



Total Food. 2017

Exploitation of agri-food chain wastes

Norwich Research Park, Norwich, UK

31st October - 2nd November 2017

Abstracts

www.totalfood2017.com

Organised by



Biorefinery
Centre

[5.08]

Antioxidant fortification of yogurts using a wine distillation by-product

*Fernando J. Gonçalves, Ana P. Rodrigues, Suzanna M. Ferreira, Raquel P. F. Guiné
CI&DETS, Polytechnic Institute of Viseu Department of Food Industry, Viseu, Portugal*

The wine distillation process is used to produce the spirits required for production of Port Wine. From this process, a by-product rich in phenolic compounds is produced which may be incorporated into novel food products with functional properties. The objective of this work was to develop a new yogurt, attractive from the organoleptic point of view and with the advantage of being rich in phenolic compounds with antioxidant activity. For that, the red wine was dealcoholized and concentrated allowing to obtain a phenolic-rich solution with antioxidant activity. This solution was added (5 or 10 mL) into yogurts as a functional ingredient. The developed yogurts contained different aroma variations (mixed fruit or cinnamon) and different levels of sugar (no sugar or 20 g/L added). The acidity and antioxidant activity of the yogurts were measured, and also a sensorial evaluation was performed.

The addition of the phenolic-rich solution caused an increase in the content of antioxidants, which was proportional to the amount of added by-product solution. Furthermore, the yogurts with cinnamon presented higher antioxidant activity than the corresponding versions with fruits. Also, the addition of the by-product solution did not cause any observable effect on acidity, an important organoleptic factor for consumer acceptance. The results of sensory evaluation revealed that the fortified yogurts were preferred when compared with the control ones. In addition, it was possible to conclude that the yogurt with mixed fruits, sugar, and phenolic-rich solution was preferred by the panellists, getting the highest score.

[5.09]

Innovative electro-membrane fractionation technology for fish by-product valorization

*Shyam Suwal, Sunantha Ketnawa, Jen-Yi Huang, Andrea M. Liceaga
Department of Food Science, Purdue University, West Lafayette, USA*

Fishery industries are known to generate more than 30% of fish waste or by-products. Fish by-products are rich in industrially valuable compounds such as protein, which can be better utilized through enzymatic hydrolysis to produce fish protein hydrolysates (FPH) containing peptides with enhanced bioactive properties such as antioxidant activity. Unfortunately, bioactive peptides (BP) are