

## Optimisation of Extraction of Phenolic Compounds in Algerian *Lavandula multifida*, Algeria, NW

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**Abstract :** *L. multifida* is applied to treat rheumatism and cold and has hypoglycemic and anti-inflammatory properties. The present study is to optimize the extraction of phenolic compounds in Algerian *Lavandula multifida*. The influences of parameters including temperature (decoction and maceration) and extraction time (15min to 45 min) on the flavonoids concentration are studied. The optimal conditions are determined and the quadratic response surfaces draw from the mathematical models. Total phenols were evaluated using Folin sicaltieu methods, total flavonoids were estimated using the Tri chloral aluminum method. The maximum concentration extracted, for total flavonoids, equal to 0.043 mg/g was achieved with decoction and extraction time of 41.55 min. However, for total phenol compounds highest concentration of 0.218 mg/g, is obtained with 45 min at 49.99°C.

**Keywords :** *L. multifida*, phenolic content, optimization, time, temperature

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