

Relative Efficacy Of Ester Synthesis By Various Lipases In Microaqueous Media And The Effect Of Water On Reaction Progress

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Abstract

Ten commercial sources of lipases were evaluated for comparative hydrolytic (in an aqueous emulsion) and ester synthesis (in microaqueous media) activities. There was little relationship between these activities for the lipases evaluated. An immobilized *Rhizomucor miehei* lipase had the greatest ester synthesis activity but had comparatively limited hydrolytic activity. For the five most effective ester synthesizing lipases, each had a characteristic optimum water content for maximum initial reaction rates. However, this optimum water content was greater than that associated with maximum reaction yield of ester formation, indicating the need for unique and differential moisture control during the progress of reaction to obtain maximum process efficiency.

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