

**EFFECTS OF BUTYLATED HYDROXYTOLUENE ON THE
DEGRADATION OF FATTY ACID IN COOKING OIL**

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ABSTRACT

EFFECTS OF BUTYLATED HYDROXYTOLUENE ON THE DEGRADATION OF FATTY ACID IN COOKING OIL

Unstable nature of cooking oil posed serious health risk to human. The effect of synthetic antioxidants to prevent the degradation of fatty acids in cooking oil for 4 hours heating at 180°C was studied. Antioxidant, which is butylated hydroxytoluene (BHT) was tested in cooking oil (palm oil). The composition of fatty acids (%) for fresh sample, sample without BHT and with BHT were determined and analysed using GC-MS and stability of antioxidant to prevent oxidation of oil was evaluated. From the composition of fatty acids (%), it shows that palmitic acid composition in fresh sample was decreased from 43.79% to 38.42% when heated without BHT while for the other fatty acids consists of stearic, oleic, and linoleic were increased from 3.69% to 3.88%, 41.15% to 46.06% and 11.37% to 11.64% respectively. Oil that was heating without BHT and oils with BHT gives the results that clearly demonstrated the BHT was found to be the least effective antioxidant to prevent oxidation of palm oil in this study due to the insignificant changes of the fatty acids compositions.