

# High Recovery of Nucleic Acids with Superior Yield and Purity

## Agencourt® DNAdvance® System Nucleic Acid Extraction from Mammalian Tissue Samples

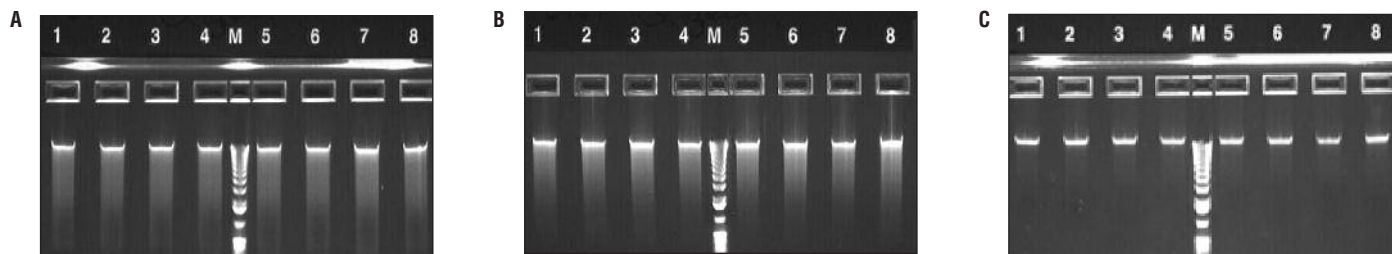
Built on SPRI® paramagnetic bead-based technology, the Agencourt DNAdvance kit is a high throughput genomic DNA (gDNA) isolation reagent kit enabling the purification of high quality DNA from mammalian tissue samples. The Agencourt DNAdvance kit offers greater recovery of high quality gDNA than other commercially available DNA isolation kits.

### Key Features:

- Able to process three 96-well plates in about 75 minutes when using the Beckman Coulter Biomek® NX<sup>P</sup> or FX<sup>P</sup> 96 Multichannel laboratory automation workstations.
- Compatible with a variety of downstream analysis tools such as PCR<sup>2</sup>, qPCR, SNP genotyping, and sequencing
- Does not use organic extraction or centrifugation/filtration

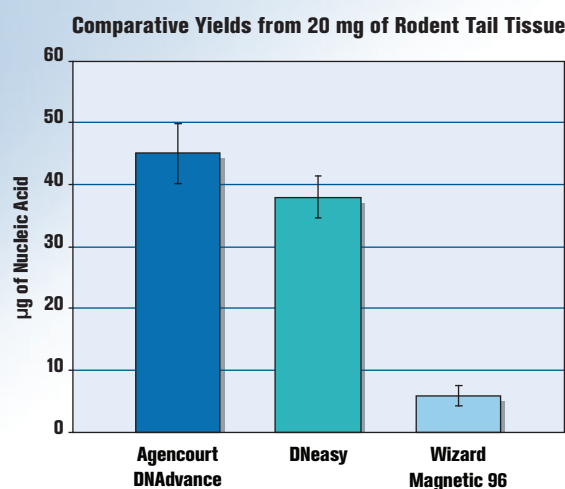
### Automation Friendly Process

High throughput automation using the Agencourt DNAdvance kit offers a simple, fully walk-away system. This turnkey solution is optimized on the Biomek NX<sup>P</sup> or FX<sup>P</sup> 96 Multichannel. The method has a built-in user friendly graphic user interface with scripted parameters which can be changed easily as desired. It is capable of extracting three 96-well plates in about 75 minutes. The Agencourt DNAdvance data in Figure 1 was obtained using the automated method and resulted in a 15% CV.



**Figure 2.** Results from 1 µl of eluent from Agencourt DNAdvance (A) 1 µl of eluent from 100 µl using DNeasy (B) and 4 µl of eluent from 500 µl using Wizard Magnetic 96 (C). Extractions were electrophoresed on an 0.8% agarose gel. Wells 1-8 contain samples, Well M contains the 1 kb ladder.

Genomics  
Proteomics  
Cell Analysis  
Particle Characterization  
Centrifugation  
Lab Automation  
Bioseparation  
Lab Tools



**Figure 1.** Nucleic acid yields from 24 replicates of 20 mg rodent tail samples. Yields determined spectrophotometrically.

