



## Genomic DNA: Simple and Efficient

### AGENCOURT® GENFIND™

#### BLOOD AND SERUM DNA ISOLATION KIT

The Agencourt Genfind DNA purification system isolates and purifies genomic DNA (gDNA) from whole blood and serum. The kit utilizes cutting-edge SPRI® (Solid Phase Reversible Immobilization) magnetic bead technology to effectively produce a high recovery of DNA for downstream applications such as PCR\* and genotyping. The method does not require filtration or centrifugation and supports 96-well plate and tube processing formats.

#### Key Benefits:

- Processing from 50 to 400  $\mu\text{L}$  volumes
- High gDNA recovery up to 12  $\mu\text{g}$  from 200  $\mu\text{L}$  of whole blood
- Intact, pure gDNA, approximately 40 kb average size
- 2 mL tube or 96-well plate processing formats
- No PCR inhibition from common anticoagulants

#### High Recovery of gDNA

The kit produces high recovery of gDNA using flexible starting volumes that can range from 50 to 200  $\mu\text{L}$  in 96-well format and up to 400  $\mu\text{L}$  in tube format. Figure 1 demonstrates that Agencourt Genfind delivers from two to five times greater yield per microliter of sample in comparison to competitor filtration and bead-based methods.

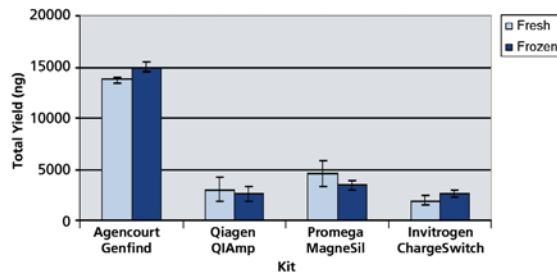
#### High Quality gDNA

The Agencourt Genfind DNA isolation method isolates and purifies gDNA of a high molecular weight, producing DNA that is intact and suitable for cloning large DNA fragments. Genomic DNA from human whole blood samples was isolated and analyzed by pulse-field gel electrophoresis. The average size of the genomic DNA recovered was approximately 40 kb (Figure 2).

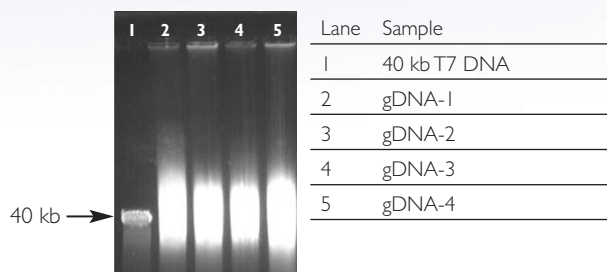
#### No Inhibition From Anticoagulants

The Agencourt Genfind purification method is efficient at removing residual anticoagulants including EDTA, Citrate, and Heparin. High purity genomic DNA can be isolated from blood preserved with all of the common anticoagulants (Figure 3A) with no inhibition of PCR detected (Figure 3B).

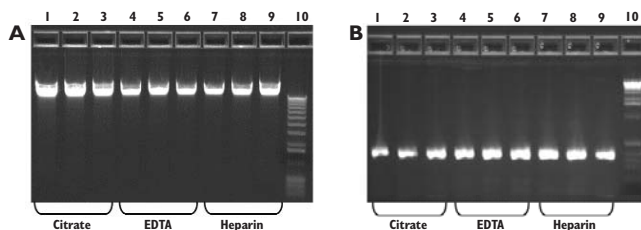
#### Average DNA Yields from 200 $\mu\text{L}$ Human Blood Preserved with EDTA



**Figure 1.** Comparison of gDNA yields from 200  $\mu\text{L}$  of fresh human blood preserved with EDTA using Agencourt Genfind and competitor kits. Results shown are the average and standard deviation from three preparations. All isolations were performed according to manufacturers' protocol. DNA was quantified using the Quant-iT PicoGreen ds DNA Assay kit (Invitrogen).



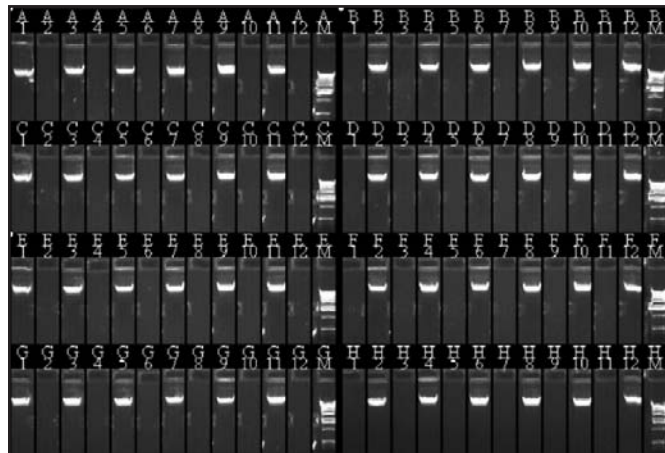
**Figure 2.** Pulse-field gel electrophoresis of genomic DNA isolated with the Agencourt Genfind purification method. Lane 1: 40 kb T7 DNA size marker. Lanes 2-5: 1  $\mu\text{g}$  each of four separate Agencourt Genfind preparations of genomic DNA.



