

In collaboration with:

## Automated DNA Purification from Harpera™ Microbiopsy™ Punches

Purify DNA from skin microbiopsies using the Maxwell® RSC Instrument to obtain DNA suitable for amplification-based applications.

- Kit:** [Maxwell® RSC Cell DNA Kit](#) (Cat.# AS1370)  
Harpera™ Microbiopsy™ Punch (Trajan Scientific,  
Cat.# VH-01M20PI)
- Analyses:** qPCR
- Sample Type:** Skin microbiopsies collected using the Harpera™  
Microbiopsy™ Punch
- Input:** 1 punch
- Materials Required:**
- Harpera™ Microbiopsy™ Punch (Trajan Scientific,  
Cat.# VH-01M20PI)
  - Maxwell® RSC Cell DNA Kit (Cat.# AS1370)
  - Maxwell® RSC Instrument or Maxwell® RSC 48 Instrument (Cat.# AS4500 or AS8500)

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 TM418](#)

Contact Technical Services at: [techserv@promega.com](mailto:techserv@promega.com)

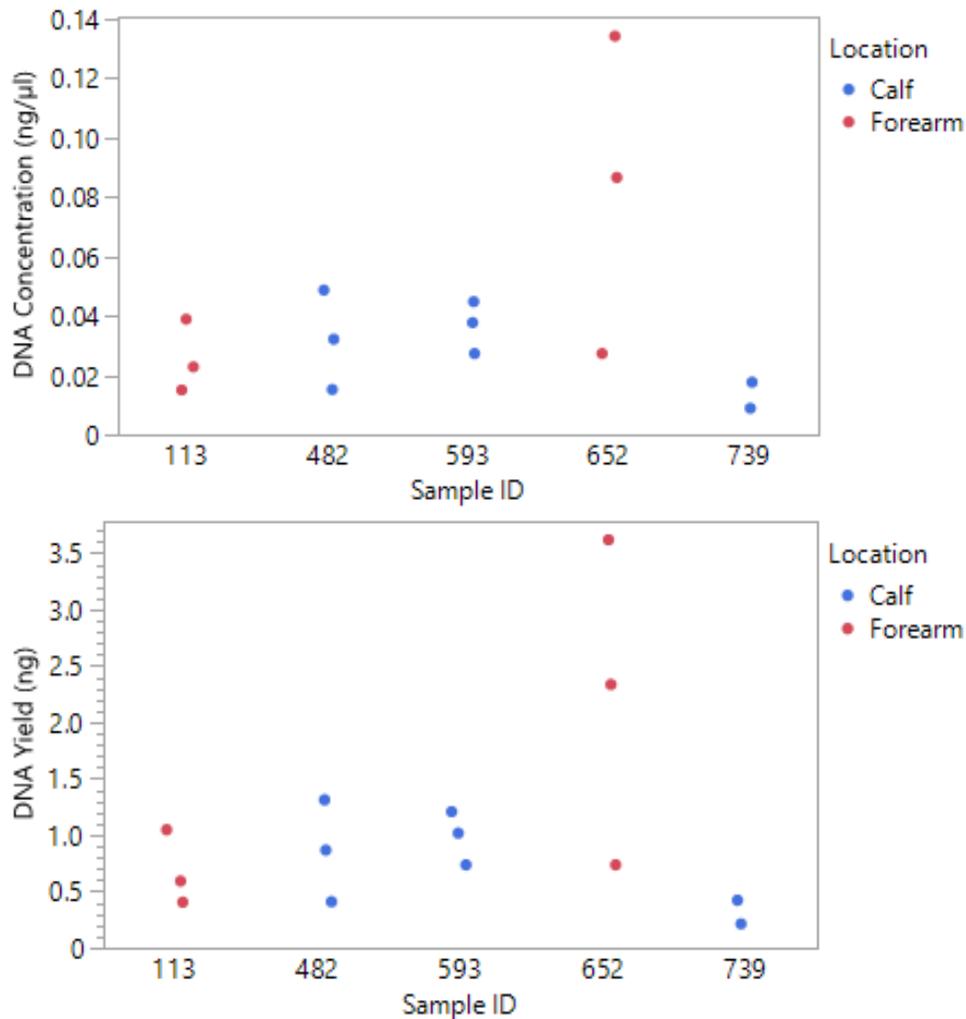
### Protocol:

1. Collect skin microbiopsies using the Harpera™ Microbiopsy™ Punch as described by the manufacturer.
2. Disassemble the device as described in the Harpera™ User Guide and transfer the microbiopsy collector to a clean 1.5ml tube.
3. Prepare cartridges for the Maxwell® RSC Cell DNA Kit as described in the Technical Manual.
  - a. Place cartridges to be used in the Maxwell® RSC deck tray, snap into place, and remove seals.
  - b. Place a plunger in well 8 of each cartridge.
  - c. Place Elution Tubes in the front of the deck tray and add 30-50µl of Elution Buffer to the bottom of each tube.

Note: The Maxwell® RSC Cell DNA Kit Technical Manual recommends using 50µl Elution Buffer. For this application, Elution Buffer may be reduced to 30µl if desired to concentrate the sample.
4. Transfer 150µl of lysis buffer from well 1 of the Maxwell® RSC Cell DNA cartridge to the tube containing the microbiopsy collector.
5. Vortex for 10 seconds to lyse cells. Briefly centrifuge to collect lysate at the bottom of the tube.
6. Transfer the full lysate to well 1 of a Maxwell® RSC Cell DNA cartridge. Pipet to mix.
7. Place the prepared deck tray in a Maxwell® RSC or Maxwell® RSC 48 Instrument and purify DNA using the Cell DNA method.

**Results:**

Amplifiable DNA was obtained from 14 of 15 skin samples collected with the Harpera™ Microbiopsy™ Punch and purified with the Maxwell® RSC Cell DNA Kit.



**Figure 1. DNA concentration and yield purified from Harpera™ Microbiopsy™ Punches using the Maxwell® RSC Cell DNA Kit.** Skin was sampled from the calf or forearm of five healthy individuals using Harpera™ Microbiopsy™ Punches (n=3 each). DNA was purified using the Maxwell® RSC Cell DNA Kit and eluted in 30μl of Elution Buffer. DNA concentration was measured in duplicate by qPCR using the ProNex® DNA QC Assay (75bp target) with 5μl of undiluted sample DNA. (Top) DNA concentration is shown as mean of n=2 replicate amplifications for each device. (Bottom) Eluate volumes were measured and used to calculate DNA yield.

Trademarks herein are the property of Promega Corporation or their respective owners.

The Harpera™ Microbiopsy™ Punch is intended to enable the collection of a specimen from the cutaneous skin surface by a healthcare professional for clinical studies and is currently supplied globally as an investigational use only (IUO) product. The performance characteristics of this device have not been fully validated.