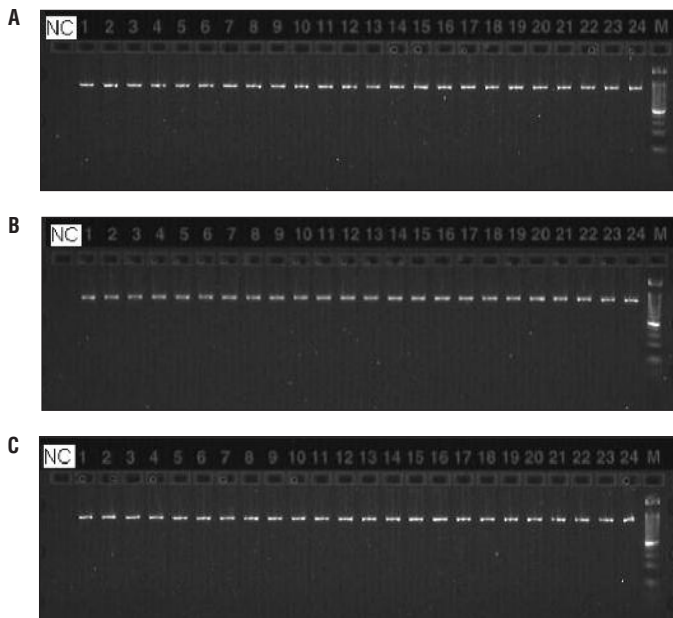
### Higher Recovery of Nucleic Acid

By using SPRI technology to isolate nucleic acid from mammalian tissue, Agencourt DNAdvance consistently delivers superior recovery of nucleic acid. Figure 1 shows yields obtained from 20 mg rodent tail samples with DNeasy<sup>1</sup>, Wizard<sup>1</sup> Magnetic 96, and Agencourt DNAdvance.

As seen in Figure 2, the Agencourt DNAdvance kit produces nucleic acid of comparable quality in comparison to DNeasy. In order to appear on the gel, Wizard Magnetic 96 required four times the material.

## No Inhibition of PCR

Figure 3 demonstrates how nucleic acid isolated from mouse tail, rat liver, and rat brain sample using the Agencourt DNAdvance system was successfully amplified without inhibition.



**Figure 3.** Nucleic acid isolated from mouse tail (A), rat liver (B), and rat brain (C) using Agencourt DNAdvance was used as template to amplify a 300 bp fragment (beta actin) and run on a 4% Agarose gel. A 5 µl sample from a 20 µl total reaction was loaded. M: 25 bp DNA marker, NC: Non-template control, lanes 1-24: replicates of each tissue type.

## Nucleic Acid from Different Sample Types

The Agencourt DNAdvance kit is versatile and can extract nucleic acid from many sample types. As seen in Figure 4, it can extract nucleic acid from rat brain and rat liver samples as well as mouse tail.

## 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	Product #
Agencourt DNAdvance Kit - Small	384 preps (4 x 96)	A48705
Agencourt DNAdvance Kit - Large	9600 preps (100 x 96)	A48706

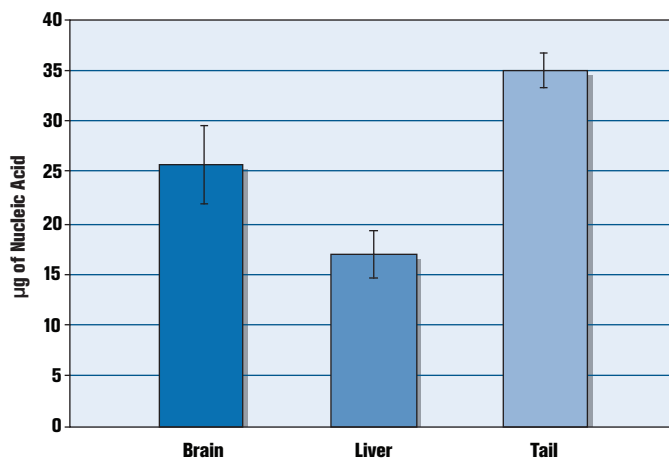
  

Related Products	Product #
Software - Agencourt DNAdvance 96 MC - v 3.x	A48708
SPRIPlate 96 - Ring Super Magnet Plate	A32782

<sup>1</sup> All trademarks are property of their respective owners.

<sup>2</sup> The PCR process is covered by patents owned by Roche Molecular Systems, Inc., and F. Hoffman-La Roche, Ltd.

## Nucleic Acid Yield from Various Rodent Tissues



**Figure 4.** Nucleic acid yields from 24 replicates of 20 mg samples of rat brain, rat liver and mouse tail. Yields determined spectrophotometrically.

## Summary

The Agencourt DNAdvance isolation kit is an efficient, automation friendly solution for extracting nucleic acid from mammalian tissue samples. When used with the Beckman Coulter Biomek NX<sup>P</sup> or FX<sup>P</sup> Multichannel 96 laboratory automation workstation and Agencourt software methods, this system is simple to use and yields superior results. Supported by the power of SPRI chemistry, the Agencourt DNAdvance system produces more nucleic acid over competitive methods without PCR inhibition.

## Kit Components

- Lysis Buffer
- Bind 1 Buffer
- Bind 2 Buffer
- Proteinase K Buffer
- Proteinase K
- Elution Buffer

