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## NUTRITIONAL VALUE AND CHEMICAL COMPOSITION OF THREE TYPES OF *PETROSELINUM CRISPUM* LEAVES

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*Petroselinum crispum* Mill. Nym., commonly known as parsley, is an aromatic herb used to garnish and to give flavour and odour to dishes and salads [1]. The most common parsley types in the Mediterranean region are *Petroselinum crispum* ssp. *neapolitanum* (plain-leafed) and *Petroselinum crispum* ssp. *crispum* (curly-leafed). Many factors affect the parsley's composition and bioactive properties, such as the genotype, the irrigation regime, the planting density, the sowing date and the climate conditions. The main objective of this study was to evaluate the crop diversification through the determination of the nutritional value and the chemical composition of leaves from twenty-five plain-leafed, curly-leafed and turnip-rooted parsley (*Petroselinum crispum* ssp. *tuberosum*) cultivars, cultivated in central Greece. The proximate composition was evaluated by AOAC official procedures, free sugars and tocopherols were determined using liquid chromatography coupled to a refraction index (HPLC-RI) and fluorescence (HPLC-FL) detectors, respectively. Fatty acids were determined by gas chromatography coupled to a flame ionization detector (GC-FID) and organic acids by ultra-fast liquid chromatography coupled to a diode detector (UPLC-DAD) [1]. The plain and curly-leafed type contains higher amount of fat and energy than the turnip-rooted one, protein content was higher in the curly-leafed and turnip-rooted type and no significant differences were observed between the three types in terms of the carbohydrates content. The total sugars content did not differ significantly among the tested cultivar types and  $\alpha$ -tocopherol was the major tocopherol detected. The main fatty acids were  $\alpha$ -linolenic and linoleic acid followed by palmitic acid, while only linoleic acid content differed among the cultivar types. The curly-leafed type contains the highest amount of malic, citric and total organic acids, whereas the highest oxalic acid content was recorded in both curly-leafed and turnip-rooted type. The results of our study showed a great variability in the nutritional value parameters and the chemical composition of twenty-five parsley cultivars from three distinct types, which indicates the great potential of the valorization of the existing genotypes to increase the agrobiodiversity and introduce the turnip-rooted type in the Mediterranean region.

### References

[1] Â. Fernandes, N. Polyzos, S.A. Petropoulos, J. Pinela, E. Ardohain, G. Moreira, I.C.F.R. Ferreira, L. Barros, *Agronomy*, 10 (2020) 1416.

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