

**A REVIEW ON THE POTENTIAL OF NATURAL ANTIOXIDANT
SOURCES TO IMPROVE OXIDATIVE STABILITY IN EDIBLE OILS**

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

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Edible oils have been used widely to in food processing, especially process with thermal treatment such as frying. In the frying process, oils are usually used repetitively and will trigger the presence of lipid oxidation which will result in the degradation of fatty acids. This degradation of fatty acids will then result in the reduction of quality in oil which include decreasing of nutritional value. The reduction of quality in oil is very dangerous as it can migrate into the food that will be consume by human and trigger several negative health effects such as carcinogenic properties. In order to preserve the quality of the oil, antioxidants are used to improve its oxidative stability. As there are some restrictions and drawbacks of using synthetic antioxidant, natural antioxidants are more preferable to be used in food industry. In this paper, the subject that were reviewed are oils with high polyunsaturated fatty acids content and natural antioxidants that has the potential to improve oxidative stability of the oils which are rosemary extract, sesame seed extract, green tea extract and fruit peels extract. The optimum extraction method and active compounds contained in the extract will also be discussed.

Keywords: Edible Oil, Fatty Acids, Oxidative Stability, Natural Antioxidant, Antioxidant Activity, Optimum Extraction, Active Compound



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DEDICATION

I dedicate this thesis work to my family, advisor and everyone that
are interested in this topic.



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