Promega

Product Application

Automated Purification of DNA from Swabs using the Gentueri Oral Collection Kit

Purify genomic DNA from buccal cells collected with the Gentueri Oral Collection Kit using the Maxwell® RSC Instrument and Maxwell® RSC Buccal Swab DNA Kit.

Kit: Maxwell® RSC Buccal Swab DNA Kit (Cat.# AS1640)

Analyses: UV absorbance, dye-based quantitation and qPCR

Sample Type(s): Buccal cells collected with the Gentueri Oral Collection Kit

Input: 1 Swab

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 TM479, available at: **www.promega.com/protocols**

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

Materials Required:

- Maxwell® RSC Buccal Swab DNA Kit (Cat.# AS1640)
- Maxwell® RSC Instrument (Cat.# AS4500)
- QuantiFluor® ONE dsDNA System (Cat.# E4870)
- Quantus™ Fluorometer (Cat.# E6150)
- ProNex® DNA QC Assay (Cat.# NG1003)
- Gentueri Oral Collection Kit (Gentueri, Cat.# 5000-025)
- ClickFit Microtubes (Cat.# V4741)
- Microcentrifuge
- Incubator at 56°C

Protocol:

1. Collect buccal samples with the SimpleSwab™ from the Gentueri Oral Collection Kit for 30 seconds per cheek.
2. Eject the SimpleSwab™ head into the SwabSaver® Device. Allow swab to dry overnight at room temperature.
3. Assemble a Clearing Column/ClickFit Microtube for each sample.
4. Add the dried swab head to the Clearing Column/ClickFit Microtube assembly.
5. In a separate tube, mix 300µl Lysis Buffer and 30µl Proteinase K for each sample. Add 330µl of Lysis Buffer/Proteinase K to the swab head in the Clearing Column/ClickFit Microtube assembly.
6. Close tube over the Clearing Column and vortex for 10 seconds.
7. Incubate for 20 minutes at 56°C.
8. Centrifuge the Clearing Column/ClickFit Microtube assembly with swab for 2 minutes at maximum speed. Remove the Clearing Column with swab head and discard.
9. Add flowthrough to well #1 of the Maxwell® RSC cartridge.
10. Process using the Maxwell® RSC Instrument and the RSC Buccal Swab DNA method.

Results:

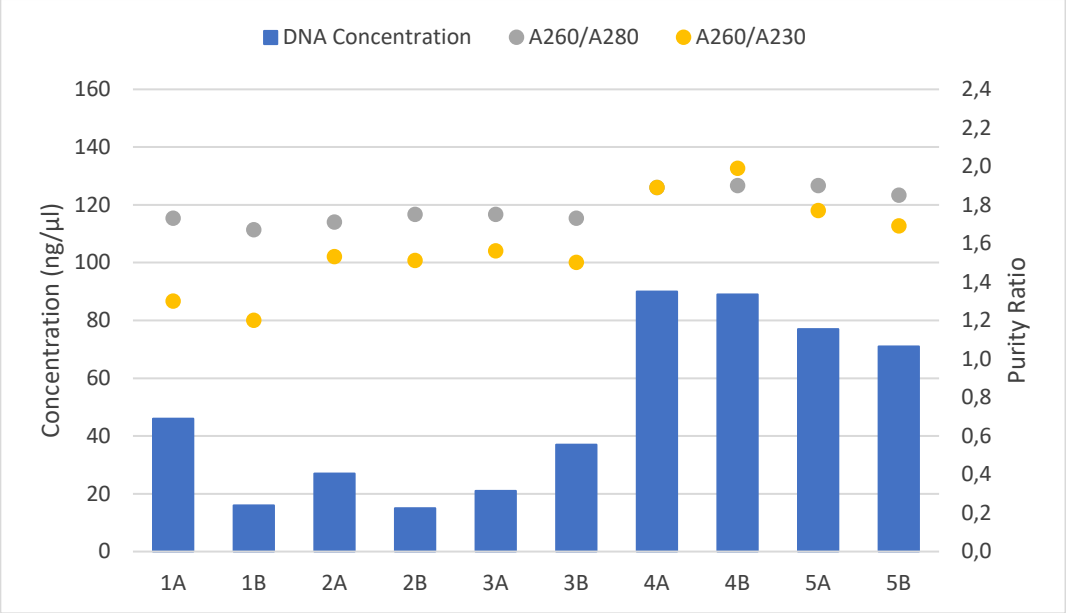

Figure 1. Concentration and purity of DNA from buccal samples in Gentueri Oral Collection Kit using the Maxwell® RSC Buccal Swab DNA Kit (Cat.# AS1640) on the Maxwell® RSC Instrument (Cat.# AS4500). DNA concentration was determined using the QuantiFluor® ONE dsDNA System (Cat.# E4870) with the Quantus™ Fluorometer (Cat.# E6150). DNA purity was determined using the NanoDrop™ 8000 Spectrophotometer. For each individual (1-5), duplicate swabs (A and B) were processed.

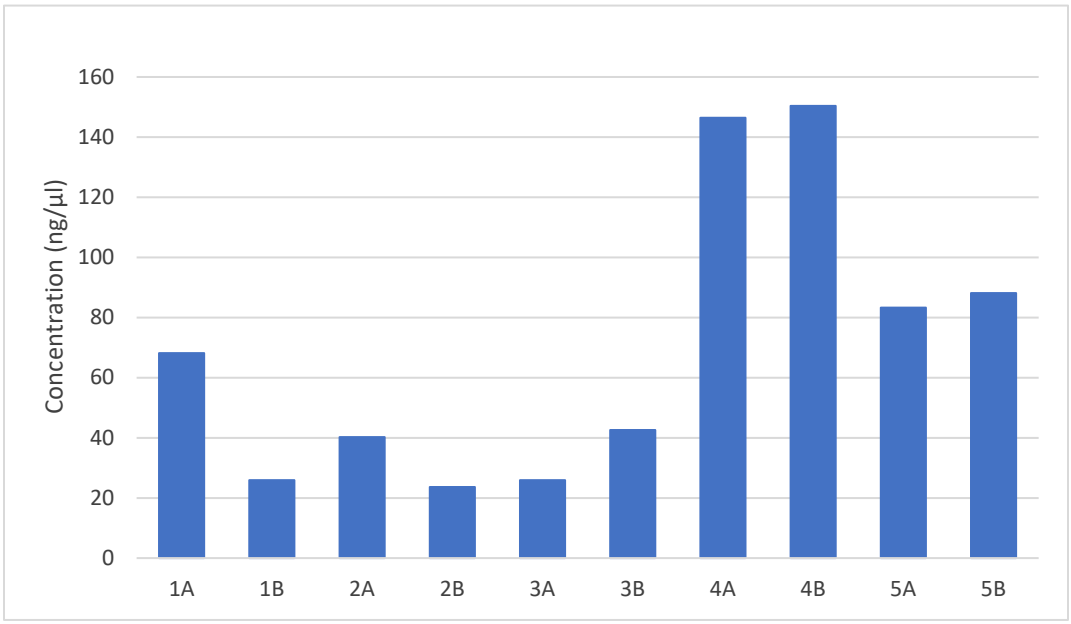

Figure 2. Concentration of human DNA purified from buccal samples in Gentueri Oral Collection Kit determined by qPCR using the 75bp amplicon of the ProNex® DNA QC Assay (Cat.# NG1003). For each individual (1-5), duplicate swabs (A and B) were processed.