**Figure 3.** The Agencourt Genfind kit was used to isolate genomic DNA from whole horse blood. A) Genomic DNA isolated from 200  $\mu\text{L}$  horse blood preserved with citrate (lanes 1-3), EDTA (lanes 4-6), or heparin (lanes 7-9), stored at 4°C for less than two weeks. B) PCR of genomic DNA using horse transferrin primers. 1  $\mu\text{L}$  of each sample from Figure 3A was used as template in a 10  $\mu\text{L}$  PCR with transferrin. Lane 10 contains a 1 kb DNA ladder. The expected product size is 389 bp.

## Effortless Automation

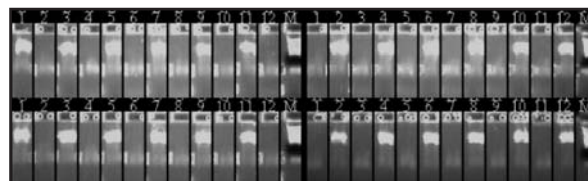
The magnetic bead technology behind Agencourt® Genfind™ allows the process to be easily automated on a variety of liquid handling robots. The process has been programmed on the Beckman Coulter Biomek® FX and NX platforms using both a 96-well multichannel head and a Span-8 head. These platforms allow efficient, reproducible processing of up to 200 µL of whole blood from 1–96 samples (Figure 4).



**Figure 4.** 200 µL of human blood preserved in sodium citrate was processed in a checkerboard layout in every other well of a 96-well plate using the Biomek NX Span-8 platform. Results show reproducible yields across all sample wells.

## Robust Downstream Performance

The Agencourt Genfind method produces high quality DNA suitable for downstream applications such as PCR or SNP genotyping. Gel electrophoresis analysis showed robust PCR of gDNA isolated from human whole blood. There was no cross contamination introduced into blank wells during automated processing (Figure 5).



**Figure 5.** Two rows of gDNA and mock extracted wells from Figure 4 were analyzed by PCR using 1 µL gDNA template and primers for ADP-ribosylation factor 1.



## Ordering Information

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

Product	Size	Product #
Agencourt Genfind DNA Isolation 2 mL Tube Starter Kit	50 preps	001281
Agencourt Genfind DNA Isolation 96-well Plate Starter Kit	384 preps (4 x 96)	001280
Agencourt Genfind DNA Isolation 2 mL Tube Kit	50 preps	001279
Agencourt Genfind DNA Isolation 96-well Plate Kit	384 preps (4 x 96)	001194
Agencourt Genfind 96 Batch Software Method, v2.x		001287
Agencourt Genfind 96 Batch Software Method, v3.x		001288
Related Products	Size	Product #
Agencourt Orapure™ Buccal Cell DNA Isolation 2 mL Tube Starter Kit	100 preps	003051
Agencourt Orapure Buccal Cell DNA Isolation 96-well Plate Starter Kit	100 preps (4 x 96)	003052
Agencourt AMPure® PCR Purification 96-well Plate Starter Kit	1333 preps (25 µL PCR reaction volume)	000146

\* The PCR process is covered by patents owned by Roche Molecular Systems, Inc., and Hoffmann-La Roche, Ltd. All trademarks are the property of their respective owners.



Innovate Automate  
SIMPLIFY

Agencourt Bioscience Corporation, A Beckman Coulter Company • 800-361-7780 • [www.agencourt.com](http://www.agencourt.com)  
500 Cummings Center, Suite 2450 • Beverly, Massachusetts 01915

### Worldwide Offices:

Australia (61) 2 9844-6000 Canada (905) 819-1234 China (86) 10 6515 6028 Eastern Europe, Middle East, North Africa (41) 22 994 07 07  
France 01 49 90 90 00 Germany (31) 10 470 79 26 Hong Kong (852) 2814 7431/2814 0481 Italy 02-953921 Japan 03-5404-8359  
Mexico (55) 560-57770 Netherlands (31) 10 470 79 26 Singapore (65) 6339 3633 South Africa, Sub-Saharan Africa (27) 11-805-2014/5 Spain 91 3836080  
Sweden 08-564 85 900 Switzerland 0800 850 810 Taiwan (886) 2 2378 3456 Turkey 90 216 309 1900 U.K. 01494 441181 U.S.A. 1-978-867-2600