

Comparison of Antioxidant Activities of *Cynara Scolymus* (Artichoke), *Cucurbita Moschata* (Pumpkin) and *Actinidia Deliciosa* (Kiwifruit)

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Abstract: Large quantities of solid waste are produced annually by the food processing industry. These wastes contain biodegradable organic material and their disposal results in serious environmental problems. They can be used as biosource as well as source for bioactive phenolic compounds recently used in medicine, cosmetics and food industry for various purposes.

This work is based on the comparison of the antioxidant activities of phenolic compounds obtained from artichoke and its leaves, and pumpkin and kiwifruit.

Artichoke has traditionally been used for the treatment of liver and gallbladder diseases. Its effect is based on the antioxidants it contains. Pumpkin and kiwifruit are valuable for their vitamin and mineral contents.

Pumpkin and kiwifruit have been obtained from local markets and their shells have been removed. Artichoke and its leaves have been obtained from a local processing company. They have been dried at 55 degrees Celsius for 20 hours and they have been processed in a kitchen type mixer. Following this, they have been extracted in a mixer type extractor using ethyl alcohol for 21 hours. Their extracts have been filtered using a Whatman No:1 filter paper and the clear filtrates have been concentrated in rotary evaporator.

The antioxidant activities of the phenolic compounds in the extracts have been observed using DPPH reactive (1,1-diphenyl-2-picryl-hydrazil radicals) in a PharmaSpec UV-1700 spectrophotometer at 515 nm.

The antioxidant activities have been noted as: artichoke > artichoke leaves > kiwifruit > pumpkin. Conclusively, artichoke leaves, which are disposed as waste, can effectively be used as an efficient antioxidant source. Pumpkin and kiwifruit can also be considered as antioxidant resources.

Industry Relevant Text: Antioxidants have gained importance due to their positive effect on human health. They can be extracted from various fruits and leaves. This work concentrates on the extraction of antioxidants from pumpkin and kiwifruit and the comparison of the extracted antioxidants to that extracted from artichoke and its leaves which are known to be good resources of antioxidants.