

# nucleic acid purification

## QUANTUM PREP<sup>®</sup> PLASMID MIDI- AND MAXIPREP KITS

QUANTUM PREP PLASMID MIDI- AND MAXIPREP KITS PROVIDE THE FOLLOWING BENEFITS FOR TRANSFECTION PROTOCOLS:

- FASTEST, HIGHEST YIELDING PLASMID DNA PURIFICATION KIT AVAILABLE
- LOWEST COST PER mg PURIFIED DNA
- STRINGENT QUALITY CONTROL ENSURES OPTIMAL PURITY AND PERFORMANCE

## Highly Pure DNA in Quantities Ideal for Transfections

As molecular biology techniques improve, the amount of DNA required for any given protocol has gotten smaller. However, larger amounts of DNA are still required for a number of applications, including the introduction of DNA into eukaryotic cells (transfection) to analyze gene expression, subcloning and other enzymatic manipulations. Quantum Prep plasmid midi- and maxiprep kits are specifically designed to isolate highly pure DNA in quantities large enough to support such applications. Quantum Prep plasmid kits are based on the highly porous siliceous exoskeleton of the prehistoric remains of diatoms. Proprietary treatments produce a matrix with ideal DNA binding and purification characteristics.

### Fastest Midi- and Maxipreps Available

Quantum Prep plasmid midi- and maxiprep kits use a simple spin column procedure to significantly reduce the time required to generate large quantities of plasmid DNA, without compromising purity. Eliminate vacuum manifolds, plugged drip columns and time-consuming CsCl centrifugation steps, and avoid the difficulties of band harvesting and handling of hazardous organic reagents such as ethidium bromide, phenol, chloroform, and CsCl.

#### PURIFICATION TIME FOR HIGH COPY NUMBER PLASMID

TECHNIQUE	MIDI- PREP	MAXI- PREP
Quantum Prep	45 min	90 min
Anion exchange column	120 min	145 min
Silica slurry	90 min	<180 min
CsCl banding	N/A	2 days

*(Per manufacturer's recommendations/specifications)*



### Highest Yielding Midi- and Maxipreps Available

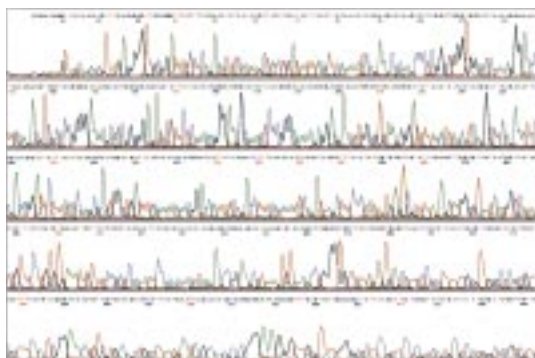
Increasingly complex and demanding transfection protocols require large amounts of plasmid DNA. To avoid loss of experimental validity, it is desirable to prepare enough plasmid DNA to complete any given transfection screening experiment. The patented formulation of the Quantum Prep matrix takes advantage of the high surface-to-volume ratio of the diatomaceous earth support to provide the highest yields of DNA available in a plasmid purification kit, at the lowest cost per mg purified DNA.

#### TYPICAL YIELDS FOR HIGH COPY NUMBER PLASMID

TECHNIQUE	MIDI- PREP	MAXI- PREP
Quantum Prep	100–300 µg	up to 3 mg
Anion exchange column	75–100 µg	300–500 µg
Silica slurry	60–200 µg	0.3–1.0 mg
CsCl banding	N/A	up to 3 mg

*(Per manufacturer's recommendations/specifications)*

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QC analysis of Quantum Prep-purified DNA. Fluorescent DNA sequence analysis using the ABI™ PRISM™ Dye Terminator kit and analyzed on an ABI 377A DNA sequencer.

### Guaranteed High Purity Plasmid DNA

Protocols such as mammalian cell transfection demand DNA of the highest purity to ensure optimal efficiency. Quantum Prep plasmid midi- and maxiprep kits must pass the highest functional quality control procedure available, providing fluorescent DNA sequencing accuracy of at least 98% over 600 bases (see sequencing chart at left). Plasmid DNA purified with Quantum Prep midi- and maxiprep kits is ideal for mammalian cell transfection via CaPO<sub>4</sub>, cationic lipid, electroporation, and particle bombardment protocols with even the most difficult cell lines.

### TECHNICAL INFORMATION

	MIDIPREP	MAXIPREP
Application	Transfections, fluorescent sequencing, cloning	Transfections, fluorescent sequencing, cloning
Cell culture volume	20–40 ml	100–500 ml
DNA yield	up to 300 µg	up to 3 mg
Separation time	45 minutes	90 minutes
Plasmid preps/kit	20	10

### Ordering Information

Catalog #	Description
732-6120	Quantum Prep Midiprep Kit, 20 preps, includes 110 ml cell resuspension buffer, 110 ml cell lysis buffer, 100 ml neutralization buffer, 20 ml Quantum Prep matrix, 125 ml wash buffer, 20 midi spin columns, instructions
732-6130	Quantum Prep Maxiprep Kit, 10 preps, includes 165 ml cell resuspension buffer, 250 ml cell lysis buffer, 165 ml neutralization buffer, 110 ml Quantum Prep matrix, 270 ml wash buffer, 10 maxi spin baskets, instructions
732-6100	Quantum Prep Miniprep Kit, 100 preps, includes 20 ml cell resuspension buffer, 25 ml cell lysis buffer, 25 ml neutralization buffer, 20 ml Quantum Prep matrix, 63 ml wash buffer, 100 mini spin filters, instructions

### ACCESSORIES

732-6100	Quantum Prep Matrix, 20 ml
732-6122	Quantum Prep Neutralization Solution, 125 ml
732-6116	Quantum Midi Spin Columns, 20
732-6137	Quantum Midi Spin Baskets, 10

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