Promega

Product Application

# DNA Purification from Plant Stem using the Maxwell® RSC System

*High-performance DNA was isolated using the Maxwell® RSC PureFood GMO and Authentication Kit from lyophilized carrot, celery, parsley and tomato stem.*

**Kit:** Maxwell® RSC PureFood GMO and Authentication Kit (Cat.# AS1600)

**Analyses:** GoTaq® qPCR Master Mix amplification

**Sample Type(s):** Lyophilized carrot, celery, parsley and tomato stem homogenates in PBS

**Input:** 1ml at 100mg/ml

**Materials Required:**

- Maxwell® RSC Instrument (Cat.# AS4500)
- Maxwell® RSC PureFood GMO and Authentication Kit (Cat.# AS1600)

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 TM473, available at: **www.promega.com/protocols**

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

**Protocol:**

1. Centrifuge samples for 10 minutes at 7500rpm and remove supernatant.
2. As multiple samples are processed, prepare lysis solution by mixing 1ml of CTAB with 20µl of RNase A and 40µl of Proteinase K (PK) Solution per sample. Then resuspend samples in 1ml of this solution.
3. Vortex until complete resuspension is achieved.
4. Incubate samples in a heat block for 30 minutes at 65°C, shaking at 1000rpm.
5. During the incubation, prepare RSC cartridges as described in the Technical Manual TM473. Add 100µl of Elution Buffer into the Elution Tubes.
6. Invert tubes thoroughly and centrifuge at room temperature for 10 minutes at maximum speed to remove cellular debris.
7. Add 300µl of Lysis Buffer, as well as 300µl of cleared lysate, into well #1 of the cartridge. Run the PureFood GMO and Authentication method on the Maxwell® RSC Instrument.

**Results:**

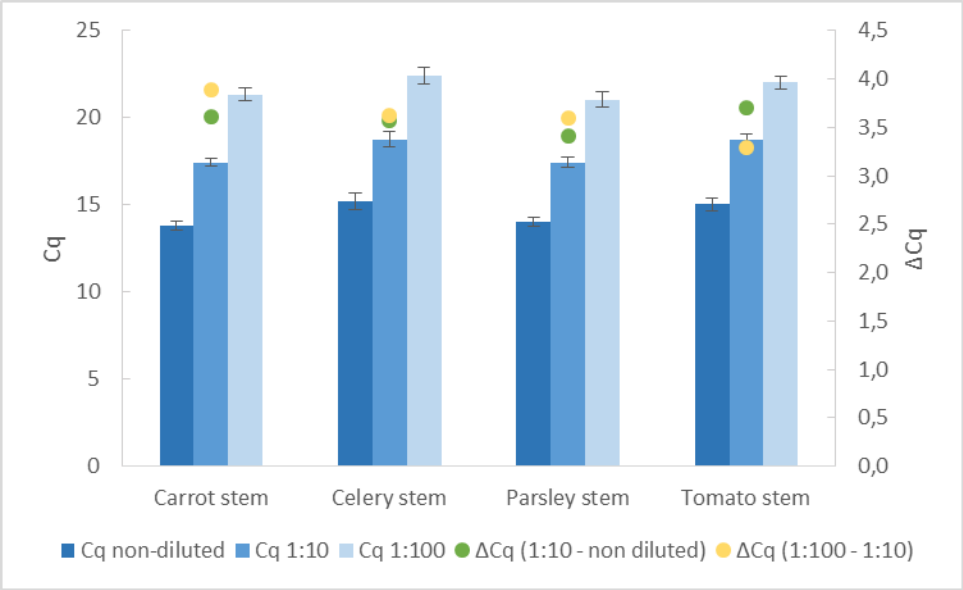


**Figure 1. qPCR amplification results for DNA purified from plant stems using the Maxwell® RSC PureFood GMO and Authentication Kit.** Cq and ΔCq values for 2µl of purified DNA amplified using the GoTaq® qPCR Master Mix (Cat.# A6001) and universal plant primers (1) in a final volume of 20µl. A ΔCq value of 3.3 reflects a total absence of qPCR inhibitors. N=10.

**Reference:**

1. Wang, J. *et al*. (2011) Universal endogenous gene controls for bisulphite conversion in analysis of plant DNA methylation. *Plant Methods* **7**, 39.