

**EFFECT HEAT TREATMENT ON DEGRADATION OF FATTY
ACID IN COOKING OIL**

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ABSTRACT

EFFECT HEAT TREATMENT ON DEGRADATION OF FATTY ACID IN COOKING OIL

Palm oil, which are part of human diet have shown significant changes in the quantity of saturated and unsaturated fatty acids during heat treatment occur. During the process of heating, oxidation degrade the quality of oils and reduces nutritional value. Therefore, the objective of this study was to evaluate any changes in percentage of fatty acid that occurs on fatty acid composition during heat treatment to the palm oil. Palm oil were investigated in this study by heat treatment up to their respective time periods for 0 hours, 2 hours, 4 hours, 6 hours and 8 hours respectively. The results palm oil showed an increase percentage in palmitic acid of saturated fatty acid (36.73% to 39.43%). In stearic acid and myristic acid did not show any change with an increase in heating time period. While unsaturated fatty acids which is oleic and linoleic showed that the percentage of fatty acid decrease with an increase in heating time period. Oleic acid decrease from 45.89% to 44.76% and linoleic acid decrease from 12.32% to 10.81%. Results showed that unsaturated fatty acid in palm oil had undergone oxidation process while saturated fatty acid does not undergone oxidation process. So, the oxidation of fatty acid in palm oil was occurred in this research. As a conclusion, palm oil can be considered as good cooking oil because it contain high amount of antioxidants, β -carotene, and vitamin E.