# POST-REACTION DNA PURIFICATION

## GenElute™ PCR Clean-Up Kit

*For purification of single- or double-stranded PCR amplification products.*

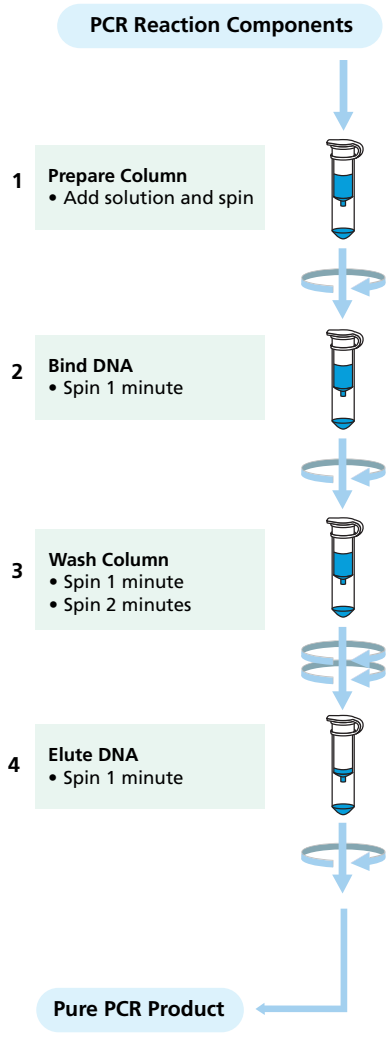
The GenElute™ PCR Clean-Up Kit is designed for rapid purification of single-stranded or double-stranded PCR amplification products (100 bp to 10 kb) from other components in the reactions, such as excess primers, nucleotides, DNA polymerase, oil and salts (Fig. 1). This kit combines the advantages of silica binding with a convenient spin column format, eliminating the need for expensive resins or toxic organic compounds such as phenol and chloroform.

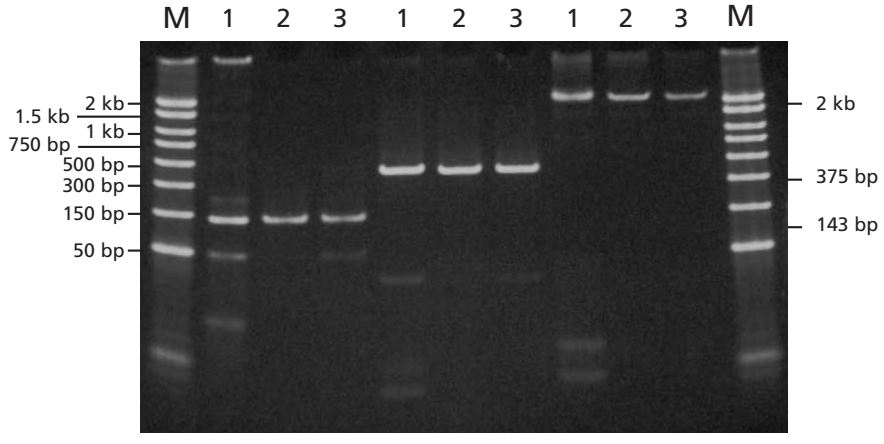
DNA is bound on a silica membrane within the spin column. The bound DNA is washed and the clean, concentrated DNA is eluted in the buffer of choice. Each column can purify up to 100 µl or 10 µg of PCR amplified DNA and recover up to 95% of PCR products between 100 bp and 10 kb. More than 99% of the primers and most primer-dimers (<40 bp) are removed. Purified DNA can be used in enzymatic reactions, conventional or Automated Sequencing (Fig. 2), Cloning and Microarray analysis.

### Features and Benefits

- Purifies up to 100 µl or 10 µg of PCR amplified DNA in 8 minutes
- Recovers up to 95% of PCR products between 100 bp and 10 kb
- Removes over 99% of primers and other components
- Eliminates the need to remove mineral oil by organic extraction
- 40% more purification preps supplied than market leader

**Storage:** Room Temperature




***Comparison of PCR product recovery and primer removal.***

***Figure 1.*** *Three separate PCR products were purified with GenElute™ PCR Clean-Up Kit and the kit from Supplier Q. Products were 143 bp from corn leaf, 375 bp from pBR322, 2 kb from human blood. Samples were analyzed on a 20% TBE acrylamide gel and visualized by staining with SybrGreen II™.*

*Lanes 1: Unpurified Reaction*
*Lanes 2: GenElute™ PCR Clean-Up Kit*
*Lanes 3: Supplier Q*

