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## Characteristics of lipase in dormant seeds catalyzed hydrolysis of olive oil in SDS-olive reversed microemulsions

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The activity of lipase-catalyzed hydrolysis of olive oil in SDS-1-butanol-olive-water microemulsions was investigated. The kinetics of lipases in reverse microemulsions and water were also compared. The influences of the characteristic parameters of these systems, such as pH, temperature (T), molar ratio ( $\omega_0$ ) of water to SDS, the concentrations of enzyme and substrate, on activity of enzyme were examined. According to the optimum conditions the production and activity were measured as; at pH=4, T= 40°C,  $\omega_0=12$ . The activation energy of the reaction was calculated from the Arrhenius plot. It was found that the hydrolysis reaction obeyed Michaelis-Menten kinetics and the apparent Michaelis  $K_{m,a}$  and the apparent maximal reaction rate  $V_{max}$  were determined. The effect of microemulsion's surfactant (SDS) on enzymatic activity will be also discussed.

### Biography

Mohamed E El-Hefnawy has completed his PhD at the age of 30 years from Osaka City University, Japan. He has published more than 12 papers in reputed journals (ISI).

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