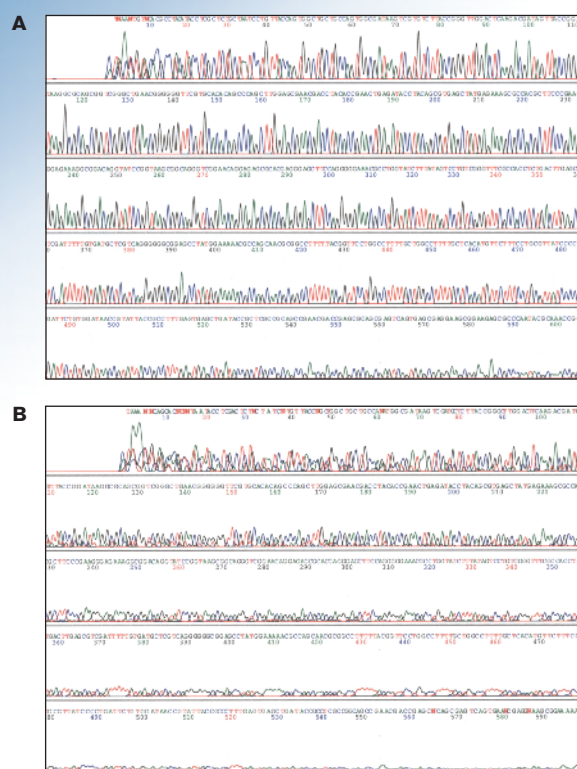


Scalable, automation friendly  
and High Throughput PCR purification.

## Agencourt® AMPure® System PCR Purification System

Agencourt AMPure is a highly efficient PCR<sup>1</sup> purification system that delivers superior quality DNA. The Agencourt AMPure method utilizes Solid Phase Reversible Immobilization (SPRI®) paramagnetic bead-based technology which requires no centrifugation or filtration. It can be easily used in manual and automated 96- and 384-well formats. Using a simple, three-step protocol, reaction contaminants are removed to improve downstream performance in applications such as sequencing and SNP genotyping.

Table 1	Agencourt AMPure	ExoSAP-IT
Number of Samples	16	16
Pass Rate <sup>2</sup>	100%	94%
Phred20	701±45	542±142



**Figure 1.** A 967 bp fragment of a pGEM plasmid was amplified, purified using Agencourt AMPure (A) or ExoSAP-IT<sup>3</sup> (B) and sequenced using BigDye Terminator v3.1. Unincorporated dye terminators were removed using Agencourt CleanSEQ<sup>®</sup> and samples detected on an ABI PRISM<sup>®</sup> 3730xl.

RDS84212

Genomics

Proteomics

Cell Analysis

Particle Characterization

Centrifugation

Lab Automation

Bioseparation

Lab Tools

### Efficient PCR Purification

Agencourt AMPure provides:

- Efficient removal of unincorporated dNTPs, primers, salts and other contaminants
- High recovery of both small and large amplicons
- A scalable and automation-compatible method

### Flexible Process

Agencourt AMPure flexible protocol is compatible with both 96- and 384-well formats and can be used for a variety of applications:

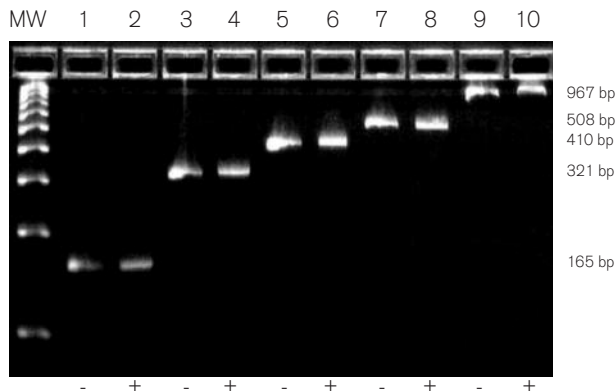
- PCR Sequencing
- SNP Genotyping
- cDNA Labeling
- Rolling Circle Amplification

### High Purity – High Performance

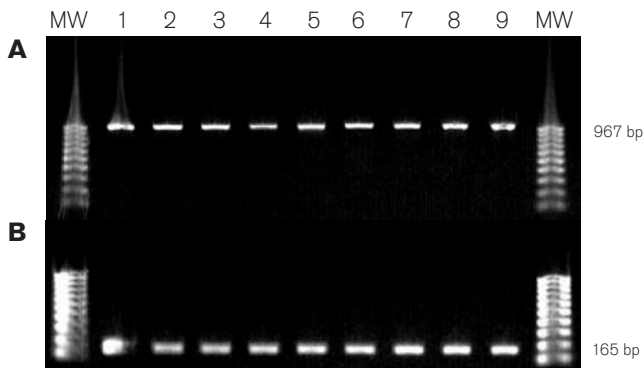
The Agencourt AMPure purification process binds PCR amplicons to paramagnetic particles and draws them out of solution, allowing contaminants such as primers, salts, and dNTPs to be easily rinsed away. The purified PCR product is an ideal template for sequencing. Alternative PCR treatments, such as ExoSAP-IT, merely denature enzymes and degrade unincorporated primers and dNTPs without removing them. 976bp PCR amplicons were generated from pGEM plasmid and QIAGEN HotStar<sup>3</sup> PCR mix, and the resulting PCR reactions were purified using either Agencourt AMPure or treated with ExoSAP-IT. Table 1 shows that Agencourt AMPure gives longer phred20 readlengths and lower standard deviation than ExoSAP-IT. The poor purity of the ExoSAP-IT template interferes with the sequencing reaction resulting in shorter readlengths, decreased quality and increased background. Figure 1 shows Agencourt AMPure traces versus ExoSAP-IT traces. Agencourt AMPure's efficient removal of contaminants results in higher quality sequencing data.

