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Isolation of 62 kDa Protein with Antioxidant Properties from Natural Honey

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It is strictly evident that honey contains antioxidant activity; however, constituents of honey responsible for its antioxidant activity are still needed to be investigated. The aim of this study was to purify protein fraction on the basis of antioxidant activity. Fourteen natural honey samples from North Africa and South Asia were evaluated for their antioxidant activities by employing 1,1-Diphenyl-2-picrylhydrazyl (DPPH) radical assay. The scavenging activity of all honey samples ranged 18.7-32.6%. A 62 kDa protein was isolated from honey by gel filtration chromatography followed by reverse phase HPLC. This protein showed significant radical scavenging activity (54.6 %). This indicated the possible role of this protein in the antioxidant and therapeutic properties of the natural honey.

Keywords: DPPH, honey proteins, size permeation chromatography.