tissue Section DNA Isolation Kit
P-1004-1	FitAmp™ Plasma/Serum DNA Isolation Kit
P-1009-1	FitAmp™ Paraffin Tissue Section DNA Isolation Kit