

Plasmid MiniPrep Kit

Norgen's Plasmid MiniPrep Kit is designed for the rapid preparation of plasmid DNA from small batch cultures of *Escherichia coli*. The plasmid DNA is preferentially purified from other cellular components such as genomic DNA and RNA. The Plasmid MiniPrep Kit is able to purify plasmids up to 13,000 bp in size, and the typical purification yield is up to 20 mg from 1.5 mL of bacterial culture. The purified DNA is fully digestible with all restriction enzymes tested, and is completely compatible with manual or automated sequencing to achieve 95-100% accuracy.



Purification is based on spin column chromatography. The process for the isolation of plasmid DNA involves first pelleting 1.5 mL of an overnight culture of *E. coli* harbouring the plasmid of interest using centrifugation. The pellet is then resuspended in the provided Resuspension Solution AZ, which contains RNase A. Lysis Buffer N is then added to the sample in order to assist in the lysis of the bacterial cells. Next, Buffer TN is added to the sample which will neutralize the sample and cause precipitation of the proteins and genomic DNA that is present. The resulting suspension is spun down, and the clarified lysate containing the plasmid DNA is then applied to a provided column through centrifugation. Norgen's column binds DNA in a manner that depends on ionic concentrations, thus the DNA will bind to the column while most of the RNA, proteins and other contaminants will either flowthrough or be retained on top. The bound DNA is then washed twice using the provided Wash Solution E in order to remove any remaining impurities, and the purified PCR product is eluted with the Elution Buffer K.

Kit Specifications

Column Binding Capacity	25 µg	Size of Plasmids Purified	Up to 13,000 bp
Average Yield from 1.5 mL Culture	Up to 20 µg	Time to Complete 10 Purifications	30 minutes

Plasmid MiniPrep Kit Benefits

Fast and easy processing	Rapid spin-column format allows for the processing of multiple samples in 30 minutes.
High binding capacity of columns	The binding capacity of the columns in the Plasmid MiniPrep Kit is 25 µg.
High recovery	Up to 20 µg of plasmid DNA can be purified from 1.5 mL of bacterial culture (Figure 1)
Recovered plasmid DNA is suitable for downstream applications	Purified plasmid DNA is fully compatible with restriction enzyme digestions and sequencing (Figure 2).

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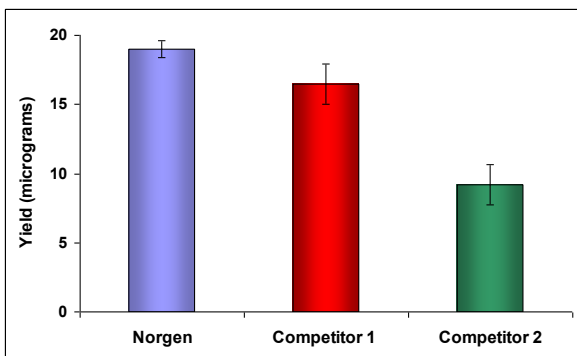


Figure 1. High DNA Yield from Small Cultures

Plasmid DNA from bacterial cultures grown overnight was prepared with Norgen's Plasmid MiniPrep Kit and compared with two other commercial kits. The purifications were performed in triplicate, and the average yield for each kit is shown in the graph. Norgen shows a significantly higher average yield than the other 2 competitor's kits.

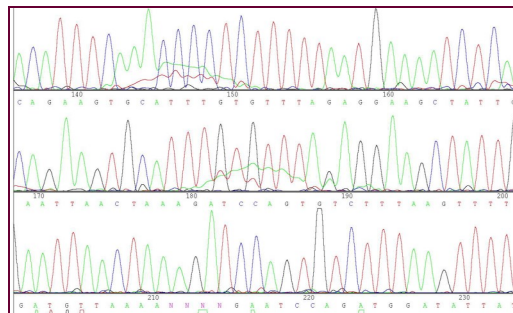


Figure 2. High-Accuracy Sequencing

Sequencing of purified plasmid DNA as a template resulted in an accuracy of 99% over a 950 bp contiguous sequence.

Plasmid MiniPrep Kit Contents

1. Resuspension Solution AZ
2. Lysis Buffer N
3. Buffer TN
4. Wash Solution E
5. Elution Buffer K
6. RNase A
7. Micro Spin Columns
8. Elution tubes (1.7 mL)
9. Product Insert

Customer-Supplied Reagents and Equipment

- Benchtop microcentrifuge
- 1.5 mL microcentrifuge tubes

Storage Conditions

All solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for at least 1 year in their unopened containers. The RNase should be stored at -20°C upon arrival. The Resuspension Buffer should be stored at 4°C upon addition of RNase enzyme.

Shipping Conditions

The Plasmid MiniPrep Kit is shipped at room temperature.

Cat #	Description	Quantity
13300	Plasmid MiniPrep Kit	50 preps
46400	Plasmid MiniPrep Kit	250 preps