

EpiQuik™ DNA Clean and Concentrator Kit

Base Catalog # P-1068

PLEASE READ THIS ENTIRE USER GUIDE BEFORE USE

Uses: The EpiQuik™ DNA Clean and Concentrator Kit is suitable for cleaning and concentrating DNA from various DNA samples, especially from those with low concentration of DNA such as microdissection samples, paraffin-embedded tissues, restriction enzyme digestions, PCR reactions, and home-made minipreps. The cleaned and concentrated DNA can be used for various down-stream applications such as sequencing, labeling, PCR, microarray, transfection, transformation, and restriction digestion procedures.

DNA size is from 50 bp to 20 kb; DNA quantity from 1 ng to 2 µg, optimal between 10 ng and 2 µg.

Input Amount: The amount of starting materials can be up to 300 µl of liquid volume, with an optimal volume of 200 µl. A total of 50 (P-1068-50) or 100 (P-1068-100) standard preparations (using 200 µl of sample) can be performed with this kit.

Binding Capacity and Yield: The column binding capacity can be up to 5 µg. The tests show that the recovery yield is >90%. However, the recovery yield from different samples may vary depending on the sample type.

Purity: Cleaned or concentrated DNA is ready for most downstream applications and specifically for PCR or other downstream DNA manipulations such as ligation/transformation, sequencing, restriction digestion, microarray analysis, labeling, microinjection, and *in vitro* transcription.

Precautions: To avoid cross-contamination, carefully pipette the sample or solution using aerosol-barrier pipette tips and always change pipette tips between liquid transfers. Wear gloves throughout the entire procedure. In case of contact between gloves and sample, change gloves immediately.

KIT CONTENTS

Components	50 preparations P-1068-050	100 preparations P-1068-100	Shipping Temperature	Storage Upon Receipt	Storage Checklist
DB (DNA Binding Enhancer)	5 ml	10 ml	RT	RT	
DWB (DNA Wash Buffer)	3 ml	2 x 3 ml	RT	RT	
EB (Elution Buffer)	1 ml	2 ml	RT	RT	
F-Spin Column	50 pcs	100 pcs	RT	RT	
F-Collection Tubes	50 pcs	100 pcs	RT	RT	

SHIPPING & STORAGE

The kit is shipped at ambient room temperature. Upon receipt, store the components according to the temperatures in the table above away from light. The kit can be stable for up to 6-months from the date of shipment when stored properly.

Note: Check all buffers for salt precipitation prior to use. Re-dissolve any precipitate by warming up to 37°C.

MATERIALS REQUIRED BUT NOT SUPPLIED

- ☐ Vortex mixer
- ☐ Desktop centrifuge (up to 14,000 rpm)
- ☐ Pipettes and DNase-free pipette tips
- ☐ 1.5 ml microcentrifuge tubes (DNase-free)
- ☐ Isopropanol (100%)
- ☐ Ethanol (100%)
- ☐ DNA sample of interest

GENERAL PRODUCT INFORMATION

Quality Control: Each lot of the EpiQuik™ DNA Clean and Concentrator Kit is tested against predetermined specifications to ensure consistent product quality. EpiGentek guarantees the performance of all products in the manner described in our product instructions.

Product Warranty: If this product does not meet your expectations, simply contact our technical support unit or your regional distributor. We also encourage you to contact us if you have any suggestions about product performance or new applications and techniques.

Safety: Suitable lab coat, disposable gloves, and proper eye protection are required when working with this product.

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. Thus, only use the User Guide that was supplied with the kit when using that kit.

Usage Limitation: The EpiQuik™ DNA Clean and Concentrator Kit is for research use only and is not intended for diagnostic or therapeutic application.

