

Total Food 2014

Science and technology for the economic and sustainable exploitation of agri-food chain wastes and co-products

Norwich Research Park, Norwich, UK

11th - 13th November 2014

Abstracts

www.ifr.ac.uk/totalfood2014







refining, greatly influencing commercial prospects. The consortium has been fortunate in having access to applications development specialists, so technical performance of materials can be established and trial offerings can be prepared and sampled, to give confidence to commercial planning. The poster presentation will describe the details of scientific and technical activities and the logic of commercial assessment and exploitation.

[P4.08]

A preliminary study on cheese enrichment with grape pomace

Roberta Marchiani, <u>Alessandro Guglielmetti</u>, Daniela Ghirardello, Simona Belviso, Manuela Giordano, Marta Bertolino, Giuseppe Zeppa

DISAFA-Dept. of Agricultural, Forest and Food Sciences, University of Turin, Largo Braccini 2, Grugliasco (To) Italy

E-mail: roberta.marchiani@unito.it

In last decade consumers' interest to healthy and natural foods increased, and at the same time food industries are also interested to recovery agricultural by-product since they contain value-added compounds. The feasibility of use these by-product as food ingredient represent an opportunity to produce novel functional foods. Grape pomace is one of the most important agricultural by-products. It is a mix of seeds and skins residual from winemaking and contains high levels of phenolic compounds. The objective of this research was to evaluate the feasibility of using different percentage of grape skin on production of a cow ripened Italian cheese to enhance its antioxidant content. After coagulation of whole pasteurized milk, curd was added with three different grapes skin: Chardonnay before and after distillation (white variety) and Barbera (red variety). Each grape skin type was dried (54 °C for 48 h), milled and added to the curd at a level of 0.8 and 1.6% (w/w). Cheese samples were evaluated on: I) proteolysis as ratio of water-soluble nitrogen at pH 4.6 to total protein; II) microbial dynamics (yeast, moulds, lactobacillus and lactococcus counts); III) total phenolic content and antioxidant activity were evaluated spectrophotometrically. Sampling time where: 0, 5, 10, 20 and 30 days of ripening. The results obtained highlighted how the addition of grape skin did not determined neither a higher yeasts or moulds counts nor an inhibition on lab microflora compared to the control. No differences were found also during ripening on proteolysis, whereas statistically differences were obtained on total phenolic content and antioxidant activity.