Promega

Product Application

Automated purification of DNA from dried herbal extract supplements

Purify DNA from herbal extracts using the Maxwell® RSC Instrument and Maxwell® RSC PureFood GMO and Authentication Kit.

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

Analyses: Dye-based quantitation and qPCR

Sample Type(s): Dried herbal extracts from capsules and tablet

Input: 60mg

Materials Required:

- Maxwell® RSC PureFood GMO and Authentication Kit (Cat.# AS1600)
- Maxwell® RSC Instrument (Cat.# AS4500)
- Thermomixer
- Microcentrifuge
- 1.5 ml tube

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. Add 300µl of CTAB buffer, 8µl of RNase A and 16µl of Proteinase K to each tube containing 60mg of herbal extract from capsule or ground tablet.
2. Tap, invert and vortex vigorously on maximum speed until the sample is resuspended.
3. Place samples in a thermomixer at 65°C for 30 min with continuous mixing.
4. Centrifuge for 10 min at 12,000 rpm to separate any solid or oils.
5. Transfer 300 µl sample supernatant and 300 µl Lysis Buffer into well #1 of the Maxwell® RSC cartridge. Avoid pipetting any solid material from the bottom of the tube or oil from the surface.
6. Add plungers to well #8.
7. Place the supplied elution tubes into the sample rack and add 100 µl of the elution buffer.
8. Run method *PureFood GMO and Authentication* on the Maxwell® RSC Instrument

Results:

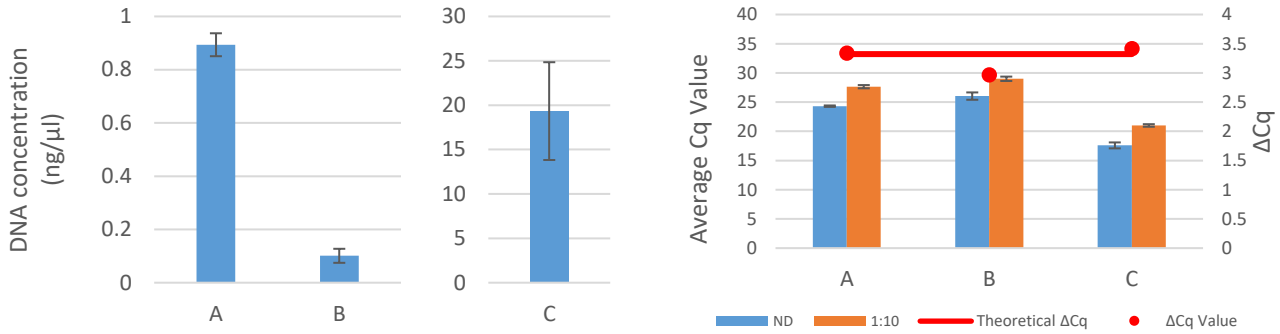

Figure 1 (Left) DNA was prepared from 60 mg of multi-herbal extract from individual capsules (A: proprietary brand; B: generic) and tablet (C: generic) using Maxwell® RSC PureFood GMO and Authentication kit. The concentration was determined using QuantiFluor® ONE dsDNA kit (Cat.# E4870). **(Right)** 2 µl of undiluted and 1:10 dilution DNA was amplified using GoTaq® qPCR Master Mix (Cat.# A6002) and plant universal primers[1] in a final volume of 20µl. Cq and ΔCq values are shown. A ΔCq = 3.3 between the 1:10 diluted sample relative to the undiluted mathematically represents no inhibitors present. Average ± STD is shown. N=3.

Reference:

1. Wang et al.: *Universal endogenous gene controls for bisulphite conversion in analysis of plant DNA methylation.* Plan Methods 2011 7: 39.