A BRIEF OVERVIEW

The EpiQuik™ DNA Clean and Concentrator Kit uses a unique procedure and composition to efficiently clean DNA from various DNA samples including PCR reactions, impure DNA and home-made minipreps and concentrate DNA from DNA samples with low concentration including those from microdissection samples and paraffin-embedded tissues. The kit has the following features:

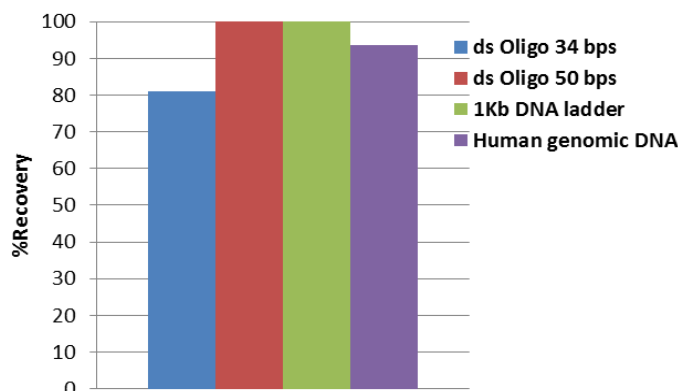
- The fastest procedure available (< 5 minutes)
- The cleaned and concentrated DNA is ultra-pure with efficient removal of contaminants (salts, proteins, enzymes, nucleotides, PCR inhibitors, primers, etc.)
- High recovery of DNA (>90% recovery of input DNA)

PRINCIPLE & PROCEDURE

The EpiQuik™ DNA Clean and Concentrator Kit applies a proprietary DNA binding buffer to the DNA sample. The DNA in the sample will tightly bind to the filter of the **F-Spin Column**. After washing it with the washing buffer, the DNA is easily recovered in 8-10 µl with elution solution. The cleaned and concentrated DNA is ready for downstream application.



Schematic procedure for using the EpiQuik™ DNA Clean and Concentrator Kit.



The EpiQuik™ DNA Clean and Concentrator Kit facilitates >90% recovery of input DNA (>50 bps).

PROTOCOL

For the best results, please read the protocol in its entirety prior to starting your experiment.

Starting Materials

Input Amount: The sample amount can be up to 300 µl volume with an optimal volume of 200 µl.

Working Buffer Preparation

Working Wash Buffer: For 50 preparations, add 27 ml of 100% ethanol to 3 ml of **DWB (DNA Wash Buffer)** and for 100 preparations, add 54 ml of 100% ethanol to 6 ml of **DWB (DNA Wash Buffer)**

DNA Clean-up and Concentrating

1. For 200 µl of sample, add 60 µl of **DB (DNA Binding Enhancer)** followed by adding 250 µl 100% isopropanol and mix well. If the sample volume is less than 200 µl, the **DB (DNA binding Enhancer)** and isopropanol can be added in proportion (For example: for each 20 µl of DNA sample, add 6 µl of **DB (DNA Binding Enhancer)** and 25 µl of 100% isopropanol).
2. Transfer the mixture 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.)

3. Add 250 µl of Working Wash Buffer 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 µl of Working Wash Buffer to the column and centrifuge at 12,000 rpm for 30 seconds again.
4. Place the column in a new 1.5 ml vial. Add 8-10 µl of **EB (Elution Buffer)** directly to the column filter, centrifuge at 12,000 rpm for 30 seconds to elute DNA.

Cleaned and concentrated DNA is now ready for use or storage at –20°C.

TROUBLESHOOTING

Problem	Possible Cause	Suggestion
Low yield of purified DNA	Insufficient amount of starting DNA or DNA is not double-stranded DNA (dsDNA) form.	To obtain the best results, the amount of input DNA should be dsDNA at >10 ng.
	Insufficient purity of starting DNA.	Ensure that RNA is removed by RNase treatment before starting purification protocol.
	Improper storage of the kit.	Ensure that the kit has not exceeded the expiration date. The standard shelf life is 6 months from date of receipt when stored properly.

RELATED PRODUCTS

DNA Isolation and Clean-up

P-1003	FitAmp™ General Tissue Section DNA Isolation Kit
P-1004	FitAmp™ Plasma/Serum DNA Isolation Kit
P-1006	DNA Concentrator Kit
P-1009	FitAmp™ Paraffin Tissue Section DNA Isolation Kit
P-1017	FitAmp™ Urine DNA Isolation Kit
P-1018	FitAmp™ Blood and Cultured Cell DNA Extraction Kit
P-1063	EpiNext™ DNA Purification HT System