



<input type="checkbox"/> Home	<input type="checkbox"/> About us	<input type="checkbox"/> Info for Authors	<input type="checkbox"/> Feedback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Contact us
-------------------------------	-----------------------------------	---	-----------------------------------	--------------------------	--------------------------	-------------------------------------

- Latest Issue
- Previous Issues
- Instructions to Authors
- Guidelines for Referees
- Related Journals
- Announcements
- Web Links

Food Technol. Biotechnol. 47 (2009) 221-226.

ISSN-1330-9862
FTB-2118

scientific note

Influence of Application of Microwave Energy on Quality Parameters of Mate Tea Leaves (*Ilex paraguariensis* St. Hil.)

Giovana Cristina Ceni^{1,2}, Eliana Maria Baldissera²,
Maristela dos Santos Primo^{1,2}, Octávio Augusto Ceva Antunes¹,
Cláudio Dariva³, José Vladimir de Oliveira² and Débora de Oliveira^{2*}

¹Institute of Chemistry – UFRJ, CT, Bloco A, Lab 641,
BR-21941-909 Rio de Janeiro, RJ, Brazil

²Department of Food Engineering, URI – Campus de Erechim,
Av. Sete de Setembro, 1621, BR-99700-000 Erechim, RS, Brazil

³Institute of Research and Technology – ITP, PEP/NDTR-UNIT,
BR-49031-490 Aracaju, SE, Brazil

Received: June 18, 2008

Accepted: December 4, 2008

Summary

Polyphenol oxidase and peroxidase are enzymes responsible for browning and quality deterioration in mate tea leaves. The main objective of this work is to investigate the influence of microwave energy on the oxidase activity, moisture content and colour of this raw material. The polyphenol oxidase was inactivated after 30 s of microwave treatment of the samples exposed to high and low light intensity. In samples exposed to low light intensity, the peroxidase activity was reduced for about 60 % after 120 s. The exposure of mate tea leaves to microwave energy for 220 s resulted in the moisture content required by the manufacturing process. The measured colour parameters showed that after microwave treatment, mate tea leaves showed a more intense green colour. In a general sense, the results show that the inhibition of polyphenol oxidase and peroxidase by microwave energy have an anti-browning effect on the colour evolution of mate tea leaves.

Key words: mate tea leaves, microwave energy, oxidase activity

*Corresponding author: E-mail: odebora@uricer.edu.br

 [PDF Full Text](#)

Last Updated: 06/22/2009 04:09:24

Copyright © 2005 FTB - Food Technology and Biotechnology
Revised : 16.12.2006