

Purification Systems

Purify DNA Fragments...

...from PCR, Sequencing Reactions and Gel Slices.

Promega fragment DNA purification systems provide:

- **High yield:** Excellent recovery rates direct from PCR or from gels.
- **Your choice of purification method:** We provide a range of membrane filtration-based and magnetic particle-based systems. You choose the separation method best suited to your needs.
- **Your choice of throughput:** Both membrane-based and magnetic-based purification systems are available in manual and automated formats.
- **Simplicity and sophistication:** From manual, single-tube purification to full automation, there is a fragment purification system for every need.
- **Fully automated systems for high-throughput users:** Automated methods and personalized automation support are available for all high throughput systems.
- **Increased productivity:** Save time and labor from easy to use protocols.
- **Experience you can trust:** Have confidence in a supplier with over 25 years experience providing molecular biology systems and reagents.

Purify Fragments:

- Directly from PCR
- From gels
- From sequencing reactions
- From restriction digests
- Away from phosphatases, kinases, polymerases

How can we help you achieve your goals today?

A Comparison of Fragment DNA Purification Systems.

	Sequencing Clean-Up	PCR Clean-Up	Gel Fragment Isolation	Spin Protocol	Vacuum Protocol	Magnetic Technology	Manual Handling	Automated Handling
Wizard® SV Gel and PCR Clean-Up (Cat.# A9281, A9282)		●	●	●	●		●	
Wizard® SV 96 PCR Clean-Up (Cat.# A9340, A9341, A9342)		●	●		●		●	●
Wizard® PCR Preps (Cat.# A7170, A2180)		●	●		●		●	
Wizard® DNA Clean-Up (Cat.# A7280)		●			●		●	
Wizard® MagneSil® Sequencing Reaction Clean-Up (Cat.# A1830, A1831, A1832)	●					●	●	●
Wizard® MagneSil® PCR Clean-Up (Cat.# A1930, A1931)		●				●	●	●

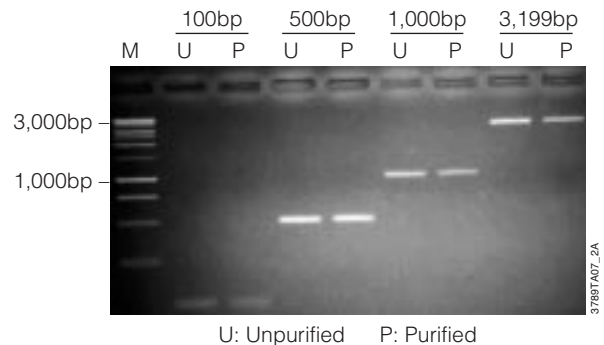
Wizard® SV Gel and PCR Clean-Up System

High recovery of concentrated DNA fragments over a broad size range.

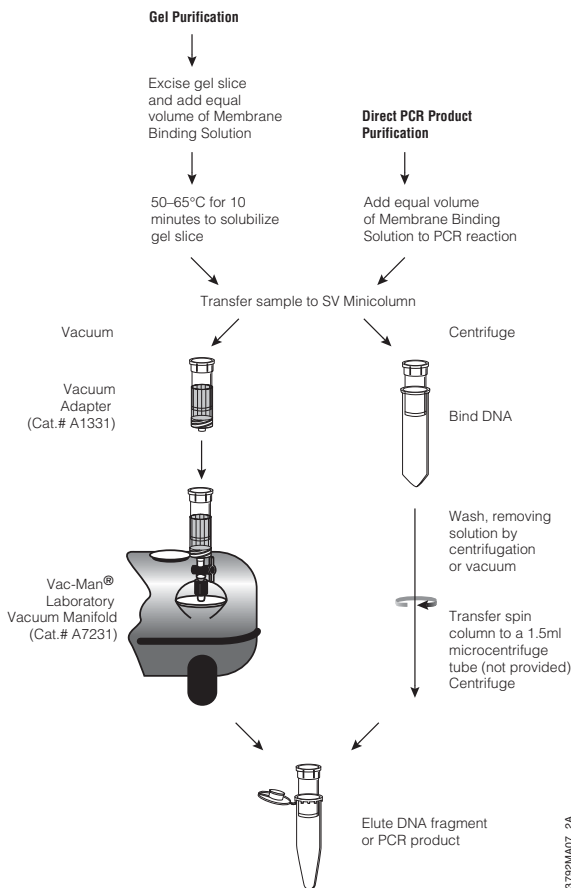
The Wizard SV Gel and PCR Clean-Up System provides:

