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## **The fiber fraction of oil palm trunk treated by ligninase thermostable produced by thermophilic bacteria isolated from hot spring of West Sumatra, Indonesia**

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The research purposed to find out interaction between oil palm trunk concentrations and ligninase doses to increase the fiber fractions of oil palm trunk before using as animal feeding. The oil palm trunk treated by ligninase thermostable aimed to hydrolysis of lignin as cell wall through separation of fiber fraction such as ADF, NDF, cellulose, and hemicellulose. The design used in this study was a Completely Randomized Design (CRD) factorial using 2 factors: (1) Factor A consisting of three levels of ligninase enzymes A1: 250 U/kg, A2: 500 U/kg, and A3: 750 U/kg; and (2) Factor B which is the concentration of oil palm trunks B1: 40%; B2: 60% that were repeated 3 times. The results showed that there is highly significant effect of interactions ( $p < 0.01$ ) between levels of ligninase enzyme (factor A) with the concentration of oil palm trunks (factor B) to ADF, NDF, cellulose, hemicellulose and lignin contents of hydrolysis products of oil palm trunk. The optimum concentration of oil palm trunks was 60% (v/w) and 750 U/kg of ligninase thermostable that were required to improve the fiber fractions quality to be easily digested by ruminantia animal such as cow, sheep, buffalo and goat.

### **Biography**

Yeti Marlida has completed her PhD from Universiti Putra Malaysia and Postdoctoral studies from Cornell University, Ithaca, USA. She is the Head of Feed Technology Laboratory at Department of Animal Nutrition and Feed Technology, Faculty of Animal Science, Andalas University, West Sumatra. She has published more than 15 papers in reputed journals and has been serving as an Editorial Board Member of reputed.

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