BOOK OF ABSTRACTS

# 11TH ASEAN FOOD CONFERENCE 2009

## FOOD SCIENCE AND TECHNOLOGY: INNOVATIVE APPROACHES AND OPPORTUNITIES FOR GLOBAL MARKET

AN ACTIVITY OF ASEAN COMMITTEE ON SCIENCE AND TECHNOLOGY & FEDERATION OF INSTITUTES OF FOOD SCIENCE AND TECHNOLOGY IN ASEAN

OCTOBER 21-23, 2009

THE RIZQUN INTERNATIONAL HOTEL

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## S408

### Technological Conditions Affecting Variation in Acrylamide Concentration in French fries Preparation in Malaysia Food Service Establishments.

**Sanny, M.[ab], Jinap, S.[b*], Luning, P.A.[a], Marcelis, W.J.[c], and van Boekel, M.A.J.S.[a1]**

Dietary intake studies observe significant variations in concentrations of acrylamide, a probable human carcinogen. The aim of this study was to analyse the variation in acrylamide concentration in French fries as affected by the technological conditions from selected categories of food service establishments (FSE) in Malaysia. Frozen par-fried potato stripe and French fries samples were collected from the selected categories of FSE; fast food restaurant, institutional caterer, and local restaurant. The samples were analysed for reducing sugars and acrylamide analyses using HPLC and GC-MS-TOF, respectively. The study **found the frying conditions in the fast food restaurants are more controlled than in the** institutional caterers and even less in the local restaurants. The variation in the concentration of reducing sugars in frozen par-fried potato stripes was found to be similar for all of the establishments studied. The **variation in the acrylamide concentration however was** significantly different in French fries where the **fast food restaurant showed** less variation **in as compared to the institutional caterers and local restaurants. The** obtained insights are crucial for the development of dedicated quality control and assurance at FSE which contribute to a sustainable reduction in acrylamide intake.

Keywords: Acrylamide; variation; French fries; technological conditions; food service establishments

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## S409

### Antimicrobial Effect of *Salvia leriifolia leaf* Extract Against the Growth of *Staphylococcus aureus* in Hamburger

**Haddad Khodaparast, Mohammad Hossein[1]*, Mahdavian Mehr, Hadi[1], Hosseini, Zohreh[1]**

In this research, antimicrobial activity of *Salvia leriifolia leaf* extract was investigated on growth of *Staphylococcus aureus* with different concentrations (5000, 10000, 15000 and 20000 mg/L) in Hamburger. purified *Staphylococcus aureus* was inoculated to hamburger and then storage at -12°C. Samples were subjected to microbiological analyses (Total count and numbers of *Staphylococcus* aureus) at different time intervals (15, 30 and 45 days). The result showed that microbial total count and the number of *Staphylococcus aureus* in all samples with different concentrations of extract, decreased during storage. This effect was significant at day 15 and 30 for *Staphylococcus aureus* and total count, respectively. The extract of *Salvia leriifolia* at highest concentration caused maximum reduction *Staphylococcus* aureus population and microbial total count. These data indicate that *Salvia leriifolia* extract can exhibit antimicrobial activity against *Staphylococcus aureus*; so it can be considered as an alternative natural preservative in food products.

Keywords: *Salvia leriifolia* leaf, antimicrobial activity, *Staphylococcus aureus*, total count, natural preservative

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