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Effect of pH values on the antioxidant activity in red cabbage (*Brassica oleracea*)

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Antioxidant molecules are frequently discussed for various diseases, such as cancer, macular degeneration, cardiovascular and Alzheimer's disease. These molecules mostly come from nature like from fresh fruits and vegetables. Most plants have polyphenolic compounds however; red cabbage (*Brassica oleracea*) contains high level of water-soluble anthocyanins including diacylated derivatives of cyanidin-3-diglucoside-5-glucoside (Cy-3diG- 5G). Therefore, recent researches have focused on the stability of these natural antioxidants and on which factors affect their antioxidant properties. The aim of this study is to show how pHs influence the antioxidant activity of phenolic compounds (from pH 1 to pH 14) and to determine the optimal pH value, in which anthocyanin molecules exhibit the best stability and activity towards 1,1-diphenyl-2-picrylhydrazyl (DPPH) antioxidant assay. The results showed that maximum antioxidant activity was obtained at pH 7 while minimum antioxidant activity was seen at pH 14.

Biography

Ayşe Demirbas has graduated from Department of Aquacultural Engineering at Firat University, Turkey in 2009. Currently, she is doing her Doctorate degree in the Department of Agricultural and Biological Engineering at University of Florida. She has been working as a Research Assistant in the Department of Agricultural and Biological Engineering at University of Florida since 2012.

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