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**Título del artículo:** Comprehensive study on the potential of domesticated clones of rosemary (*Salvia rosmarinus* Spenn.): Implications for large-scale production and waste recovery in the development of plant-based agrochemicals

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**RESUMEN:** Rosemary is a versatile Mediterranean shrub valued for its culinary and medicinal uses, also finding applications as a food additive (E-392). This study explores the potential of rosemary for largescale cultivation as well as the valorization of its distillation residue, which constitutes more than 95% of the total biomass. Rich in bioactive compounds, this solid waste represents a valuable opportunity to develop renewable plant-based products. This study monitored the agronomic adaptations of cultivated clones of rosemary and evaluated the essential oil and phenolic content. This study also evaluated the biological potential of the ethanolic extracts from the distilled residue as an antifungal, antioxidant, chelator, and biostimulant in model tests. Interestingly, the extracts showed substantial phenolic content, exhibiting strong antifungal activity, antioxidant capacity, and efficient metal chelation. Furthermore, all extracts also demonstrated promising biostimulant effects on rooting. Among the clones evaluated, Pina de Ebro stood out especially for its balanced adaptability, high essential oil yield, and outstanding phenolic content, along with uniform biological capacities among individual plants and plots. Therefore, this study highlights the potential of utilizing the entire rosemary plant, enhancing the overall profitability of the crop and meeting the growing demand for eco-friendly and renewable resources in the market.

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