Promega

Product Application

Automated DNA Purification from Blood on a Mitra® Microsampler

Purify DNA from whole blood collected on a Mitra® microsampler using the Maxwell® RSC FFPE Plus DNA Kit and the Maxwell® RSC Instrument.

Kit: Maxwell® RSC FFPE Plus DNA Kit (Cat.# AS1720)

Analyses:

- Dye-based quantitation
- qPCR

Sample Type(s): Blood samples collected using Neoteryx® Mitra® microsampler device

Input: One Mitra® microsampler tip

Materials Required:

- Maxwell® FFPE Plus DNA Kit (Cat.# AS1720)
- Maxwell® RSC Instrument (Cat.# AS4500)
- CW Spin Baskets (Cat.# AS8101)
- CW Microfuge Tubes (Cat.# AS8201)
- Heat block

This protocol was developed by Promega Applications Scientists and is intended for research use only.

Users are responsible for determining suitability of the protocol for their application.

For further information, see Technical Manual TM574, available at: **www.promega.com/protocols**

or contact Technical Services at: **techserv@promega.com**

Protocol:

1. Place one Mitra® microsampler tip into a CW Spin Basket inside a CW Microfuge Tube.
2. Add 200µl of Incubation Buffer and 20µl of prepared Proteinase K. Vortex 5-10 seconds.
3. Ensure Mitra® microsampler tip is fully submerged, then incubate at 56°C for 30 minutes.
4. Centrifuge at maximum speed for 5 minutes to collect lysate at the bottom of the tube.
5. Add 400µl of Lysis Buffer to the lysate. Vortex 5-10 seconds.
6. Transfer the full lysate to well #1 of the Maxwell® RSC FFPE Plus DNA Kit cartridge.
7. Prepare Maxwell® cartridge.
    a. Place an elution tube with 50µl of Nuclease-Free Water onto the sample rack.
    b. Place a plunger in well #8 of the cartridge.
    c. Select the Maxwell® RSC FFPE Plus DNA method and run.

Results:

DNA was successfully purified from a 30µl Mitra® microsampler tip using the method described above.

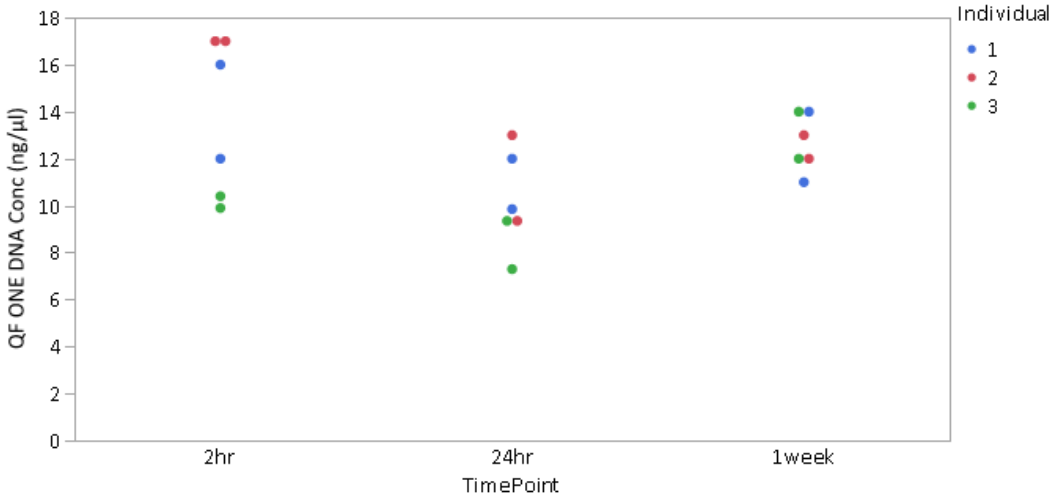

Figure 1. DNA Concentration measured by QuantiFluor® ONE dsDNA System (Cat.# E4871). DNA was purified from a 30µl Mitra® microsampler tip in duplicate from three individuals using the method described above. After sample collection, the Mitra® microsampler was allowed to dry 2 hours, 24 hours or 1 week before DNA purification.

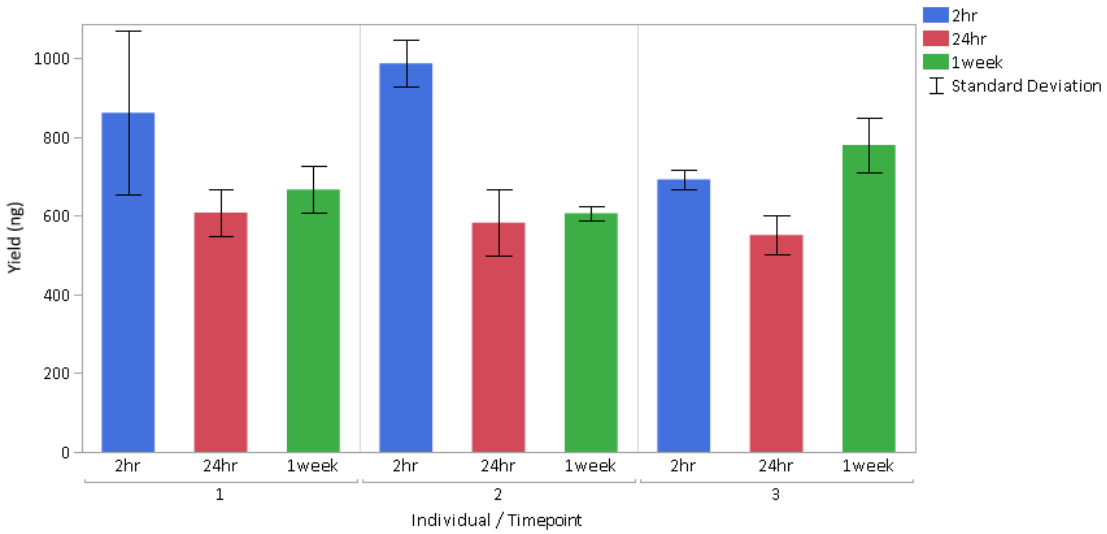

Figure 2. Average yield of purified DNA eluates. DNA was purified from a 30µl Mitra® microsampler tip in duplicate from three individuals using the method described above. After sample collection, the Mitra® microsampler was allowed to dry 2 hours, 24 hours or 1 week before DNA purification. DNA was quantified by qPCR with the 75bp target of the ProNex® DNA QC Assay (Cat.# NG1003). Mean and standard deviation of duplicate purifications amplified in duplicate is shown.