



# 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.**

**Novotná P., Šetinová  
I., Heroldová M.,**

**Klimková M.,  
Průchová J., Strohalm  
J., Fiedlerová V.,  
Winterová R., Kučera  
P., Houška M.:**

## **Deallergisation trials of pure celery juice and apple-celery juice mixture by oxidation**

Czech J. Food Sci., 29 (2011): 190-200

This work aimed to determine if it was possible to eliminate or reduce the content of the Api g1 allergen in celery juice by oxidation, utilising its natural polyphenol oxidase (PPO) content. We attempted to determine a possible relationship between the enzymatic browning of celery juice and the reactivity of the Api g1 allergen. Pressed celery juice was stirred, and samples for the colour measurement and allergenicity, determined using the Western Blot (WB) method, were collected at pre-defined

times. Oxidation failed to eliminate the allergenicity of pure celery juice. Further trials were focused on celery allergen elimination in apple-celery juices mixtures in ratios of 3:1, 5:1, and 7:1. We selected the 5:1 ratio as the most acceptable from the sensory perspective, and monitored its allergenicity using the WB method, basophil activation test, and skin prick testing. The WB test showed that oxidation, caused by stirring for 120 min, reduced the allergenicity of the mixture. However, the basophil activation test showed no reduction in the allergic response to the oxidised juice mixture. Skin testing showed that the oxidised juice mixture stirred for 120 min exhibited a significantly lower reaction than the juice mixture stirred for 60 min or celery and apple juice stabilised with ascorbic acid. Due to the contradictory results in different tests, the method cannot be declared successful or safe, even for mixtures of apple-celery juices.

### **Keywords:**

celery; allergen; juice; oxidation; colour; Western blot; basophil activation; skin tests

[ Fulltext ]

---

© 2011 Czech Academy of Agricultural  
Sciences

XHTML1.1 VALID

CSS VALID