

KAJIAN HIDROLISIS ENZIMATIS MINYAK SAWIT SECARA IN SITU¹⁾ (Study of In Situ Palm Oil Enzymatic Hydrolysis)

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ABSTRACT

In situ enzymatic hydrolysis was studied in the fresh dan bruised paim fruit mesocarp. These fruits were stored for 5 and 30 days in a room temperature Hydrolysis yields contained mono- and diacylglycerols in the crude palm oil were analyzed by HPLC-ELSD. The result showed that lipase m situ can hydrolize not only triacylglycerols (TAG) but also diacylglycerols (DAG) and monoacylglycerols (MAG) The reaction increased by adding water in to the pulp palm fruit mesocarp, but the activity is very low. However, lipase in situ preferred hydrolyzed TAG acyl chain number 2 than number 1 and 3. It was proved by the highest concentration of 1,3-DAG and specific position analysis of oil hydrolysis by using 1,3-dipalmitoyl-2-oleoylglycerol (POP) and GC-FID. The analysis showed that mol ratio of palmitic and oleic acid was 1 mmol : 38 mmol. PSI (positional specificity index) showed value 47.09.

Key words: lipase in situ, monoacylglycerols, diacylglycerols, triacylglycerols, 1,3-dipalmitoyl-2-oleoylglycerol, positional specificity index

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