

Antioxidant properties of freshly collected leaves of *Diplotaxis tenuifolia* (L.) DC.

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Diplotaxis tenuifolia (L.) DC, recognized by its common name wild rocket, assumes a notable role within the Brassicaceae family. The leaves of this plant offer a unique flavor that enhances culinary preparations, alongside their influence on improvement in overall human well-being due to its content of nutrients and bioactive compounds. Wild rocket possesses a wide range of antioxidants, incorporating vitamins such as C and E, along with carotenoids, glucosinolates, and flavonoids. The objective of this study was to assess the antioxidant properties of the fresh leaves from three wild rocket hybrids: *Marte* F1, *Venere* F1, and *T&T* F1. Using an 80% acetone solution as the solvent, powdered plant material was subjected to a 3-hour extraction period at a ratio of 1:10 (plant material:solvent). Upon extraction process, the antioxidant properties of the extracts were assessed spectrophotometrically using four distinct assays: DPPH•, ferric reducing power (FRP), *in vitro* phosphomolybdenum total antioxidant capacity (TAC), and cupric reducing antioxidant capacity (CUPRAC). Phytochemical analyses disclosed a variation in the quencher assay results among hybrids, ranging from 5.42 to 6.19 μmol Trolox/g. Nevertheless, the statistical analysis indicated a lack of statistically significant differences among the hybrids within this specific quencher assay. Similarly, no statistically significant differences were found among the samples in relation to the TAC results. The *T&T* hybrid achieved the highest results in both the FRP and the CUPRAC assays (2.79 mg/g AAE and 17.73 mg/g AAE respectively). Notably, there were no statistical differences observed between the *T&T* and *Venere* hybrids. However, both the *T&T* and *Venere* hybrids exhibited statistically significant differences when compared to the *Marte* hybrid. The overall results showed variations among the chosen hybrids regarding their antioxidant properties, while indicating the potential of fertilization in the enhancement of bioactive compound profile and biological activity.

Key words: antioxidant activity, *Diplotaxis tenuifolia*, wild rocket

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