Promega

Product Application

DNA Purification from Linen Seed and Flour Using the Maxwell® RSC System

DNA suitable for qPCR amplification was isolated from linen seed and flour samples using the Maxwell® RSC PureFood GMO and Authentication Kit.

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

Analyses: NanoDrop® ONE Spectrophotometer quantitation, qPCR amplification

Sample Type(s): Linen seed, linen flour

Input: 20mg

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

Materials Required:

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

Protocol:

1. Weigh 20mg of sample in a 2ml tube (the shape of these tubes may make resuspension easier).
2. Add 1ml of CTAB, 20µl of RNase A and 40µl of Proteinase K (PK) Solution to each tube.
3. Vortex, tap, invert and mix by pipetting until complete resuspension.
4. Incubate samples in a heat block for 90 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.
   a. *Note: Due to the oily sample nature, supernatant was transferred to a new tube and centrifuged again for 10 minutes at maximum speed to obtain a clear lysate.*
7. Add 300µl of Lysis Buffer and 300µl of cleared lysate into well #1 of the cartridge. Run the PureFood Method on the Maxwell® RSC Instrument for DNA purification.

Results:

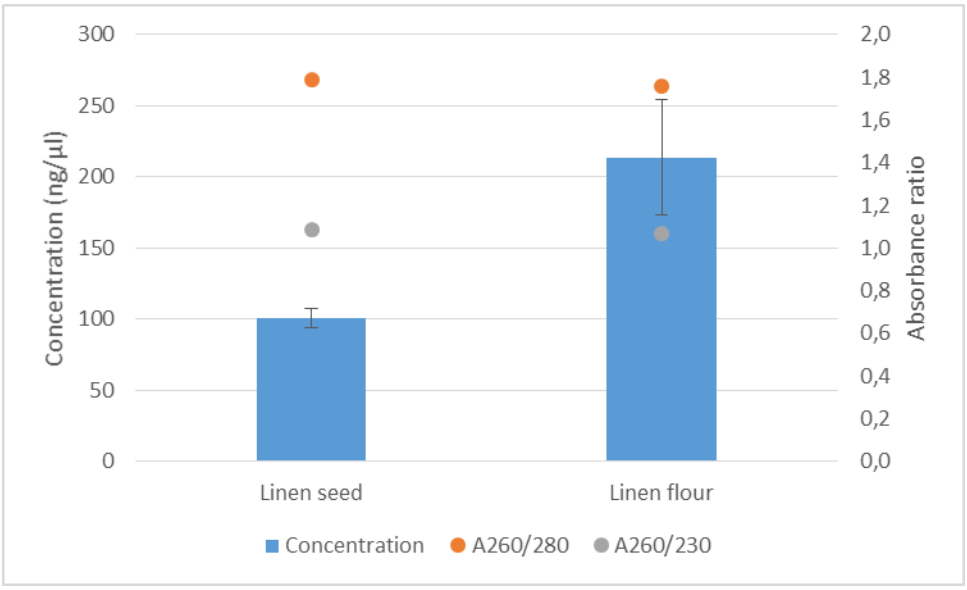

Figure 1. DNA concentration and purity obtained using the Maxwell® RSC Purefood GMO and Authentication Kit. Assessed by NanoDrop® ONE Spectrophotometer. N=3.

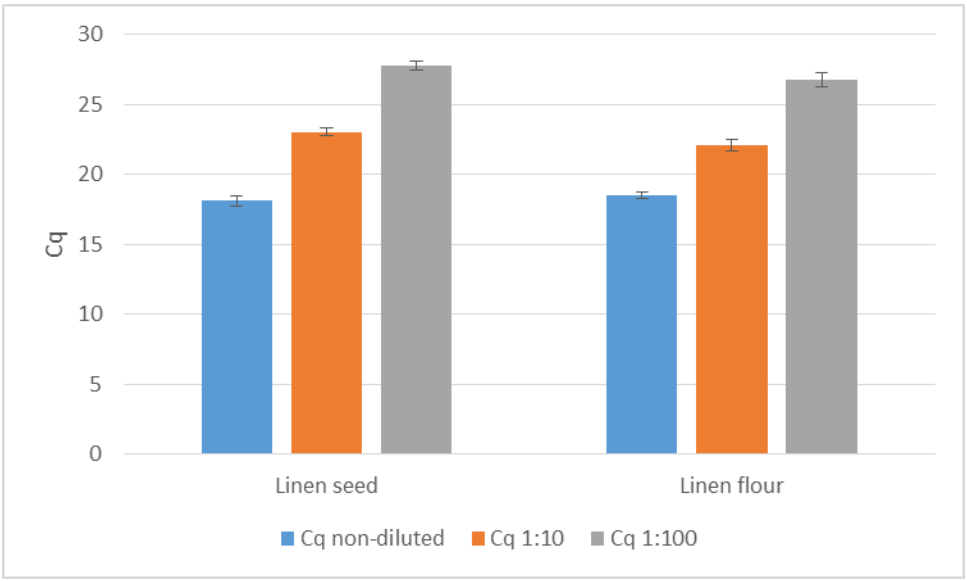

Figure 2. qPCR amplification data. Cq values for 2µl of purified DNA amplified using the GoTaq® qPCR Master Mix (Cat.# A6001) and universal plant primers (1) in a final volume of 20µl. N=3.

Reference:

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