- **Speed:** Purify DNA fragments or PCR products in as little as 20 minutes directly from PCR or from agarose gels in either TAE or TBE buffer.
- **High yield:** 70–95% recovery of DNA fragments (100bp–10kb) from gels and 85–95% recovery of PCR products (100bp–3.2kb). Recovery of PCR products >3.2kb is similar to that from agarose gels.
- **An application-tested system:** Tested to ensure performance of purified PCR products in fluorescent sequencing. Purified DNA routinely achieves 700bp with >98% accuracy.
- **Safety and convenience:** No phenol extraction or precipitation required.

Product	Size	Cat.#
Wizard® SV Gel and PCR Clean-Up System	50 preps	A9281
	250 preps	A9282
For Laboratory Use.		



Gel analysis of DNA fragments before and after gel extraction using the Wizard SV Gel and PCR Clean-Up System. DNA fragments of the sizes indicated were analyzed before (U; unpurified) and after (P; Purified) purification. The marker (M) used is the 1kb DNA Ladder (Cat.# G5711).



Flow chart of DNA fragment gel purification or direct PCR product purification using the Wizard SV Gel and PCR Clean-Up System.

Wizard SV Gel and PCR Clean-Up System: Percent recovery of various sized fragments from agarose gels.

DNA Fragment Size	Percent Recovery
70bp	39%
85bp	55%
100bp	84%
500bp	89%
1,000bp	92%
3,199bp	95%
9,416bp	95%

Wizard SV Gel and PCR Clean-Up System: Percent recovery of various sized fragments directly from PCR.

DNA Fragment Size	Percent Recovery
200bp	87%
500bp	91%
1,000bp	92%
1,500bp	92%
3,199bp	87%

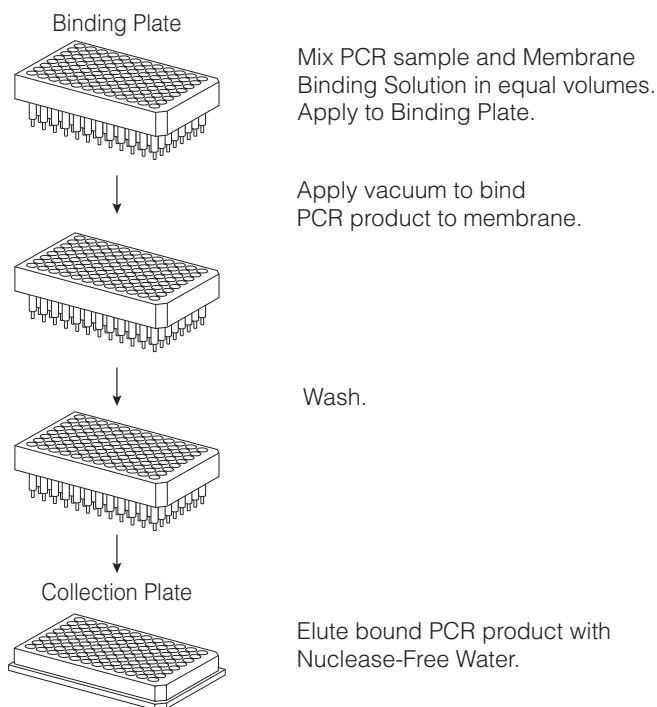
Purification Systems

Wizard® SV 96 PCR Clean-Up System

Rapid high-throughput 96-well recovery of fragment DNA

The Wizard SV 96 PCR Clean-Up System provides:

