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Chromatographic evaluation of gallic acid, catechin and quercetin in methanolic extracts of selected formulations of spices and herbs

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Abstract

The main objective of this study was to quantify the probable antioxidants such as gallic acid (phenolic acid), catechin and quercetin (flavonoids) in the three different formulations of mixed spices and herbs, that is mixed herbs (F1), mixed spices (F2) and mixed spices & herbs (F3) predominantly formulated for general health and wellbeing. The aforementioned antioxidants could be highly beneficial for the maintenance of good health as they possess the capacity to scavenge the free radicals which sequentially prevents certain non-communicable diseases (NCDs) such as diabetes mellitus, cancer and atherosclerosis for which free radicals are considered one the major causes. The formulation F2 comprising of mixed spices showed highest contents of gallic acid (86.03 µg/ml), catechin (339.40 µg/ml) and quercetin (394.59 µg/ml) thus highlighting its nutritional potential against various NCDs. The findings of this study depict that the daily supplementation of spices and herbs particularly that of mixed spices could be highly beneficial for the maintenance of good health as they are a rich source of phenolic antioxidants.

Keywords

Author Keywords: spices; herbs; gallic acid; catechins; quercetin; High Performance Liquid Chromatography (HPLC)

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