

# Optimization of microwave-assisted extraction recovery of bioactive compounds from *Origanum glandulosum* and *Thymus fontanesii*

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Description

Microwave-assisted extraction (MAE) was used for the recovery of bioactive compounds of two Lamiaceae species: *Origanum glandulosum* and *Thymus fontanesii*. MAE was combined with response surface methodology (RSM) to optimize the effect of concentration of ethanol (%EtOH), temperature and extraction time on the total phenolic content (TPC), the extraction yield and the antioxidant capacity from the aerial parts of *O. glandulosum* and *T. fontanesii*. The total phenolic content was determined using the Folin-Ciocalteu reagent, while the antioxidant capacity was evaluated using 2,2'-azino-bis(3-ethylbenzothiazoline-6-sulphonic acid) (ABTS) and 2,2-Diphenyl-1-picrylhydrazyl (DPPH) radicals. Optimum conditions obtained for *O. glandulosum* MAE extracts were 0% ethanol, 42 °C and 2 min of extraction time, which give individual response values of  $23.29 \pm 0.38\%$ ,  $311.36 \pm 6.09$  mg GAE/g extract, 5 ...

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