

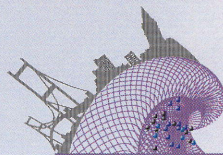
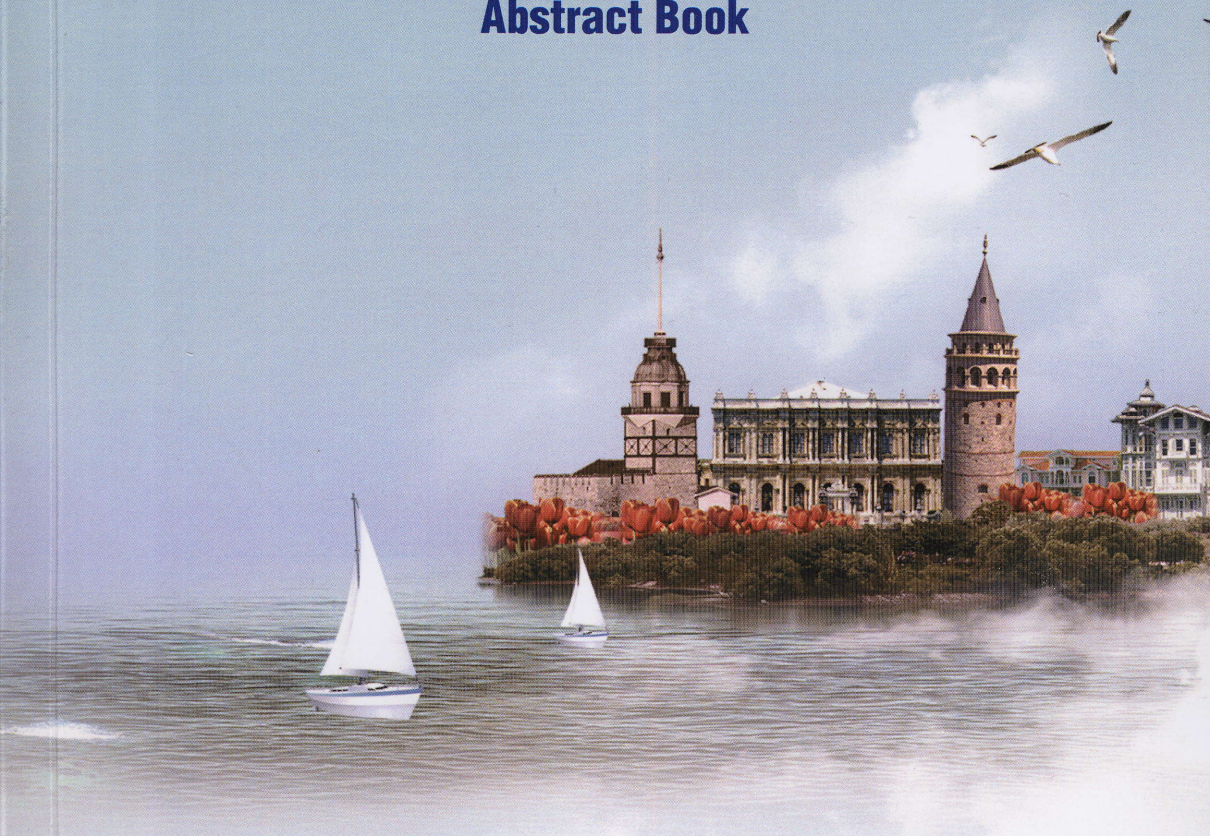


# 23<sup>rd</sup> INTERNATIONAL ICFMH SYMPOSIUM FoodMicro 2012



## Global Issues In Food Microbiology

### Abstract Book



# FoodMicro

3-7 SEPTEMBER 2012 ISTANBUL



## **EDITORS**

Dilek HEPERKAN, Prof. Dr.

Funda KARBANCIOGLU-GULER, Assist. Prof.Dr.

Ceren DASKAYA-DIKMEN, M.Sc.

ISTANBUL TECHNICAL UNIVERSITY  
CHEMICAL & METALLURGICAL ENGINEERING FACULTY  
DEPARTMENT OF FOOD ENGINEERING

All rights reserved. No parts of this work covered by the copy-right herein may be reproduced or used in any forms or by any means graphic, electronic or mechanical, including photocopying, recording, taping or information storage and retrieval systems without permission of the editors.

DISCLAIMER: All abstracts and titles of presentations were only formatted into the correct font, size and paragraph style and were not language edited. The abstracts were reprinted as submitted by the authors. The editors accept no responsibility for any language, grammar or spelling mistakes.

**FoodMicro2012(23. :2012 :Istanbul, Turkey)**

**XXIII FoodMicro2012, Abstract Book /ed. Dilek Heperkan, Funda Karbancıođlu-Güler, Ceren Daskaya-Dikmen – İstanbul :İ.T.Ü. Chemical and Metallurgical Engineering Faculty,2012.**

836 s.

ISBN 978-975-561-423-6

I. Gıda-Mikrobiyoloji. I. Heperkan, Dilek II. Karbancıođlu-Güler, Funda, III. Daskaya-Dikmen, Ceren

QR115.F66 2012

CIP

P-487

## Content of 4-ethylcatechol and other volatile phenols in dressings, beverages and spirits

Roberto LARCHER, Tiziana NARDIN, Daniela BERTOLDI, Giorgio NICOLINI

Technology Transfer Centre, Edmund Mach Foundation, 38010 San Michele all' Adige (TN), ITALY

Corresponding author: [tiziana.nardin@iasma.it](mailto:tiziana.nardin@iasma.it)

Recently, in addition to the already known 4-ethylphenol and 4-ethylguaiacol, 4-ethylcatechol (4-EC) was found to be associated with *Brettanomyces*. These off-flavouring ethylphenols are also produced by *Lactobacillus plantarum* or other micro-organisms. 4-EC has been described as phenolic and horsey, and its olfactory threshold ranges between 50 and 800 µg/L depending on the type of wine. The "volatile phenols" class also includes 4-vinylphenol and 4-vinylguaiacol, both playing a remarkable sensory role in several products. This work mainly surveys the content of 4-EC in beverages, dressings and spirits in order to round out the few published data regarding agri-food field. Moreover, the content of the other volatile phenols is investigated. Samples of traditional balsamic vinegar of Modena P.D.O. (N.=14), apple (10) and wine (6) vinegar, soy sauce (1), apple (8) and pear (10) juice, commercial (3) and lab-scale produced (16) apple cider, not-decaffeinated ground coffee (15), tea (7), beer (28), grappa (12) and fruit distillate (5) available in the Italian market were analysed using an HPLC approach with coulometric electrochemical array detection. 4-EC was at noteworthy concentrations in apple fermented products, reaching maximum values of above 2200 and 4600 µg/L in cider and vinegar respectively, and concentration high up to 43.5 mg/kg powder were also found in aqueous extracts of not-decaffeinated ground coffee. In these products, in the light of the 4-EC sensory threshold reported in the literature, an organoleptic role of the compound is very likely.