



# Agricultural Journals

*Czech Journal of*

**FOOD SCIENCES**

[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**

---

### **Subscription**

# **Czech J. Food Sci.**

**Wang W., Zhang M.,  
Fang J., Zhang L., Zou**

# Improved detection of Ochratoxin A by marine bioluminescent bacteria *V. harveyi* BA

Czech J. Food Sci., 31 (2013): 88-93

We applicate the bioluminescent assay system for evaluating the toxicity of Ochratoxin A (OTA). The optimum conditions for the growth and bioluminescence of *V. harveyi* BA were investigated, including NaCl concentration and pH in the medium, incubation temperature, and OTA action time. The growth and luminescence reached the perfect phase with the NaCl concentration in the range of 1% to 2%, pH 8– 9, incubation temperature 25– 30° C, and OTA acting for 1 hour. Based on these optimum conditions for bioluminescence, the inhibitory effect of OTA on luminosity was pursued. When OTA concentration fell into the range of 0.1– 1.0 µg/l, bioluminescence inhibition followed a linear pattern with a good correlation coefficient ( $R = 0.944$ ). The

calculated recovery percentages fell into the range of 81– 102% within the spiking range of 20– 200 µg/kg. This system provided a screening method for the measurement of toxic OTA by monitoring the changes in luminescence.

### **Keywords:**

bioluminescence; toxicity; OTA; *V. harveyi* BA

[ [fulltext](#) ]

---

© 2011 [Czech Academy of Agricultural Sciences](#)

XHTML1.1 VALID

CSS VALID