

## **Substrate preference of mycelium-bound lipase from a strain of *Aspergillus flavus* Link**

### **ABSTRACT**

*Aspergillus flavus* mycelium-bound lipase demonstrates high preference towards short chain triacylglycerols and discriminates against triunsaturated triacylglycerols e.g. triolein. The great discriminating power of its lipase against triolein was shown in comparison with its ability to catalyse the hydrolysis of shorter chain triacylglycerols e.g. tricaprins and less was shown when hydrolysing tripalmitin. A similar phenomenon was noted when the mycelium-bound lipase was used to catalyse the reaction of coconut oil with palmitic acid or oleic acid in n-hexane. The relative percentages of octanoic acid and decanoic acid of coconut oil remaining after 20 h reaction were much less than those of the medium, long and unsaturated chain fatty acids suggesting that short chain fatty acids are preferred. The lipase hydrolyses coconut oil faster than palm olein followed by corn oil, rapeseed oil, soy bean oil and cottonseed oil. This indicates that *A. flavus* lipase has preference for oils containing saturated fatty acids rather than unsaturated fatty acids.

**Keyword:** *Aspergillus flavus* Link; Mycelium-bound lipase