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The Use of Secondary Metabolites Derived from Medicinal Plants as Bioactive Agents: Example of Crataegus oxycantha

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Abstract : The objective of this work is to estimate the impact of polyphenols extracted from the fruits of Crataegus oxycantha on human nutrition and health by evaluating the antibacterial activity of this plant using the agar diffusion method. The polyphenol content was found to be 48.86 ± 1.96 mg GAE/g, while flavonoids accounted for 30.35 ± 2.91 mg QE/g. The methanolic, ethyl acetate and aqueous extracts of C. oxycantha demonstrated strong antibacterial activity against most of the tested bacterial strains. The results of this study highlighted the richness of the plant's fruits in phenolic compounds. These compounds exhibited significant antibacterial activity, serving as an excellent biologically-derived bactericidal agent that could replace chemical treatments. Additionally, the fruits are rich in nutritional values that are recommended for human well-being. This study confirms the effectiveness of consuming these fruits in human diets and supports the rational use of this plant in traditional medicine.

Keywords : C. oxycantha, polyphenols, flavonoids, antibacterial activity, human nutrition
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