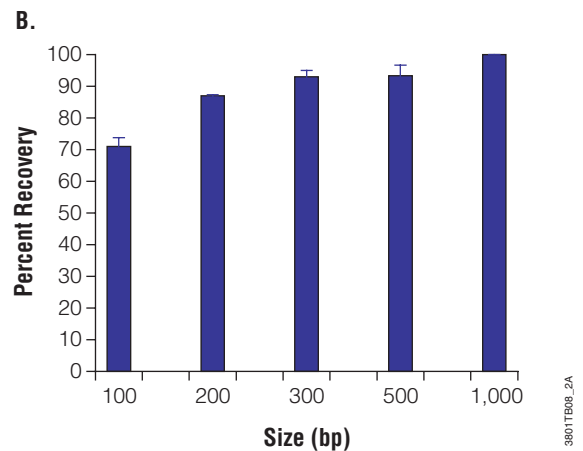
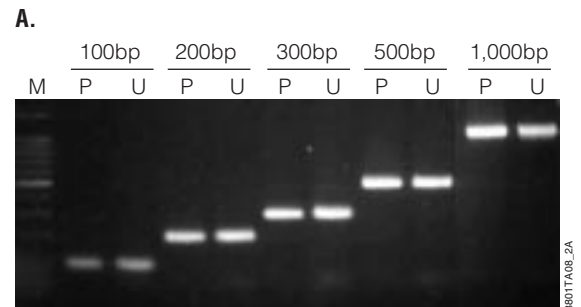
- **Speed:** Process a 96-well plate in 20 minutes.
- **High yield:** Average percent recovery for 500bp and 1,000bp fragments is >90%, unaffected by common PCR additives.
- **Gel slice purification:** The system can be used to purify DNA from gel slices, as well as directly from PCR.
- **Safety and convenience:** No phenol extraction or precipitation required.
- **An application-tested system:** Tested to ensure performance of purified PCR products in fluorescent sequencing and microarray applications.
- **Hassle-free automated methods:** Automated methods and support information available at: www.promega.com/automethods/



Wizard SV 96 PCR Clean-Up System protocol overview.

Product	Size	Cat.#
Wizard® SV 96 PCR Clean-Up System	1 x 96 preps	A9340
	4 x 96 preps	A9341
	8 x 96 preps	A9342
	100 x 96 preps	A9345

For Laboratory Use.



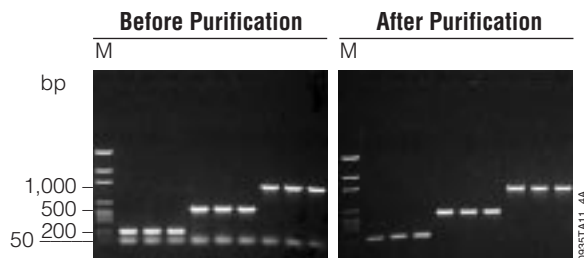
Purification and recovery of PCR products. PCR fragments of 100, 200, 300, 500, and 1,000 base pairs were purified using the Wizard SV 96 PCR Clean-Up System on the Beckman Coulter Biomek® 2000 robotic workstation. **Panel A.** Purified (P) and unpurified (U) fragments were separated on an ethidium bromide-stained, 2% agarose gel. **Panel B.** Percent recovery of purified PCR products was quantitated using a Hitachi FMBIO® Fluorescent Scanner. Results show the mean and standard deviation for 6 purified fragments of each size. For small PCR fragments (<500bp), optimal recovery requires a 95% ethanol wash. For larger fragments (>500bp), optimal results are achieved using an 80% ethanol wash.

Wizard® PCR Preps DNA Purification System

Reliable low-throughput PCR and agarose gel slice DNA fragment clean-up

The Wizard PCR Preps DNA Purification System provides:

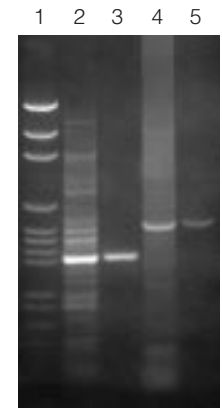
- **High yield:** 70–90% recovery of DNA fragments (500bp) from low-melting point agarose gels and 95–99% recovery of PCR products (300bp–1.5kb) directly from reactions.
- **Efficiency:** Process multiple samples simultaneously using the Vac-Man Laboratory Vacuum Manifold (20 sample capacity).
- **Safety and convenience:** No phenol extraction or precipitation required.
- **Confidence:** Removal of excess nucleotides, primers and small nonspecific amplification products such as primer-dimers from PCR.



