Abstract

The importance of oxidation in the body and in foodstuffs has been widely recognized. Oxidative metabolism is essential for the survival of cells. A side effect of this dependence is the production of free radicals and other reactive oxygen species that cause oxidative changes. Oxidation can also effect foods, where it is one of the major causes of chemical spoilage, resulting in rancidity and/or deterioration of the nutritional quality, colour, flavor, texture and safety foods. Generally oxidation of food can be prevented by synthetic antioxidants including butylated hydroxyanisole (BHA), butylated hydroxy toluene (BHT) and propyl gallate (PG) but their safety has been questioned. Hence, there is a need to identify new natural antioxidants for prevention of lipid peroxidation in the food industry. In the present work, we report the results of a study aimed at evaluating the antioxidant activity of Mentha pulegium (Pennyroyal) extract by DPPH assay and compare the extracted microwave method with the traditional extraction. Mentha pulegium antioxidant activities was determined Using (2,2 Diphenyl-1-picrylhydrazyl) DPPH method based on Subtracting the peak area of HPLC chromatograms. At the microwave method was used 0.5 gr of plant in 10 ml ethanol, methanol and water solvents. After finding the optimal solvent type, Was optimized Power microwave devices, extraction time and extraction Temperature. Extracts from the microwave and traditional methods were compared and observation the microwave extract is better efficiency for scavenging free radicals. In order to evaluation the statistical analysis, was used vertion 15 of SPSS. no significant statistically differences were found between microwave and traditional extracts. So recommended evaluation extract active components with GC-MS method.

Keywords: Antioxidant activity- Mentha pulegium- MAE- DPPH.

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Antioxidant activity evaluation of Mentha pulegium extract using MAE

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