IDENTIFICATION OF BIOACTIVE COMPOUNDS USING RP-HPLC ANALYSIS OF SOME HAWTHORN SPECIES EXTRACTS *(CRATAEGUS PINNATIFIDA BGE., C. MONOGYNA JACQ., C. CRUS-GALLI)* AND ANTIOXIDANT ACTIVITY EVALUATION.

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Hawthorn belongs to the Rosaceae family and is one of the plants that has been used as a source of bioactive substances. The aim of this work was to determine the phenolic and flavonoid content and antioxidant activity of ethanol extracts of several hawthorn species (Crataegus pinnatifida Bge., C. monogyna Jacq., C. crus-Galli). Extraction was performed using 50 v/v% ethanol as solvent (10 g fruit in 100 ml solvent) at 45 °C for 50 min. The Folin-Ciocalteu method was used to measure total phenols, the aluminium chloride method was used to measure flavonoids, and the ferric reducing antioxidant power (FRAP) method was used to assess the antioxidant activity of the extracts. Identification of phenolic compounds present in the extract was performed by RP-HPLC. A positive linear correlation was observed between the index of antioxidant activity and the total phenolic content of ethanol extracts. The order of antioxidant activity between species was as follows (C. crus-galli > C. Pinnatifida Bge. > C. monogyna Jacq.). RP-HPLC method showed that the most abundant compounds were chlorogenic acid, ferulic acid, ellagic acid, and (+)-catechin, whereas gallic acid and caffeic acid were not detected. The extract has important antioxidant properties due to the presence of phenolic compounds. Of note is C. crus-galli species, their extracts have not been studied or mentioned to our knowledge.