



# Agricultural Journals

*Czech Journal of*

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[home](#) [page](#) [about us](#) [contact](#)

[us](#)

**Table of Contents**

**IN PRESS**

**CJFS 2014**

**CJFS 2013**

**CJFS 2012**

**CJFS 2011**

**CJFS 2010**

**CJFS 2009**

**CJFS 2008**

**CJFS 2007**

**CJFS 2006**

**CJFS 2005**

**CJFS 2004**

**CJFS 2003**

**CJFS 2002**

**CJFS 2001**

**CJFS Home**

## **Editorial Board**

### **For Authors**

- **Authors Declaration**
- **Instruction to Authors**
- **Guide for Authors**
- **Copyright Statement**
- **Submission**

### **For Reviewers**

- **Guide for Reviewers**
- **Reviewers Login**

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### **Subscription**

# **Czech J. Food Sci.**

**Godálová Z.,  
Bergerová E., Siekel**

# Effect of high temperature and pressure on quantification of MON 810 maize

Czech J. Food Sci., 31 (2013): 376-381

Maize MON 810 (*Zea mays* L.) is the only transgenic cultivar grown in the European Union countries and food products with its content higher than 0.9% must be labelled. Processing such as high temperature (121° C), elevated pressure (0.1 MPa), and low pH 2.25 fragmented DNA. A two order difference in the species specific gene content compared to the transgenic DNA content in plant materials used has led to false negative results in the quantification of transgenic DNA. The maize containing 4.2% of the transgene after processing appeared to be as low as 3.0% (100° C) and 1.9% (121° C, 0.1 MPa). The 2.1% amount of the transgene dropped at 100° C to 1.0% and at 121° C, 0.1 MPa to 0.6%.

Determination of GMO (Genetically Modified Organism) content in processed foods may lead to incorrect statement and labelling could mislead consumers in these cases.

## **Keywords:**

DNA degradation; PCR; highly processed foods

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