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Preparation of chiral phenylethanols using various vegetables grown in Algeria

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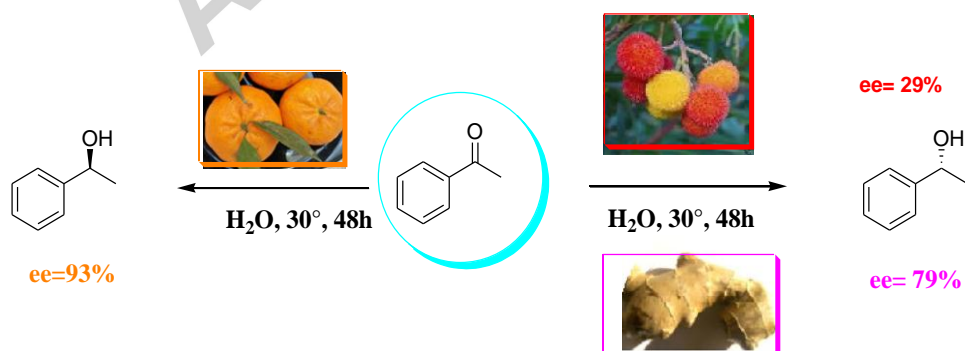
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Abstract

Ginger root, strawberry tree and mandarin growing in Algeria were evaluated for their ability to stereoselective reduction of prochiral ketones. The reactivity and the enantioselectivity are strongly dependent on the biocatalyst used, and the structure of ketone. High enantioselectivities were observed for some substrates (70–99% ee) especially for the bioreduction of acetophenone **1**, *p*-chloroacetophenone **2**, tetralone **5**, thiochromanone **6** and chromanone **7**. Using two different batches of *Citrus reticulata* from two regions of our country Annaba and Skikda, the corresponding optically active alcohols were obtained with high enantioselectivity and Skikda's variety was the best biocatalyst. The results reveal that these plants species can be a promising biocatalysts for the production of key intermediates.

Graphical Abstract



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