Presentation Preference: Oral/Poster (pls indicate)

#### TITLE: FONT STYLE: ARIAL; FONT SIZE 13; UPPER CASE

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**Introduction/Background:** Lipase has been widely utilized as biocatalyst in

bioconversion reactions such as hydrolysis, alcoholysis, aminolysis,

and esterification. Compared to chemical catalysts, lipase is more favorable as it requires milder reaction conditions, having higher reaction rates, and is highly specific. However, lipase does come with some limitations, such as reduction in activity after repeated use, limited solvent compatibility, and higher cost. The objective of this work is to determine the reduction in activity of lipase in esterification reaction.

**Methodology:** Lauric acid and butanol were reacted at 40, 50, and 60°C for
1 h and agitated with10 mg lipase (Novozym® 435) using shaker water bath at 100 RPM. The activity was determined by measuring the lauric acid content with titrimetric method. Fourier transforms infrared (FTIR) spectroscopy and 1H and C-13 Nuclear Magnetic Resonance spectroscopy were used

to confirm the ester linkages formed.

**Results:** should be specific and relevant to the research hypothesis.

**Conclusions:** should include only conclusions directly supported by results.

 Keywords: (5 keywords)

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### Guidelines

\* Word limit: 250 words

\*Prepare the abstracts in four segments, i.e. Introduction/Background, Methodology, Results and Conclusions.

\*Introduction/Background: Introduction should provide the context for the article, the objective of the study, and the hypothesis or research question.

\*Methodology: Methods should include study design or type of analysis.

\*Results: should be specific and relevant to the research hypothesis.

\*Conclusions: should include only conclusions directly supported by results.