conferenceseries.com

Annual Conference on

Bioscience

September 12-13, 2016 Berlin, Germany

Alessandro Leone et al., J Bioeng Biomed Sci 2016, 6:4(Suppl)
http://dx.doi.org/10.4172/2155-9538.C1.008

Physicochemical evaluation of olive paste and olive oil obtained by a new partial destoner machine implemented in an industrial olive oil extraction plant

Alessandro Leone[1], **Roberto Romaniello**[1] and **Antonia Tamborrino**[2]
[1]University of Foggia, Italy
[2]University of Bari Aldo Moro, Italy

In this scientific paper, an industrial prototype of a partial destoner machine was specified, built and implemented in an industrial olive oil extraction plant to evaluate its quantitative and qualitative performance compared to the traditional mechanical crusher. The extraction efficiency of the olive oil extraction plant, olive oil quality, sensory evaluation and rheological aspects were investigated. The research demonstrated that leaving 40% of pits in olive paste (as pits fragments) the extraction efficiency loss at decanter level is avoided. The extraction efficiency measured when partial destoner machine and mechanical crusher were used did not show statistical differences. The oils obtained using partial destoner machine are characterized by higher green fruitiness, flavor and aroma with respect to those produced using traditional processing systems. In addition, the partial destoner machine allows the pits recovery to be used as biomass. It is to be noted that nowadays the goal of environmental sustainability is oriented to the use of renewable energy instead of fossil fuels and the global goal is to increase the use of biomasses for energy-consuming processes.

Biography

Alessandro Leone is an Associate Professor in Agricultural Mechanics and Food Processing Plants, SAFE Department, Engineering Area, University of Foggia, where he teaches Mechanics and Mechanization in Agricultural, Food Engineering and Work Safety. His major research topics are, in food processing plants: Agro-food industry plants and process settings, processing logic control, recovery of agro-food waste byproducts to useful composts in agriculture, as well as waste management and in agricultural mechanics: Analysis of the vibrations transmission mode from the vibrating heads to the trunk of olive trees and subsequent optimization; study, design of mobile elevating work platforms; safety devices on tractors and machinery.

alessandro.leone@unifg.it

Notes: