

Title An antioxidant of dried chili pepper maintained its activity through postharvest ripening for 18 months

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Abstract

The antioxidant properties of hot-water extracts from a dried chili pepper were maintained through the postharvest ripening process at 10degC for 18 months. In order to isolate the antioxidant from the ripe pepper, we fractionated hot-water extracts by size-exclusion gel chromatography. A certain fraction showed antioxidative activity via the 1,1-diphenyl-2-picrylhydrazyl (DPPH) radical-scavenging activity assay. Structural analysis by reversed-phase high performance liquid chromatography (HPLC), LC-MS, and nuclear magnetic resonance (NMR) revealed that the antioxidant was a known compound, p-coumaryl alcohol. This study indicates that an effective antioxidant in chili pepper sustains its antioxidative effects during the postharvest ripening process.