Recovery of PCR products using the Wizard PCR Preps Resin. A representative sample from the simultaneous purification of 96 PCR reactions was chosen to determine the effectiveness of the DNA purification process. Equivalent amounts from before and after purification were separated on a 1% agarose gel and stained with ethidium bromide.

Product	Size	Cat.#
Wizard® PCR Preps DNA Purification System	50 preps	A7170
	250 preps	A2180

For Laboratory Use.



Purification and analysis of PCR products from low-melting agarose using the Wizard PCR Preps DNA Purification System. Lane 1, 250ng pGEM® DNA Markers; lane 2, β -1-anti-trypsin PCR product; lane 3, purified β -1-antitrypsin PCR fragment; lane 4, b-globin PCR reaction product; lane 5, purified b-globin PCR fragment.

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Wizard® DNA Clean-Up System

Safe, easy clean-up of linear or circular DNA

The Wizard DNA Clean-Up System provides:

- **Speed:** Purify DNA in as little as 15 minutes.
- **Simple, effective purification:** Purify linear and circular DNA (200bp–50kb) away from contaminants such as restriction enzymes, phosphatases, kinases, DNA polymerases, exonucleases and endonucleases (including DNase I but not RNases), mononucleotides and salts.
- **Efficiency:** Process multiple samples simultaneously using the Vac-Man Laboratory Vacuum Manifold (20–sample capacity).
- **Safety and convenience:** No phenol extraction or precipitation required.
- **Applications tested:** Eluted DNA demonstrated for use in cloning, clean-up of hi-sulfate treated genomic DNA and other applications.

Product	Size	Cat. #
Wizard® DNA Clean-Up System	100 preps	A7280
For Laboratory Use.		

Removal of Common Impurities by the Wizard DNA Clean-Up System.

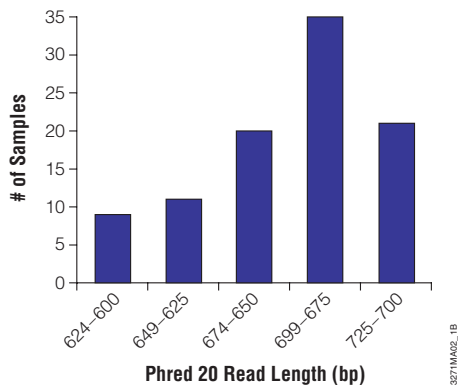
Contaminant	Removed
Restriction enzymes	Yes
Heat-stable restriction enzymes	Yes
Phosphatases	Yes
Kinases	Yes
Ligases	Yes
DNA polymerases	Yes
<i>Taq</i> DNA polymerases	Yes
Exonucleases	Yes
DNase I	Yes
RNases	No
Mononucleotides	Yes
Salts	Yes
Oligonucleotides	No

Wizard® MagneSil® Sequencing Reaction Clean-Up System

High-throughput automated 96-well or 384-well sequencing reaction clean-up made simple and economical

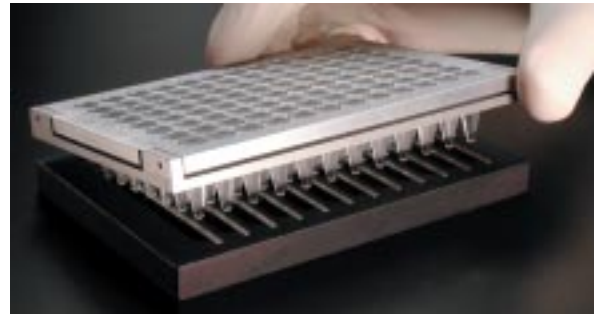
The Wizard MagneSil Plasmid Purification System provides:

- **High-throughput:** Process multiple 96-well or 384-well plates without user intervention.
- **A simple, fast method:** DNA isolation is accomplished easily, with a simple, magnetic-based procedure.
- **High quality purified DNA:** Typical Phred 20 values of 600–700 bases. 98% accuracy to at least 600 bases.
- **Efficiency:** Save labor with a walk-away high-throughput sequencing reaction clean-up automated method.
- **Hassle-free automated methods:** Automated methods and support information available at: www.promega.com/automethods/



