

Synthesis of new eugenol derivatives using microwave and ultrasound irradiation.

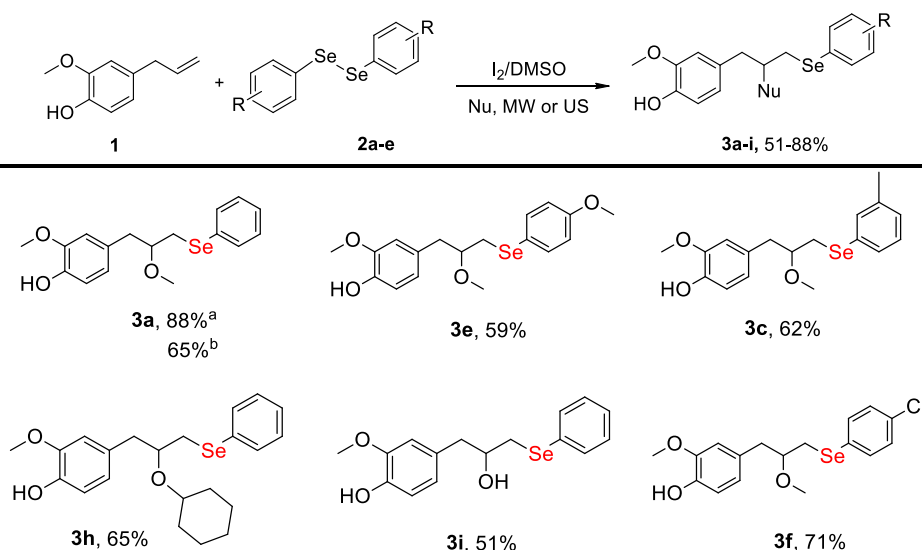
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ABSTRACT

Microwave and ultrasound irradiation are powerful tools for synthesizing organic compounds, due to their environmental benefits, easy operation, and cost-effectiveness.¹ To enhance eco-friendly synthesis, derivatives of natural products are synthesized to improve their biological properties. Eugenol is a natural product with good anti-inflammatory and antioxidant properties.² However, your easy oxidation and high volatility limit the use of this compound.³ Selenium compounds are widely studied due to their anti-neuroprotective and antioxidation properties.⁴ Herein, we showed the synthesis of new eugenol derivatives with selenium using microwave (a) and ultrasound (b) irradiation. Eugenol (**1**) was extracted from the clove using the hydrodistillation method (Scheme 1). Microwave synthesis followed the conditions proposed by Braga et al.⁵ and ultrasound irradiation, proposed in this work, it proved to be a cheaper methodology for the synthesis compared with microwave device.

Scheme 1.



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