

ABSTRACT

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Study Program : Electrical Engineering

Thesis Title : Dielectric Strength Analysis of Virgin Coconut Oil with Butylated Hydroxytoluene (BHT) Additive Mixture as Transformer Liquid Insulation.

The dielectric strength of virgin coconut oil with a mixture of Butylated Hydroxytoluene (BHT) additives has been studied. The objective of the study was to analyze the effect of BHT addition fraction on the viscosity density, and breakdown voltage of virgin coconut oil. BHT with varying fractions from 0% to 70% was added to virgin coconut oil. Bulk density, viscosity and breakdown stress of virgin coconut oil were tested using pycnometer, viscometer, and high tension tester respectively. The results showed that the density, viscosity, and breakdown voltage increased from 0.9351 - 0.9435 g/cm³, 49.2 - 53.4 mPa.s, and 25.45 - 43.5 kV,

Keyword : Liquid Insulation, Virgin Coconut Oil, Butylated Hydroxytoluene (BHT), Penetrating Voltage, Viscosity, Density