

Technical Notes

Storage of Blood Samples Collected into PAXgene™ Blood DNA Tubes at 25°C

Human whole blood samples from 70 donors (four samples per donor, 280 samples total) were drawn into PAXgene Blood DNA Tubes and stored at 25°C for up to 14 days.

Duplicate samples from each donor were immediately processed (day 0). Remaining samples were stored at 25°C. A single sample from each donor was processed after storage for 7 and 14 days. Samples were processed using the PAXgene Blood DNA Kit according to the standard protocol. The DNA was dissolved in 1 ml Buffer BG4 (resuspension buffer).

In total, 280 blood samples (140 at day 0, 70 at day 7 and 70 at day 14) were analyzed. Yield and purity of DNA samples were analyzed by measuring the absorbance at 260 and 280 nm (Figure 1). The average DNA yield decreased from 327 µg on day 0 to 234 µg after blood storage for 14 days at 25°C. DNA purity remained high in all samples tested, and the A_{260}/A_{280} ratio of all 280 blood samples was consistently between 1.7 and 1.9.

Purified DNA was analyzed by agarose gel electrophoresis and by PCR amplification of a 1.1 kb fragment of the human single-copy gene *Hugl*. Agarose gel analysis showed that after 14 days storage at 25°C all DNA samples run quantitatively above a 23 kb marker band (Figure 2). In addition, a 1.1 kb fragment of the human single copy gene *Hugl* was successfully amplified from all DNA samples (Figure 3).

Conclusion: High-quality, highly concentrated genomic DNA can be isolated after storage of Blood Tubes for 14 days at 25°C using the PAXgene Blood DNA System.

Average Purity and Yield of DNA after Storage in PAXgene Blood DNA Tubes at 25°C for up to 14 days

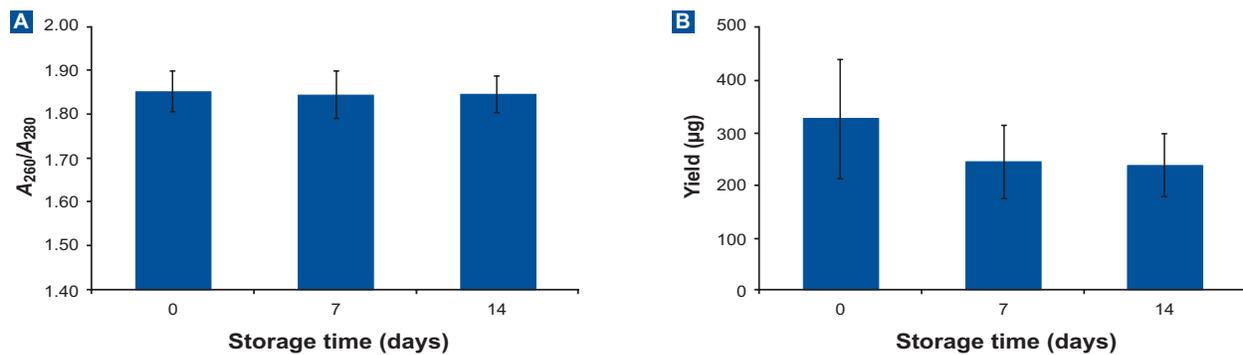


Figure 1. **A** Average purity and **B** Average yield of DNA purified from whole blood samples from 70 healthy donors.

High-Molecular-Weight DNA after Storage at 25°C

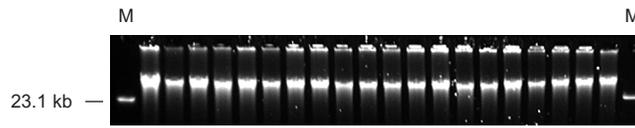


Figure 2. Agarose gel analysis of DNA (400 ng) purified from blood samples from 20 donors, after storage in PAXgene Blood DNA Tubes for 14 days at 25°C. **M:** Marker

Successful PCR after Storage at 25°C



Figure 3. Amplification of a 1.1 kb fragment of the single-copy gene *Hugl*. DNA was purified from blood samples from 20 donors, after storage in PAXgene Blood DNA Tubes for 14 days at 25°C. **M:** Marker. **Note:** The same donors were used to generate samples for both Figures 2 and 3.