# POST-REACTION DNA PURIFICATION

***Purified PCR products are suitable for Automated Sequencing***

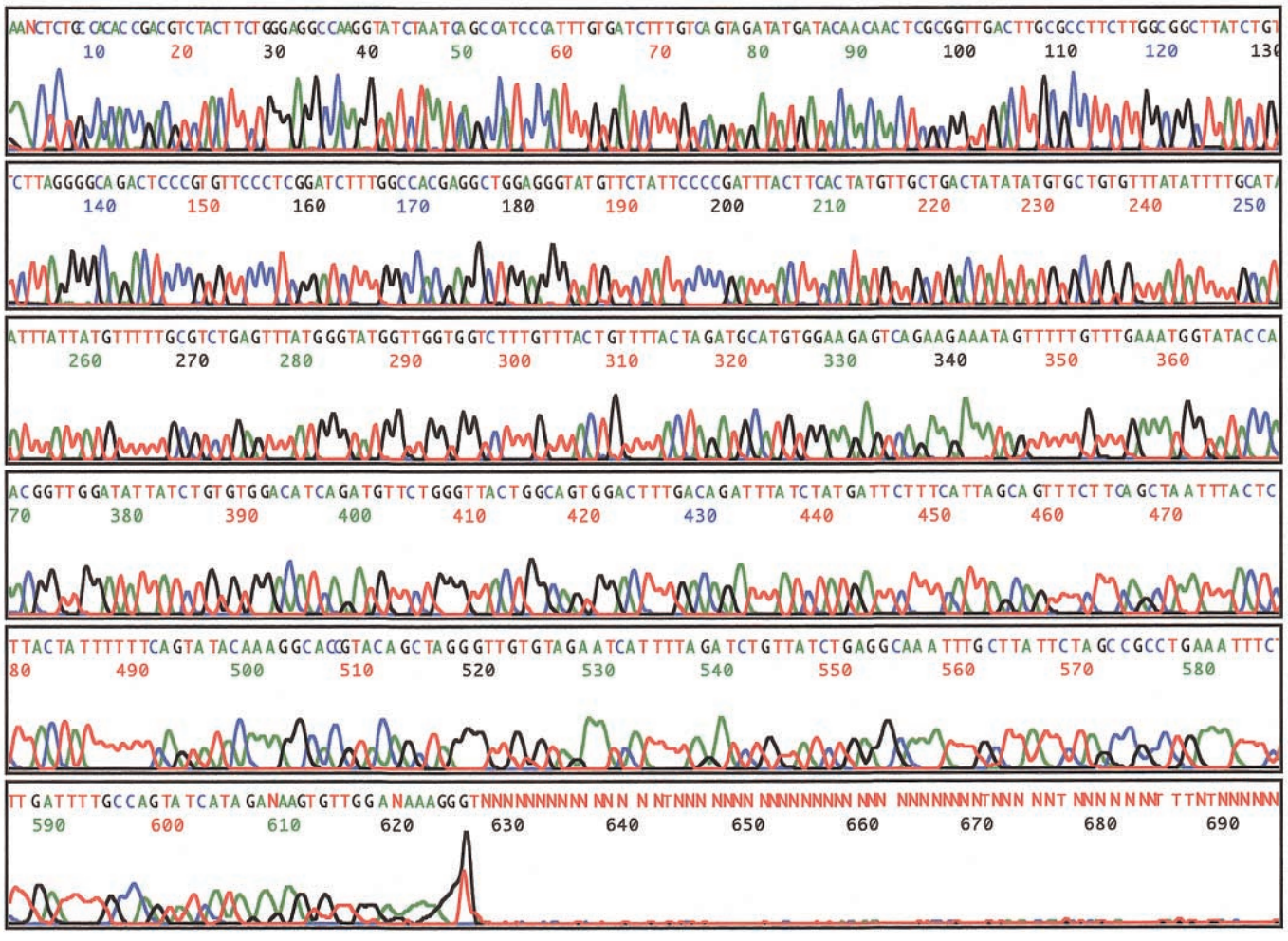


***Figure 2.*** *Sequence was resolved on an ABI 3100 from a purified, 645 bp corn leaf PCR product. The PCR product was purified with the GenElute™ PCR Clean-Up Kit. The DNA extraction and PCR were performed using Sigma's Extract-N-Amp™ Plant PCR Kit. The sequence was obtained by using ABI BigDye™ Terminator Chemistry and the same primers as for the original PCR.*

## ORDERING INFORMATION

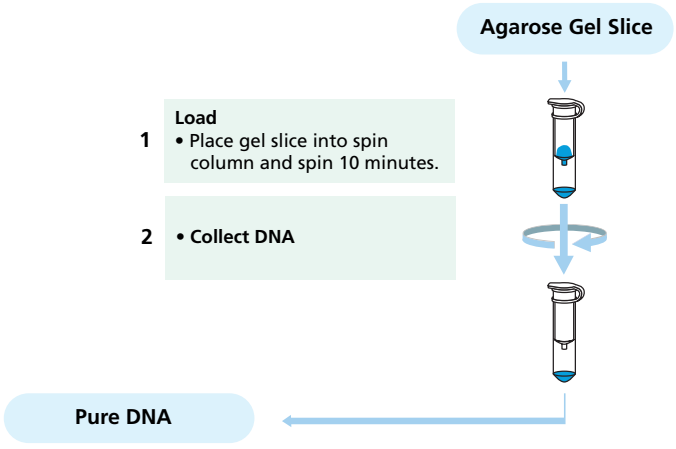
| Product | Product Description | Purifications | Quantity |
|---|---|---|---|
| NA1020 | GenElute™ PCR Clean-Up Kit | 70 | 1 kit |

