

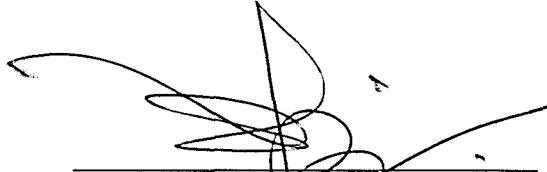
**EFFECT OF PROCESS OIL ON FILLED STYERENE BUTADIENE
RUBBER VULCANIZATES**

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**Final Year Project Report Submitted in Partial Fulfillment for Degree of
Bachelor of Science (Hons.) Polymer Technology
in the Faculty of Applied Sciences
Universiti Teknologi MARA**

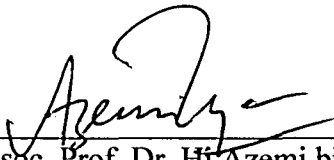
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The Final Year Project Report entitled “Effect of Process Oil on Filled Styrene Butadiene Rubber Vulcanizates” was submitted by Khairunnisa Liyana bt Abdul Hamid Ridza, in partial fulfillment of the requirements for the Bachelor of Science (Hons.) Polymer Technology, in the Faculty of Applied Sciences, and was approved by



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ABSTRACT

Theoretically, unfilled rubber barely gives poor mechanical properties. The use of filler would increase the mechanical properties. In this study, reinforcing material used is carbon black (HAF N330). For better dispersion of filler, processing oil is required during rubber compounding. The processing oils that added are aromatic oil, paraffinic oil, and naphthenic oil. The goal of this investigation is to evaluate the mechanical properties of compounds. In determining the changes in the mechanical properties of SBR, some testing is implemented. The testing are tensile test, hardness test, and aging test. Moreover, density and cross-link density of compounds also determine. As a result, carbon black does improve the mechanical properties of vulcanized SBR. Although paraffinic acts as oxidation resistance it also imparts lower mechanical properties.