

Abstract

# Analysis of *Lavandula angustifolia* Compounds Obtained by Different Extraction Types by GC-MS Technique <sup>†</sup>

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**Abstract:** *Lavandula angustifolia* is a medicinal plant with important benefits for the human body, exhibiting antimicrobial and antioxidants activities. Scientific data has detailed the fact that lavender extract presented favorable characteristics to health, such as antibacterial, antifungal, antidepressive and anticancer properties. The aim of this study was to establish the efficiency of extraction methods by identification and determination of compounds extracted from lavender plant. Different types of extraction were used: ultrasound (50 °C/2 h) and magnetic agitation (ambient temp/24 h) in pure ethanol and hydroalcoholic mixture (ethanol:ultrapure water = 50:50 v/v). GC-MS chromatograph equipment was utilised for detection and quantitative determination of lavender compounds extracted (ex. eucalyptol, linalool, camphor, terpinenol, linalylacetat, etc), an Elite-5MS (5% diphenyl methyl polysiloxane stationary phase) column and a linalool standard. Optimal GC-MS separation parameters were established. In conclusion, it was observed that lavender sample extracted in ethanol, through magnetic agitation at room temperature, represents production by a more efficient method than the others, because more compounds were observed (over 20) than in the other lavender extract samples (approximately 6).

**Keywords:** GC-MS; linalool; extract plant



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