Promega

Product Application

DNA Purification from Seed-Based Products using the Maxwell® RSC System

The Maxwell® RSC PureFood GMO and Authentication Kit provides high-quality DNA suitable for downstream applications from 1g of seeds and seed-based products.

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

Analyses: NanoDrop® ONE Spectrophotometer quantitation, GoTaq® qPCR Master Mix amplification

Sample Type(s): Pet food, corn, sweet corn, soy, rapeseed, seed-based food

Input: 1g

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. Prepare a solution using the following proportions:

	Volume (µl)
CTAB Buffer	1000
RNase A Solution	20
Proteinase K (PK) Solution	40

2. Add 10ml of this solution to 1g of sample and vortex.
3. Incubate for 30 minutes at 65°C. Shake regularly.
4. Prepare cartridges as described in the Technical Manual TM473 during incubation. Add 100µl of Elution Buffer into the Elution Tubes.
5. After incubation, invert or vortex tubes to mix thoroughly.
6. Centrifuge at room temperature for 10 minutes at maximum speed to separate any solids and oils.
7. Add 300µl of Lysis Buffer and 300µl of lysate (equivalent to 30mg of sample) to Well #1 of the reagent cartridge.
8. Run the PureFood GMO and Authentication method on the Maxwell® RSC Instrument.

Results:

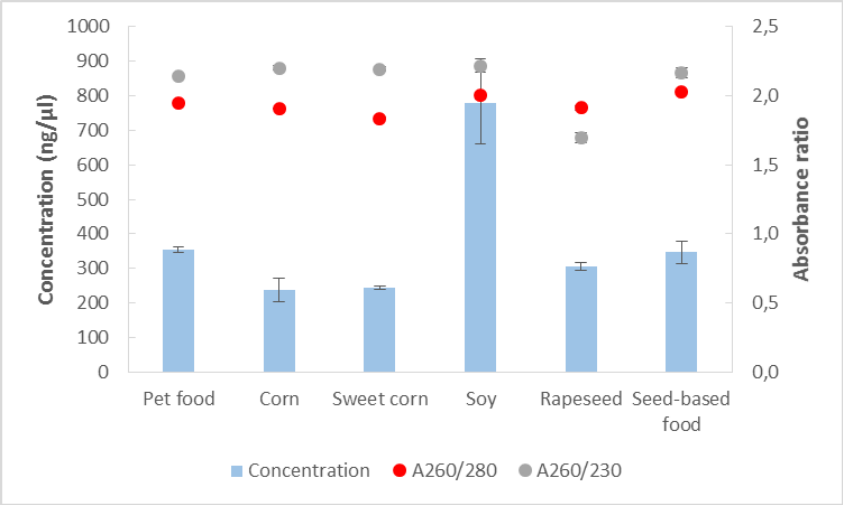

Figure 1. Concentration and purity for DNA purified from 1g of seeds and seed-based products using the Maxwell® RSC PureFood GMO and Authentication Kit. Assessed by NanoDrop® ONE Spectrophotometer. N=6.

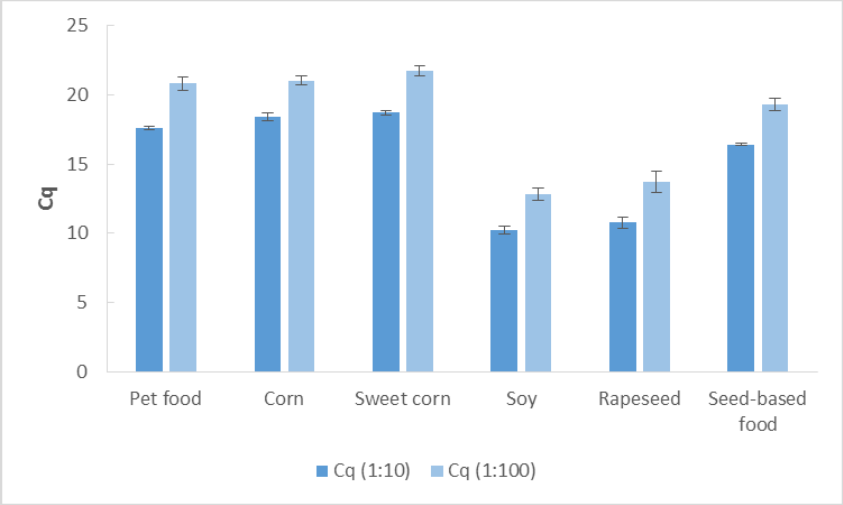

Figure 2. qPCR amplification results for DNA purified from 1g of seeds and seed-based products using the Maxwell® RSC PureFood GMO and Authentication Kit. Cq values for 2µl of 1:10 and 1:100 diluted DNA amplified using the GoTaq® qPCR Master Mix (Cat.# A6001) and universal plant primers (1) in a final volume of 20µl. N=6.

Reference:

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