# POST-REACTION DNA PURIFICATION

## GenElute™ Agarose Spin Columns

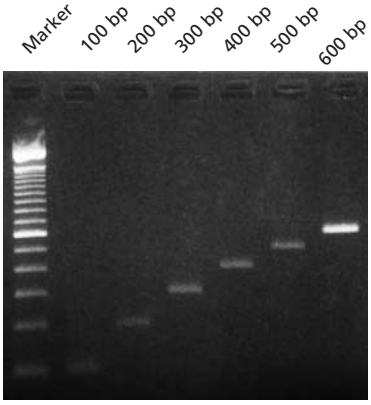
*For purification of DNA from agarose gel slices.*

GenElute™ Agarose Spin Columns isolate DNA by centrifugation/filtration. A slice of agarose gel containing the DNA of interest is excised, placed into a spin column, and spun at maximum speed in a microcentrifuge. Agarose is retained on a filter in the spin column and soluble molecules, including DNA, pass through the filter and collect in a microcentrifuge tube.



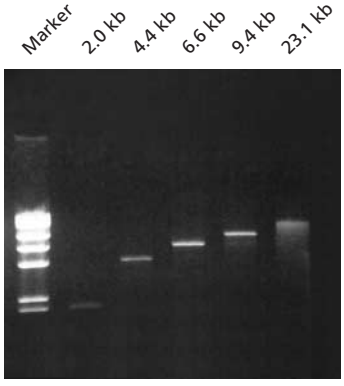

### Features and Benefits

- One-step, 10 minute protocol
- No melting or digestion of agarose required
- Simpler and quicker than bind and elute or electroelution methods
- No ethanol precipitation
- Typical recovery of 40 to 45% for DNA fragments from 100 bp to 10 kb (Figs. 1 and 2)




***Recovery of 100-600 bp DNA fragments purified using GenElute™ Agarose Spin Columns.***

***Figure 1.*** *1 µg of 100 bp DNA ladder was electrophoresed on a 2.0% agarose gel. 100, 200, 300, 400, 500, and 600 bp fragments were excised from the gel, and purified using GenElute™ Agarose Spin Columns as above. Samples were loaded and analyzed on a 2.0% agarose gel.*




***Recovery of 2 to 23 kb DNA fragments purified using GenElute™ Agarose Spin Columns.***

***Figure 2.*** *Lambda Hind III markers were pre-heated at 65°C and electrophoresed on a 2.0% agarose gel. The 2.0, 4.4, 6.6, 9.4, and 23 kb fragments were excised and purified using GenElute™ Agarose Spin Columns. Samples were loaded and analyzed on a 2.0% agarose gel.*

## ORDERING INFORMATION

| Product | Product Description | Purifications | Quantity |
|---|---|---|---|
| 5-6500 | GenElute™ Agarose Spin Columns | 70 | 70/pkg. |

# POST-REACTION DNA PURIFICATION

## GenElute™ Minus EtBr Spin Columns

*For recovering DNA from ethidium bromide (EtBr) stained agarose gels or EtBr-containing solutions.*

GenElute™ Minus EtBr Spin Columns are based on the GenElute™ Agarose Spin Column but incorporate a membrane for the selective removal of ethidium bromide (Fig. 1). The DNA band is excised from an agarose gel and loaded onto the spin column. The membranes, embedded within the column, retain agarose and ethidium bromide while allowing DNA to selectively pass through the column into a centrifuge tube during centrifugation.

Up to 95% of ethidium bromide is removed from DNA with a simple 10 minute procedure. GenElute™ Minus EtBr Spin Columns can recover DNA fragments from 100 bp to 10 kb with typical recoveries of 30 to 35%. The purified DNA can be used directly for ligation, Restriction Enzyme Digestion, Cloning, PCR and related manipulations without ethanol precipitation.

### Features and Benefits

- Removes up to 95% of EtBr from DNA
- One-step, 10 minute protocol
- No melting or digestion of agarose required
- Simpler and quicker than most methods
- No ethanol precipitation

***Ethidium Bromide removal demonstrated over a UV light box.***

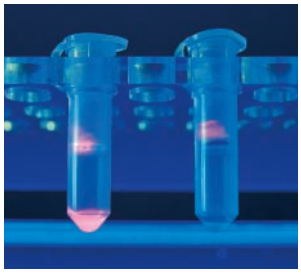


***Figure 1.*** *DNA was electrophoresed in agarose gels containing ethidium bromide (0.5 µg/ml). Bands were excised, applied to both the Minus EtBr and Agarose Spin Columns and centrifuged. The final eluate from each column was compared under a UV light box. The filter within the GenElute™ Minus EtBr Spin Column retained Ethidium bromide.*

***Left Tube:*** *GenElute™ Agarose Spin Column*
***Right Tube:*** *GenElute™ Minus EtBr Spin Column*

### ORDERING INFORMATION

| Product | Product Description | Purifications | Quantity |
|---|---|---|---|
| 5-6501 | GenElute™ Minus EtBr Spin Columns | 70 | 70/pkg. |