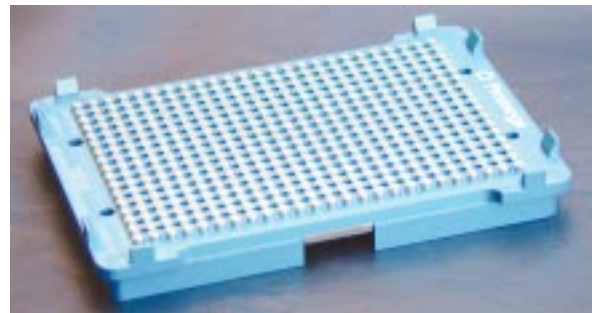
Phred 20 values for sequencing data from each well of a 96-well plate using the Wizard MagneSil Sequencing Reaction Clean-Up System. Phred is a base-calling program that assigns an error probability to each base. A phred value of 20 for a given base assigns an error probability of 1 in a 100 for that base.

Product	Size	Cat.#
Sequencing Reaction Clean-Up in 96-Well Plates		
Wizard® MagneSil® Sequencing Reaction Clean-Up System	1 x 96 preps	A1830
	4 x 96 preps	A1831
	8 x 96 preps	A1832
	100 x 96 preps	A1835
Sequencing Reaction Clean-Up in 384-Well Plates		
MagneSil® GREEN	100ml	A8231
MagnaBot® 384 Magnetic Separation Device	1 each	V8241
384-Well Plate, Conical	10/pack	V5311
Cat.# A1830, A1831, A1832, A1835, A8231, V8241 For Laboratory Use.		



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Clean-up is performed using the MagnaBot II Magnetic Separation Device (Cat.# V8351) accompanied by the Plate Clamp 96 (Cat.# V8251). These devices are designed to work with most robotic platforms.



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MagnaBot 384 Magnetic Separation Device (Cat.# V8241). The MagnaBot 384 is constructed such that the magnetic field draws particles to the corners of the processing plate.

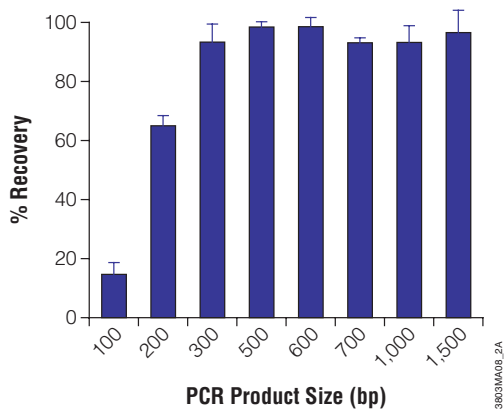
Wizard MagneSil Sequencing Reaction Clean-Up System undergoes rigorous testing for performance. DNA prepared by this method routinely achieves 98% accuracy out to 600 bases.

Wizard® MagneSil® PCR Clean-Up System

High-throughput PCR clean-up ideal for 96-well or 384-well automated format

The Wizard MagneSil PCR Clean-Up System provides:

- **High-throughput:** Process multiple 96-well or 384-well plates without user intervention using a magnetic-based purification method for DNA capture that is ideally suited for automation.
- **A simple, fast method:** No centrifugation or vacuum manifold required.
- **High quality DNA:** Primer removal is consistently >98% with purification of PCR fragments from 150bp–23kb in size.
- **An application-tested system:** Tested to ensure performance of purified PCR products in fluorescent sequencing and microarray applications.
- **Hassle-free automated methods:** Automated methods and support information available at: www.promega.com/automethods/



Recovery of PCR products of varying size using the Wizard MagneSil PCR Clean-Up System. A range of sizes of PCR products, generated using PCR Master Mix^(a) (Cat.# M7505), were recovered using the Wizard MagneSil PCR Clean-Up System on a liquid-handler. The yield of each PCR product was determined by electrophoresis on a 2% agarose gel stained with ethidium bromide. The mean and standard deviation of four separate determinations for each PCR product are shown.

^(a) The PCR process is covered by patents issued and applicable in certain countries*. Promega does not encourage or support the unauthorized or unlicensed use of the PCR process.

*In the U.S., effective March 29, 2005, U.S. Pat. Nos. 4,683,195, 4,965,188 and 4,683,202 will expire. In Europe, effective March 28, 2006, European Pat. Nos. 201,184 and 200,362 will expire.