### Effective Cleanup and Reliable Results

The Agencourt AMPure purification system can be used to purify amplicons from 100 bp to 40 kb. This method routinely produces recovery rates greater than 90% for amplicons larger than 200 bp and greater than 85% for smaller PCR amplicons (Figure 2). The utilization of a magnetic bead-based method



**Figure 2.** 165, 321, 410, 508, and 967 bp fragments of the amplified pGEM plasmid. Equal amounts of samples were run on a 4% agarose gel. Lane MW: 100 bp ladder; Lanes 1, 3, 5, 7, and 9: unpurified PCR products; Lanes 2, 4, 6, 8, and 10: Agencourt AMPure-purified samples.



**Figure 3.** Eight 967 bp (A) and 165 bp (B) PCR products were amplified. Samples were purified using Agencourt AMPure and separated by electrophoresis on a 1.2% agarose gel. Lanes MW: 100 bp MW ladder; Lane 1: Unpurified PCR products; Lanes 2 – 9: Agencourt AMPure purified samples.

allows Agencourt AMPure to generate reproducible results when purifying large and small amplicons. Figure 3 shows two gels following the Agencourt AMPure purification of 967 bp and 165 bp PCR fragments demonstrating consistent recovery of both small and large amplicons.

### Ordering Information

For more information, please visit our website at [www.agencourt.com](http://www.agencourt.com) or contact your local sales representative.

Product	Size <sup>4</sup>	Product #
Agencourt AMPure 5 mL Kit	110/275 preps	A50850
Agencourt AMPure 60 mL Kit	3,333 preps	000130
Agencourt AMPure 450 mL Kit	25,000 preps	000132

### Related Products

Product	Product #
Agencourt SPRIPlate <sup>®</sup> 96R Magnet Plate	000219
Agencourt SPRIPlate 384 Magnet Plate	000222

<sup>1</sup> The PCR process is covered by patents owned by Roche Molecular Systems, Inc., and F. Hoffman-La Roche, Ltd.

<sup>2</sup> Passing Read: Average Phred value greater than 20 for bases between 100bp and 300bp.

<sup>3</sup> All trademarks are the property of their respective owners.

<sup>4</sup> Typical reaction volume is 10–20 µL for the 96-well microplate and 5–10 µL for the 384-well microplate. Number of preps based on 10 µL reaction volume.

### Agencourt AMPure Automation

The use of magnetic beads eliminates centrifugation and filtration allowing Agencourt AMPure protocols to be completely automated while maintaining superior product quality. Agencourt AMPure is fully compatible with several common automation liquid handling platforms, and is optimized for Beckman Coulter's Biomek<sup>®</sup> series of automated laboratory workstations. Contact Agencourt for the most up-to-date list of supported platforms.

**Table 2**

Robotic Platform	Plate Throughput
Biomek NX <sup>P</sup> 96 Multi-channel	6 plates/hour
Biomek FX <sup>P</sup> 96 Multi-channel	8.5 plates/hour
Biomek FX <sup>P</sup> dual pod 96 Multi-channel	7 plates/hour
Biomek NX <sup>P</sup> 96 PlateStak1	5 plates/hour
Biomek FX <sup>P</sup> and FX <sup>P</sup> dual pod 96 PlateStak	7 plates/hour
Biomek NX <sup>P</sup> and FX <sup>P</sup> dual pod 384 Multi-channel	6 plates/hour
Biomek FX <sup>P</sup> 384 Multi-channel	8 plates/hour
Biomek FX <sup>P</sup> , NX <sup>P</sup> , and FX <sup>P</sup> dual pod 384 Quad	3 plates/hour
Biomek NX <sup>P</sup> 384 PlateStak	4 plates/hour
Biomek FX <sup>P</sup> 384 PlateStak	7 plates/hour
Biomek FX <sup>P</sup> dual pod 384 PlateStak	5 plates/hour
Biomek NX <sup>P</sup> and FX <sup>P</sup> Span-8	1 plate/hour
Biomek 3000	0.75 plates/hour

### Kit Components

- Agencourt AMPure Reagent

