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## Influence of disaccharides and pectin addition on antioxidant activity of phenolic

Mirela Kopjar, Ante Lončarić and Anita Pichler Josip Juraj Strossmayer University of Osijek, Croatia

Pood systems are very complex matrix and interactions between components have high impact on antioxidant activity of phenolic r compounds. The aim of this study was to evaluate influence of addition of disaccharides, sucrose (S) and trehalose (T) or/and pectin (P) on antioxidant activity of catechin (C) or/and guercetin (O) model systems after preparation and during storage at room temperature. Antioxidant activity (AA) was determined by DPPH, ABTS and FRAPS method. Those methods have different mechanisms of action thus different results were obtained. AA determined by DPPH method was higher in systems of C or Q when sugars or pectin was added than in systems of pure phenolics. In system CQ synergistic effect was observed, also when sugars or/and pectin was added the same effect was observed. During storage C system had the same AA, while Q system had lower AA. Systems C, Q and CQ with addition of sugars had higher AA. In all systems with pectin addition higher AA was determined, except in the case of trehalose addition where very low AA was determined. AA determined by ABTS method in C systems with sugars or pectin decreased, and increased in the case of Q system occurred in comparison to pure phenolics system. During storage, AA in systems C decreased while in systems Q increased. Systems CQ with pectin AA decreased while with sugars addition AA increased. AA determined by FRAP method was lower in systems of C or Q when sugars were added, and no synergistic effect was observed in system CQ. With addition of pectin, lower AA values were determined in all combinations. During storage systems of C or Q and with sugars addition had lower AA. When pectin was added, C system had the same AA, and O system higher. All combinations had lower AA. The results of our study showed the importance of food matrix composition as well as interactions that can occur between them.

## Biography

Mirela Kopjar has completed her PhD in Food Technology from Josip Juraj Strossmayer University in Osijek. She completed her Post-doctoral studies at INRA, Dijon, France. She is an Associate Professor at Faculty of Food Technology. She has published more than 50 papers in reputed journals and has been serving as an Editorial Board Member in several journals. Currently, she is a Principal Investigator of the project entitled "Trehalose fruit product improvement".

mirela.kopjar@ptfos.hr

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