Promega

Product Application

Condiment DNA Purification

Isolate high quality, amplifiable DNA from condiment using the Maxwell® 16 System.

Kit: Maxwell® 16 FFS Nucleic Acid Extraction Kit (Cat. #X9431)

Analyses: GoTaq® qPCR, QuantiFluor® quantitation

Sample Type(s): mayonnaise, vinaigrette, ketchup, barbecue sauce, peppercorn, relish, ground black pepper

Input: 50mg

This protocol was developed by Promega Applications Scientists and is intended for research use only.

Users are responsible for determining the suitability of this protocol for their application.

For further information, please contact **techserv@promega.com**

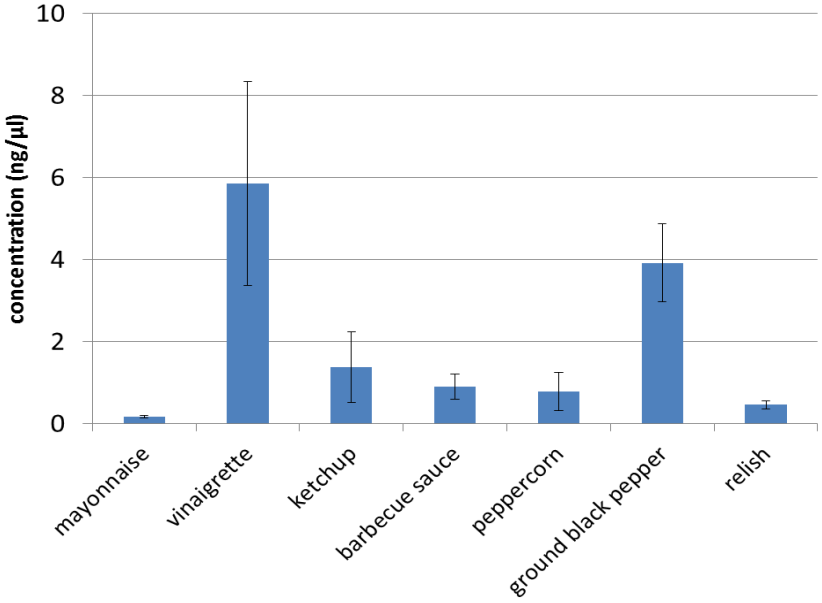
Materials Required:

- Maxwell® 16 Instrument (Cat. #AS2000) with firmware version 4.97
- Maxwell® 16 FFS Nucleic Acid Extraction Kit (custom Cat. #X9431)
- Optional: RNase A Solution (Cat. #A7973)
- CTAB Buffer: 2% CTAB, 1.4M NaCl, 0.1M Tris 10mM EDTA pH 8.0
- Optional: polyvinylpyrrolydone (PVPP, Sigma Cat. #PVP40)
- Homogenization protocol only: Coffee grinder or other grinding apparatus
- Microcentrifuge
- Heat block to 65°C

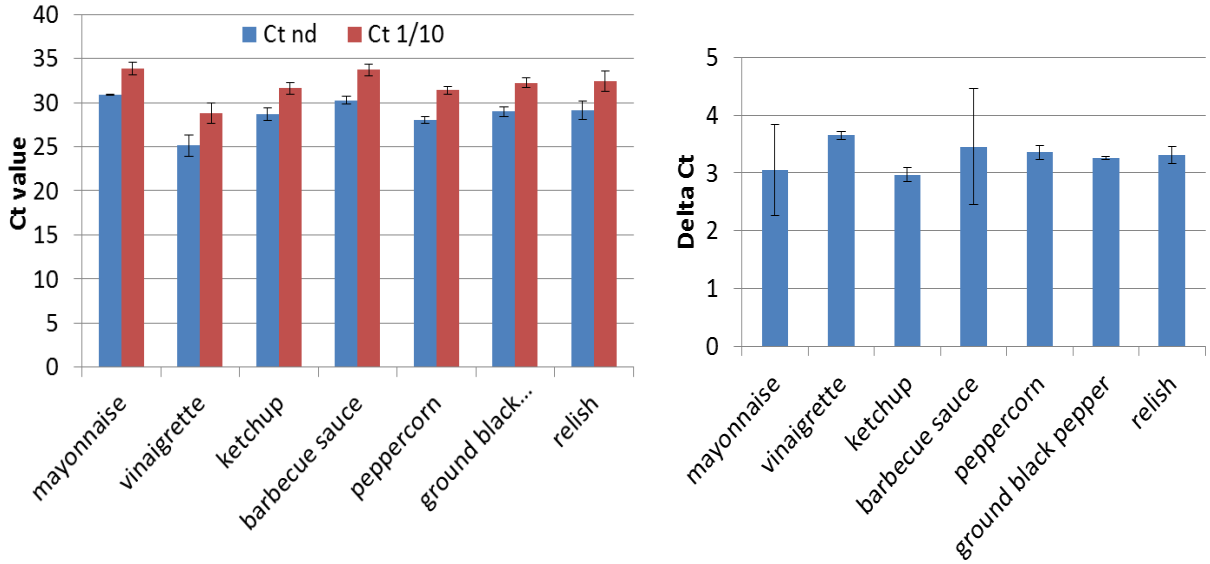
Protocol:

1. Grind sample (where possible) and place 50mg into a tube.
2. Add 600µl of fresh CTAB and 30µl of Proteinase K.
3. Optional: add 20µl RNaseA solution.
4. Optional: in case of PCR inhibition add 2% of PVPP to CTAB buffer.
5. Incubate for 90 minutes at 65°C.
6. Centrifuge for 10 minutes at high speed.
7. Pipet 300µl of sample and 300 µl of Lysis Buffer into well 1 of the Maxwell® 16 cartridge.
8. Place the plunger in the indicated position of the cartridge.
9. Select LEV configuration on the Maxwell® Instrument and select method as follows: RUN, DNA: Plant. Start run.

Results



Concentration of purified DNA. DNA purified from 50mg of each of the indicated condiments was quantified using the Quantifluor® dsDNA System (Cat.# E2670). Values represent the mean and standard deviation from n=3 samples.



Performance in qPCR. Purified DNA was amplified by qPCR using the GoTaq® qPCR Master Mix (Cat: A6001); n=3. **Left Panel**: Ct values from amplification of 1µl of non-diluted (nd) or diluted (1/10) DNA samples. **Right Panel**: Delta Ct (Ct 1/10-Ct nd) values indicate minimal inhibition of PCR.