

Selenoesters acting as benzoyl donors on lipase-catalyzed reactions

Ana Letícia Waszak da Silva (IC)^{1*} and Leandro Piovan (PQ)¹

¹) Department of Chemistry - Laboratório de Síntese Química e Enzimática (LaSQuE), Federal University of Paraná, UFPR, 81531-990

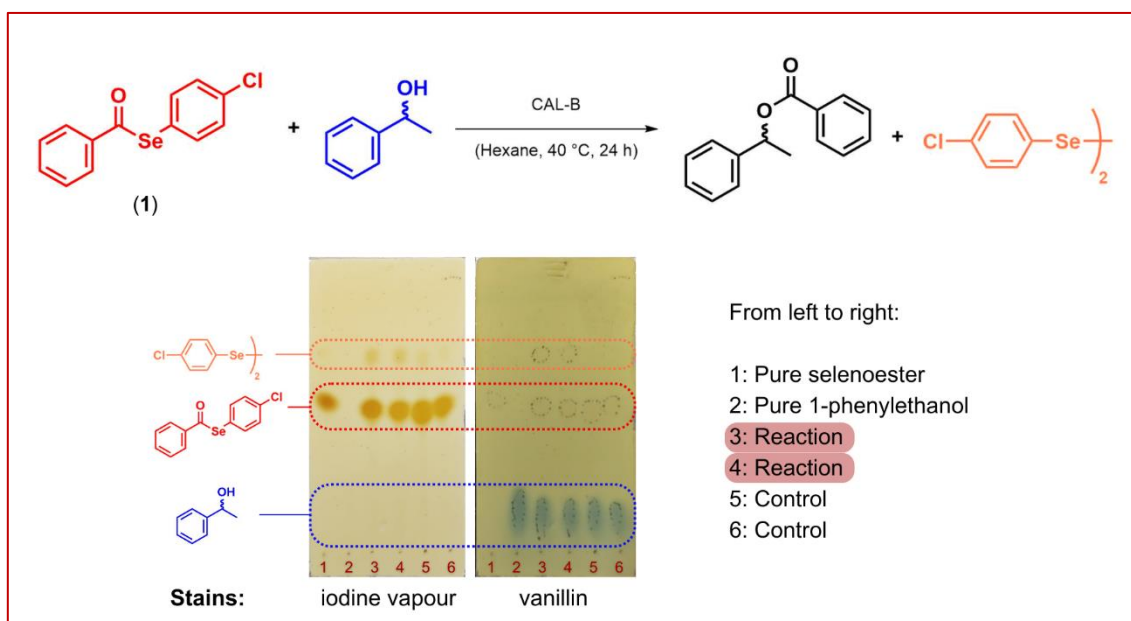
*e-mail: ana.waszak@ufpr.br

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ABSTRACT

Organoselenium compounds have been described in the literature for their most diverse potentials, including biological activity, and as key intermediates in organic and inorganic synthesis¹⁻⁴. Initially used in limited research, after the 1970s, biological and chemical studies involving the chalcogen Selenium^{1,4} have grown exponentially. The selenoesters, a subclass of organoselenium compounds, are examples of broadly applied Se-containing molecules mainly used as acyl donors in organic synthesis³.

Recently, selenoesters were applied successfully as acyl donors in lipase-catalyzed reactions³. Hence, we decided to evaluate the selenoesters' potential as benzoyl donors. Therefore, Se-(4-chlorophenyl) benzoate (**1**) was used as substrate in the EKR reaction carried out using the lipase CAL-B; 1-phenylethanol as nucleophile in hexane as solvent under 40 °C in batch mode. A control reaction was also carried out for analysis and comparison. After 24 h, the occurrence of reaction was observed only on the flask with CAL-B.



Scheme 1. Selenoester **1** used as benzoyl donor in lipase-catalyzed enzymatic kinetic resolution

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