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Effect of thermal processing on total phenolic content and antioxidant activity of *Coriandrum sativum* L. leaves

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Coriandrum sativum is a promising functional food which not only provides nutrition, but also has medicinal benefits. It is a widely grown herb and most commonly used spice in India.Total phenolic content and antioxidant activity of ethanolic extracts of coriander leaves at different temperatures were evaluated to determine the effect of thermal processing on potential health benefits of coriander. The leaves were subjected to blanching (80°C), boiling (100°C) as well as storage at refrigerated temperature (4°C). A qualitative phytochemical screening was performed for the presence of phytochemicals. The ethanolic extracts were analyzed for total phenolic content using Folin-Ciocalteau assay and free radical scavenging activity using 2,2-diphenyl-1-picrylhydrazyl (DPPH) radicals. The extracts of fresh leaves showed the highest total phenolic content, which reduced significantly after treatment 100°C and similar trend was observed with antioxidant activity. Increase in temperature reduced the antioxidant activity of coriander leaf extracts. Refrigeration also results in reduction of total phenolic content and antioxidant activity. This indicates that certain bioactive compounds such as polyphenols and phenolic acids are degraded during processing, resulting in reduced antioxidant potential and total phenolic content, thereby decreasing the medicinal value of herb. The study thus, suggests the consumption of fresh coriander leaves to obtain the maximum benefit.

Key words : *Coriandrum sativum* L., Total phenolics, Antioxidant potential, Phytochemical screening

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