



Results

Average DNA yield and standard deviation for 48 x 350 μ l whole blood samples was 8.8 μ g \pm 0.26 μ g. In addition, clean, strong bands were observed when this DNA was used for PCR amplification of the single-copy *MECL-1* gene (Figure 1C). DNA yields for 200 μ l and 350 μ l blood samples are shown (Figure 1A). Using variable elution volumes, total yield increases with increasing elution volume (Figure 2), while the concentration decreases (Figure 3).

High Yields and Reproducible Purification of High-Quality DNA

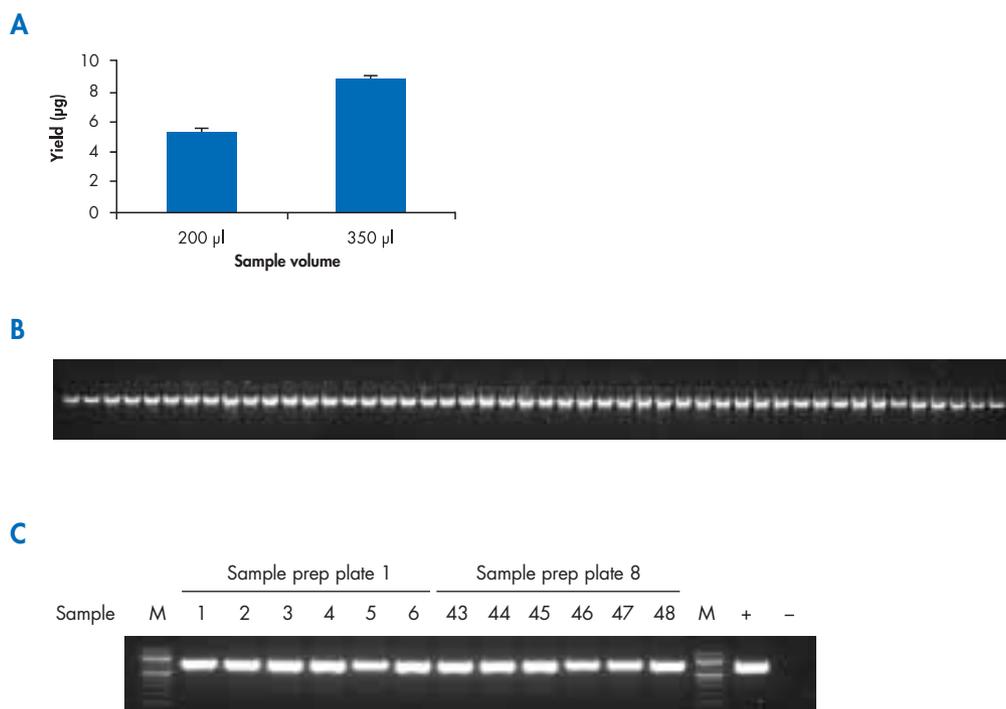
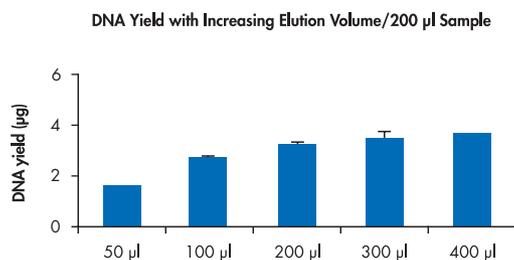


Figure 1. Average DNA yields were measured by absorbance (A_{260}) from 48 x 200 μ l and 48 x 350 μ l whole blood samples from the same blood donor isolated using the BioRobot M48 workstation (A). 10 μ l purified DNA from each 350 μ l blood sample (200 μ l elution volume) is visualized using a 0.8% agarose gel (B). DNA purified from samples 1–6 and 43–48 was used to amplify the single-copy *MECL-1* gene in a 50 μ l (5 μ l DNA per reaction) PCR. M: Marker; +: Positive control; -: negative control (C).

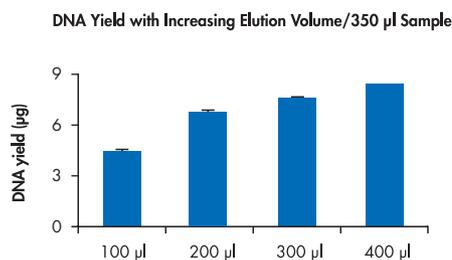


Variable Elution Volumes Allow a Range of Yields and Concentrations

A



B



C

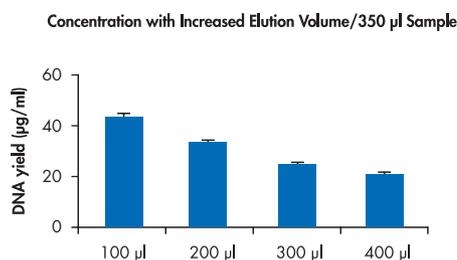


Figure 2. Average DNA yields from 200 μ l (A) and 350 μ l (B) blood samples using 50–400 μ l elution volumes. Six replicates were purified and analyzed for each elution volume. Average DNA concentration from 350 μ l blood samples, using 100–400 μ l elution volumes (C).

Conclusions

- **High-quality DNA from blood** — use MagAttract technology, fully-automated on the BioRobot M48 workstation
- **High yields and high concentrations of purified DNA** — choose variable sample and elution volumes to suit your applications
- **Consistent high performance in sensitive PCR** — when you purify template from whole blood using MagAttract magnetic particle technology and the BioRobot M48 workstation



Ordering Information

| Product | Description | Order No. |
|--|---|-----------|
| BioRobot M48 workstation | Robotic workstation for automation of magnetic-particle purification technology | 9000708 |
| MagAttract DNA Blood Mini M48 Kit (192)* | MagAttract Suspension and reagents for purification of genomic DNA from 200 µl whole blood samples using the BioRobot M48 workstation | 951336 |
| MagAttract DNA Blood Midi M48 Kit (192)* | MagAttract Suspension and reagents for purification of genomic DNA from 350 µl whole blood samples using the BioRobot M48 workstation | 951356 |

The BioRobot M48 is intended as a microtiter diluting and dispensing device. No claim or representation is intended for their use in identifying any specific organism or for a specific clinical use (diagnostic, prognostic, therapeutic, or blood banking). It is the user's responsibility to validate the performance of the BioRobot M48 for any particular use, since their performance characteristics have not been validated for any specific organism. The BioRobot M48 may be used in clinical diagnostic laboratory systems after the laboratory has validated their complete system as required by CLIA '88 regulations in the U.S. or equivalents in other countries.

* MagAttract Kits are intended as general-purpose devices. No claim or representation is intended for their use to identify any specific organism or for specific clinical use (diagnostic, prognostic, therapeutic, or blood banking). It is the user's responsibility to validate the performance of MagAttract Kits for any particular use, since the performance characteristics of these kits have not been validated for any specific organism.

Contact QIAGEN today to discover how easy it can be to get reproducible yields of DNA from blood.

QIAGEN Robotic Systems are not available in all countries; please inquire.

The PCR process is covered by U.S. Patents 4,683,195 and 4,683,202 and foreign equivalents owned by Hoffmann-La Roche AG.

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