

**PETROLEUM PRODUCTS INDUCED METALLIC  
CORROSION**

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# **PETROLEUM PRODUCTS INDUCED METALLIC CORROSION**

**By**

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Bachelor of Science (Hons.) Chemistry**

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KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA  
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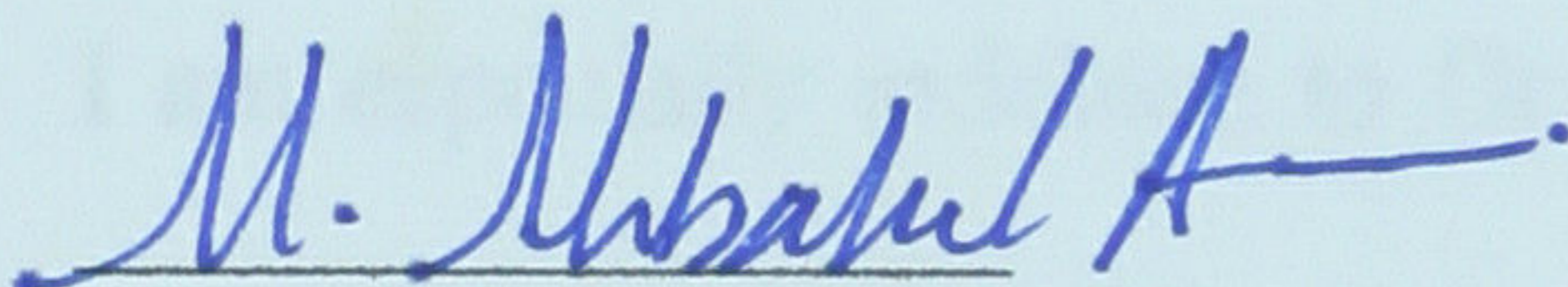
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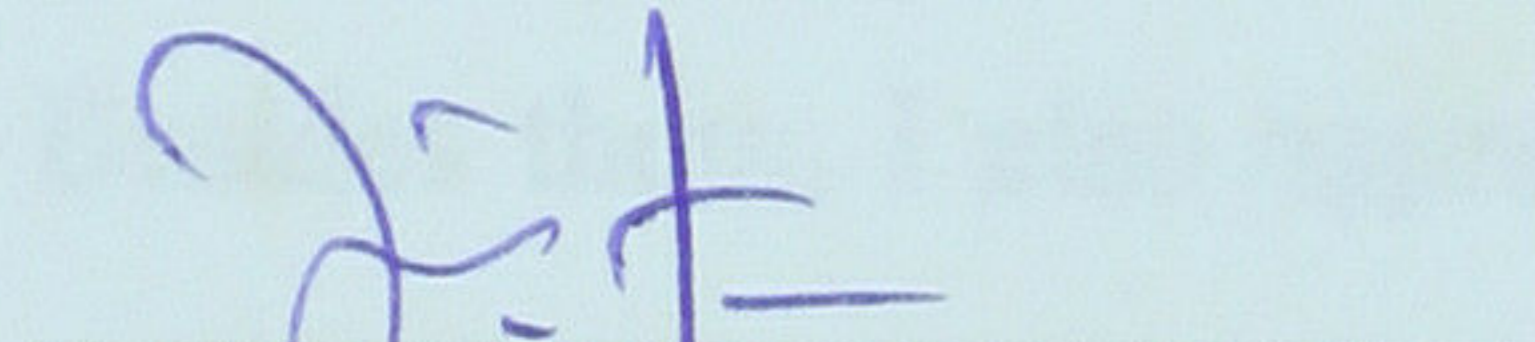
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## **ABSTRACT**

Since few decades ago, researchers had planned and run hundreds of researches on metal corrosion study induced by petroleum product. The behaviour of this type of corrosion has been monitored to see how it attacks the surface of metals by using some certain standard method.

In total immersion test, different rate of reaction will be identified to determine the resistant of copper and aluminium towards corrosion. Those metals were exposed to four different oils in temperature of 60°C and 80°C at a certain period. Besides that, trace metal detection of oil was accomplished to discover the concentration of metal ions that transfer into the oil. Finally, the surface of metals was analyzed to classify the type of corrosion that occurs upon metals.

## **ABSTRAK**

Kajian mengenai pengaratan logam oleh hasil petroleum sudah lama diusahakan dan masih giat dijalankan. Perilaku pengaratan yang terbentuk di permukaan logam diselidiki secara terperinci melalui kaedah-kaedah piawai tertentu.

Dalam ujian rendaman sepenuhnya, perbezaan kadar tindakbalas ditentukan bagi mengetahui ketahanan kuprum dan aluminium terhadap pengaratan. Kedua-dua logam ini direndam ke dalam empat jenis minyak pada suhu 60°C dan 80°C untuk satu tempoh tertentu. Selain itu, minyak yang telah digunakan diuji kandungan logam surih di dalamnya bagi mengetahui jumlah kepekatan ion logam yang memasuki badan minyak tersebut. Akhir sekali, permukaan kuprum dan aluminium dianalisis untuk mengklasifikasikan jenis-jenis pengaratan yang terbentuk di atasnya.