عنوان مقاله:

Astudy on dpph (1,1-diphenyl-2-picrylhydrazy) radical scavenging activity of pomegranate extract

محل انتشار:

سومین سمپوزیوم بین المللی سرطان نسترن (سال: 1396)

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خلاصه مقاله:

Oxidation is essential to many living organisms for the production of energy to fuel biological processes. However, it's important that be equilibrium between free radicals and antioxidants for optimizing physiological condition in the human body. Antioxidant supplements have the key role in reducing oxidative damage. Different parts of pomegranate tree have bioactive compounds such as polyphenols, anthocyanin, and conjugates fatty acids and so on; various medicinal effects have been reported as antioxidant, antimicrobial, ant-diabetic and anticancer. In this study, optimization of phenolic extraction process from ethanol-HCl 0.1 N (85:15) extract (v/v) of pomegranate through Response Surface Methodology. For optimizing the process two factors (time (10, 25, 40 min) and temperature (40, 55, 70 °C) were investigated. The experiment was conducted based on Box-Behnken design with two factor and three levels comprising a total of 13 tests. Free radical-scavenging capacity of the extract, measured by DPPH assay.Extraction time 10.17 min and Tempreture 50.97 °C showed highest total phenolic contents (240.72 µg/g of dry material, measured as Gallic acid equivalents) and DPPH radical scavenging activity (IC50 5.844 µg/mL). Results of the present study indicated good correlation between highest total phenolic contents and DPPH radical scavenging activity. Results of the study indicated that phenolic compounds are powerful scavengers of free radical as demonstrated by a good correlation between total phenolic contents contents and DPPH radical scavenging activity

کلمات کلیدی:

Cancer Prevention, Cell and Cancer, Lifestyle and Cancer, Nutrition and Cancer, Multidisciplinary Cancer Research