

Some physicochemical properties, antioxidant activity and total phenolic content of *Stachys germanica* ssp. *cordegira* briq seeds oil

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Abstract

Stachys germanica subsp. *cordigera* briq, belonging to the *Lamiaceae* family, is an emerging Moroccan plant with oily seeds. According to our best knowledge, no information is available about the characteristics of this *Stachys* species seeds oil. This study aimed to investigate some physicochemical properties, pigments content, in addition to total phenolic content (TPC) and antioxidant activity of *Stachys germanica* subsp. *cordigera* briq seeds oil. The physicochemical characteristics including peroxide value, acid value, and saponification value were carried out by standard methods, whereas, the TPC were determined by Folin-Ciocalteu method, and the antioxidant activity was assessed by 1,1-diphenyl-2-picrylhydrazyl (DPPH) scavenging capacity, Ferric reducing antioxidant power (FRAP) and total antioxidant capacity (TAC) assays. It was observed that *Stachys germanica* subsp. *cordigera* briq seeds oil has low values of acidity, peroxide value as well as total carotenoids and chlorophyll content while high level in saponification value, TPC, total antioxidant capacity, and radical scavenging activity have been shown. These preliminary results revealed that *Stachys germanica* subsp. *cordigera* briq seeds seems to be an interesting source of bioactive substances with potential uses in foods, cosmetics, and pharmaceuticals, and further detailed studies are required to examine its chemical composition and functional compounds.

Keywords: *Stachys germanica* subsp. *cordigera* briq, seeds oil, physicochemical properties, TPC, antioxidant activity.