

## Is the Addition of *Capsicum Peppers* to Monovarietal Virgin Olive Oil a Potential Strategy to Increase its Oxidative Stability?

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Extra virgin olive oil (EVOO) plays a crucial role in the Mediterranean diet and its nutritional properties are the main reason for the increment of its consumption worldwide. Within the "GLASOIL" project (ID CUP J77H18000280006) different Calabrian (Italy) monovarietal extra virgin olive oils (EVOOs) from *Olea europea* cultivars namely Carolea, Dolce di Rossano, Ottobratica and Roggianella were investigated in order to select the best cultivar for the production of an olive oil-based dressing. This study investigated the effects of *Capsicum annum* L. Mirasol, Amando, and Topepo picante, *C. chinense* Jacq. Aji limo and Red mushroom and *C. baccatum* L. Bishop crown and Aji Angelo cultivars to the quality parameters, including oxidative stability of flavoured olive oils (FOOs) obtained by the addition of pepper powder (1%) to EVOOs. The total phenols, flavonoids, and carotenoids content was quantified in all pepper extracts, EVOO, and FVOOs phenolic fractions. In order to evaluate the impact of pepper addition on oxidative stability of FOOs, Oxitest test was applied. Different antioxidant assays such as DPPH, ABTS,  $\beta$ -carotene bleaching, and FRAP were applied to investigate the antioxidant potential of samples. Bishop crown showed the highest phytochemicals content, whereas Aji Angelo had the highest amount of capsaicinoids. Among EVOOs, Roggianella EVOO showed the highest antioxidant activity as well as the highest induction time (39.6 h). Remarkably, FOO obtained by the addition of Bishop crown pepper to Roggianella EVOO exhibited a higher induction time with respect to the corresponding EVOO. Due to their high content in bioactive compounds and antioxidant potential *C. baccatum* pepper could be proposed as flavouring agents able to enhance the oxidative stability of monovarietal oils.

### Biography:

Monica Rosa Loizzo is Associated Professor in Food Science Technology at University of Calabria. Monica Rosa Loizzo has specific abilities on the main separative techniques to determine the chemical composition of different food matrix. She got specific abilities on methods to evaluate the health properties of phytochemicals rich-food. Moreover, her research interest including the influence of technological processes on the overall quality of food with particular reference to compounds able to prolong the shelf-life. Her h index is 40. She is referee of several national and international Institutions and member of the Management Committee of COST Action "Eurocaroten".