PCR Clean-Up in 96-Well Plates

Product	Size	Cat.#
Wizard® MagneSil® PCR Clean-Up System ^(a)	4 x 96 preps	A1930
	8 x 96 preps	A1931
	100 x 96 preps	A1935

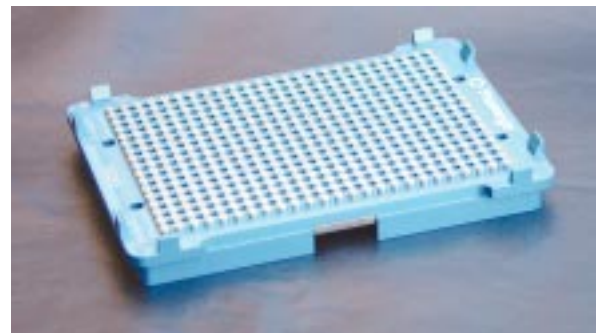
PCR Clean-Up in 384-Well Plates

Product	Size	Cat.#
MagneSil® YELLOW	100ml	A9231
Wash Solution	500ml	A8241
MagnaBot® 384 Magnetic Separation Device	1 each	V8241
384-Well Plate, Flat	10/pack	V5291

Cat.# A1930, A1931, A1935, A8241, A9231, V8241 For Laboratory Use.

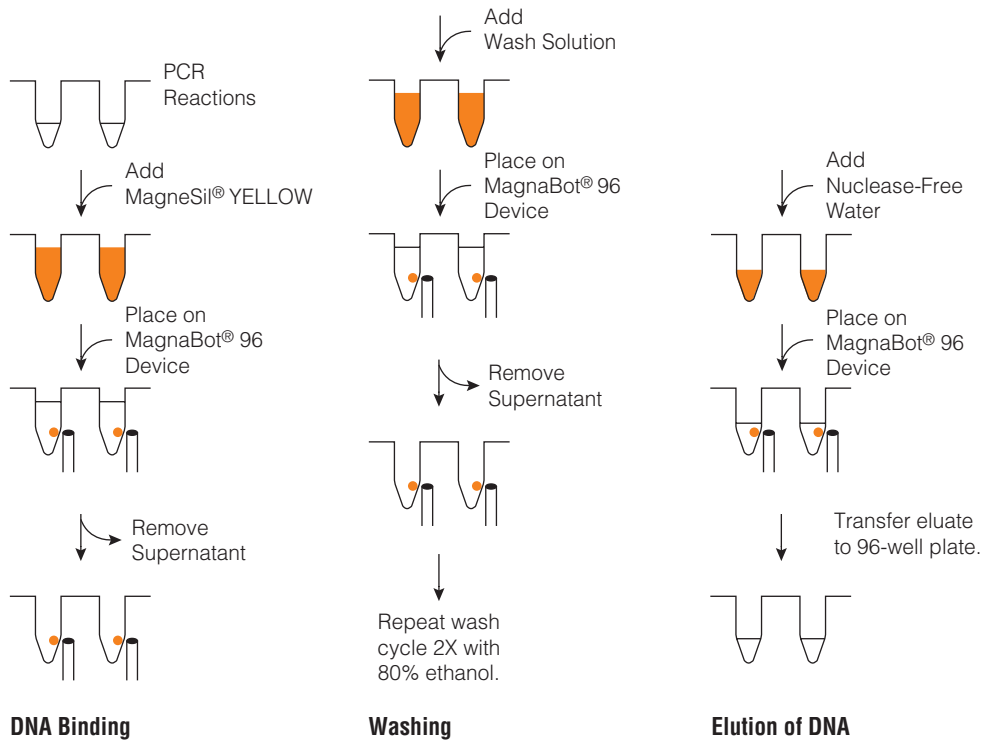


MagnaBot 96 Magnetic Separation Device (Cat.# V8151).

