

Urine DNA Isolation Kit (Slurry Format)

Norgen's Urine DNA Isolation Kit (Slurry Format) provides a fast, reliable and simple procedure for isolating DNA from various amounts of urine ranging from 3 mL to 25 mL. DNA found in urine can be divided into 2 basic categories. The larger species (genomic DNA) is generally greater than 1 kb in size, and appears to be derived mainly from cells shed into the urine. The second species is smaller, generally between 150 and 250 bp (apoptotic DNA), and derives, at least in part, from the circulation. The second species is also considered as an RNA/DNA hybrid as reported by Halicka et al., 2000.



Both types of DNA can be isolated reliably using this kit. Norgen's Urine DNA Isolation Kit (Slurry Format) can also be used for the isolation of viral DNA from urine. The viral DNA is isolated free from inhibitors and can be used directly as the template in a PCR reaction for viral DNA detection. The procedure can be used for the isolation of viral DNA from a broad range of DNA viruses. Typical yields of DNA isolated will vary depending on the input sample, with more concentrated samples tending to yield more DNA. Preparation time for a single sample is less than 30 minutes. The purified urine DNA is compatible with PCR and Southern Blot analysis.

| Kit Specifications | | | |
|---------------------|-------|-------------------------------|-------------------------------------|
| Minimum Urine Input | 3 mL | Time to Complete Purification | < 30 minutes |
| Maximum Urine Input | 25 mL | Size of Urine DNA Purified | Large (>1kb) and small (150-250 bp) |

Urine DNA Isolation Kit (Slurry Format) Benefits

| | |
|---|---|
| Fast processing | Rapid spin-column format allows for the processing of multiple samples in under 30 minutes. |
| Isolation of both types of urine DNA | Isolate both high molecular weight DNA (greater than 1 kb in size; mostly cell associated) and the smaller DNA (150 - 250 bp; derived from the circulation). |
| Isolation viral DNA from urine | Isolate viral DNA from a broad range of DNA viruses. The viral DNA is isolated free from inhibitors and can be used directly as the template in a PCR reaction for viral DNA detection. |
| High quality DNA | Removal of highly concentrated salts, metabolic wastes and proteins provides high quality, concentrated DNA to be used in various downstream applications. |
| Recovered DNA is suitable for downstream applications | Purified DNA is fully compatible with PCR analysis, qPCR, DNA fingerprinting and Southern Blot analysis. |

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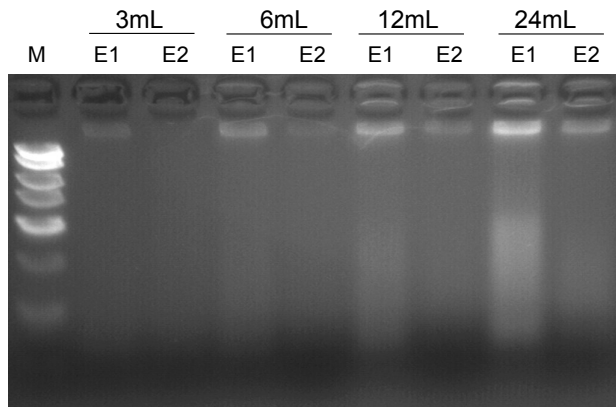


Figure 1. Typical Agarose Gel Showing Total Urinary DNA Isolated from Different Urine Volumes using Norgen's Urine DNA Isolation Kit (Slurry Format). Total urinary DNA was isolated from 3 mL, 6 mL, 12 mL and 24 mL of urine. Total urinary DNA was isolated from each urine sample according to the isolation protocol that is optimized for different sample volumes. The isolated DNA was eluted into two separate elutions (E1 and E2). The purified urine DNA was then loaded onto a 1.5% agarose gel. Each lane shows one tenth from each elution. It can be seen that the first elution contains most of urinary DNA whereas the second elution contains the rest of the urinary DNA isolated. Lane M is 10 µL of Norgen's FastRunner DNA Ladder.

Urine DNA Isolation Kit (Slurry Format) Contents

1. Slurry B1
2. Lysis Buffer A
3. Wash Solution A
4. Elution Buffer B
5. Mini Filter Spin Columns
6. Collection Tubes
7. Elution tubes (1.7 mL)
8. Product Insert

Shipping Conditions

The Urine DNA Isolation Kit (Slurry Format) is shipped at room temperature.

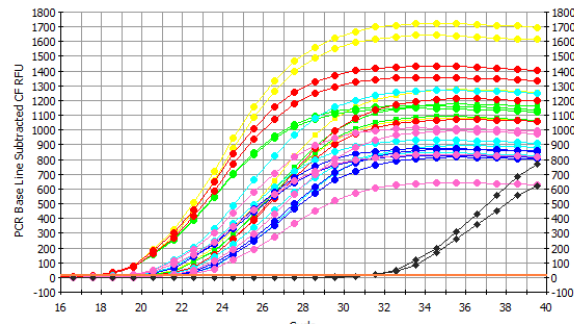


Figure 2. Isolation and Detection of DNA from Different Volumes of Urine. Total genomic DNA was isolated from 3, 6, 12 and 24 mL urine samples using Norgen's Urine DNA Isolation Kit (Slurry Format). The urinary DNA was isolated from each urine sample according to the provided protocol, and the DNA was eluted into two separate elutions (E1 and E2). The isolated DNA was then subjected to quantitative PCR using human 5S gene primers to detect the genomic DNA. To test the absence of PCR inhibitors usually accompanying DNA isolated from urine, an increasing amount from each elution (1, 3, 6 and 9 µL) was used as a template in the PCR reaction. Urinary genomic DNA was successfully detected from all the different urine volumes with no sign of PCR inhibition, even when 9 µL of urine DNA was used as the template.

Customer-Supplied Reagents and Equipment

- Centrifuge with a swinging bucket rotor
- Benchtop microcentrifuge
- Micropipettors
- 96 – 100% ethanol
- 15 and 50 mL tubes
- 60°C incubator
- Lysozyme (optional)
- Proteinase K (optional)

| Cat # | Description | Quantity |
|-------|---|------------|
| 48800 | Urine DNA Isolation Kit (Slurry Format) | 50 columns |