

13TH ASEAN FOOD CONFERENCE 2013

MEETING FUTURE FOOD DEMANDS: SECURITY & SUSTAINABILITY

9 - 11 SEPTEMBER 2013

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CONFERENCE PROCEEDINGS
POSTER PRESENTATIONS - PART 2

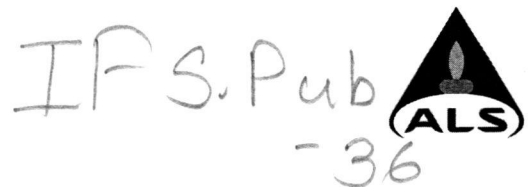
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FSA-P 9.28

Determination of Acrylamide in Potato Chips, French Fries and Frying Oil

Dr Viduranga Waisundara, Goh Wanning Sheena

Track 10 - Food Processing

FPR-P 10.1

Formulation of 'Rasi'TM-based Extrusion Products as an Alternative Staple Food in Indonesia

Mrs Marleen Sunyoto, Indonesian Food Technologist Association, Indonesia

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Mrs Rosniyana Ahmad, Malaysian Agricultural Research Development Institute, Malaysia

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Ms Rowena Grace Rumbaoa, University of The Philippines, Philippines

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Muffins and Cookies made From Garbanzos Flour

Dr Ines Gonzales, Benguet State University, Philippines

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Nutri Chips Produced From Corn and Pigeonpea Grits

Dr Ines Gonzales, Benguet State University, Philippines

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Effect of Different Drying Methods on Antioxidant Activity, Total Phenolic Content and Ascorbic Acid Content of Star Fruits (*Averrhoa Carambola*)

Ms Oshini Perera, Institute of Fundamental Studies, Sri Lanka

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Ms Hathaitip Rongkom, Chiang Mai University, Thailand

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Strategy to Reduce Oxalate Content in Local Vegetables

Mr Tan Soon Ann, Singapore Polytechnic, Singapore

Track 9 - Food Safety

FSA-P 9.28

Determination of Acrylamide in Potato Chips, French Fries and Frying Oil

Dr Viduranga Waisundara, Goh Wanning Sheena

Introduction: Acrylamide is a neurotoxin and probable carcinogen which was first identified in starch-based food products prepared at high temperatures. Given its toxicity, consumers need to be aware of its quantity present in regularly consumed starch-based food products such as potato chips and French fries, as well as the oil which is commonly reused in their preparation. The objective of this project was to quantify the acrylamide present in French fries and potato chips, and the Canola oil used for their preparation.

Methods: Thirty batches of 100 g of French fries were prepared in Canola oil which was reused and maintained at 170 OC for 4 hours. The oil and fries were analyzed for acrylamide using HPLC. Analyses were also carried out in commercial brands of potato chips as well as ready-made French fries obtained from food-stalls in the vicinity of Temasek Polytechnic.

Results: Acrylamide was not detected in any of the batches of French fries as well as the Canola oil which was reused in their preparation. The commercial brands of potato chips and French fries obtained from food-stalls also did not contain any trace of acrylamide.

Conclusion: Since acrylamide was not detected to be present at hazardous levels, it may be concluded that the potential risks imposed by acrylamide is non-existent during the consumption of these food products.