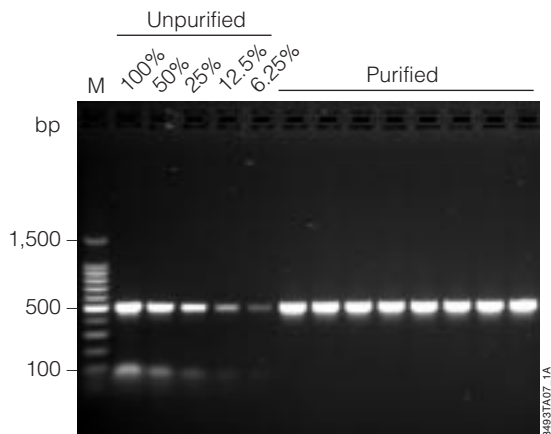


MagnaBot 384 Magnetic Separation Device (Cat.# V8241). The MagnaBot 384 is constructed such that magnetic field draws the particles to the corners of the wells of the processing plate.

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Overview of the Wizard MagneSil PCR Clean-Up System protocol.



The Wizard MagneSil PCR Clean-Up System removes primer-dimers from PCR products with high yield and consistent results. A titration of unpurified prothrombin PCR product is shown (100%, 50%, 25%, 12.5% and 6.25% of the PCR sample). The ~100bp primer-dimers are visible in these lanes. Eight replicates purified using the Wizard MagneSil PCR Clean-Up System show the 506bp prothrombin PCR product with no visible primer-dimers. The ethidium bromide-stained 1% agarose gel was imaged using an Alpha Innotech FluorChem™ fluorescence imaging system. Lane M, 100bp DNA Ladder (Cat.# G2101).

Ordering Information

Product	Size	Cat.#
Wizard® SV Gel and PCR Clean-Up System*	50 preps	A9281
	250 preps	A9282
Wizard® SV 96 PCR Clean-Up System ^{(a)*}	1 x 96 preps	A9340
	4 x 96 preps	A9341
	8 x 96 preps	A9342
	100 x 96 preps	A9345
Membrane Binding Solution*	20ml	A9301

Product	Size	Cat.#
Wizard® PCR Preps DNA Purification System ^{(b)*}	50 preps	A7170
	250 preps	A2180

Product	Size	Cat.#
Wizard® DNA Clean-Up System ^{(c)*}	100 preps	A7280

Product	Size	Cat.#
Wizard® MagneSil® Sequencing Reaction Clean-Up System ^{(d)*}	1 x 96 preps	A1830
	4 x 96 preps	A1831
	8 x 96 preps	A1832
	100 x 96 preps	A1835
MagneSil® GREEN*	100ml	A8231

Product	Size	Cat.#
Wizard® MagneSil® PCR Clean-Up System ^{(d)*}	4 x 96 preps	A1930
	8 x 96 preps	A1931
	100 x 96 preps	A1935
MagneSil® YELLOW*	100ml	A9231
Wash Solution*	500ml	A8241
Nuclease-Free Water*	150ml	P1195

Hard Ware Devices/Accessories

Product	Size	Cat.#
Vac-Man® 96 Vacuum Manifold	1 each	A2291
Vacuum Adapters	20 each	A1331
Wizard® SV 96 Binding Plates*	10 pack	A2271
	100 each	A2278
MagnaBot® II Magnetic Separation Device	1 each	V8351
Plate Clamp 96	1 each	V8251
Plate Stand	1 each	V8261
MagnaBot® 96 Magnetic Separation Device	1 each	V8151
Plate Clamp 96	1 each	V8251
Plate Stand	1 each	V8261
MagnaBot® Spacer	1 each	V8381
MagnaBot® Adapter T1	1 each	V8481
Collection Plates (4-pack)	1 each	A9161
MagnaBot® 384 Magnetic Separation Device*	1 each	V8241
	384-Well Plate, Conical	10 pack
384-Well Plate, Flat	10 pack	V5291

*For Laboratory Use.

^(a)Australian Pat. No. 730718 and other patents and patents pending.

^(b)Licensed under U.S. Pat. No. 5,075,430.

^(c)U.S. Pat. Nos. 5,658,548 and 5,808,041, Australian Pat. No. 689815 and other patents and patents pending.

^(d)U.S. Pat. Nos. 6,027,945 and 6,368,800, Australian Pat. No. 732756 and other patents and patents pending.

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FluorChem is a registered trademark of Alpha Innotech Corporation.

HiSpeed is a trademark of Qiagen.

Perfectprep is a registered trademark of Eppendorf.