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**A STUDY ON THE MINERAL CONTENTS OF
KLANG PORT SEDIMENTS**

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Dedicated to:

Mohamad Bin Awang Isa (Abah)

Ruhani Bt Ismail (Mama)

Siti Nurul Hayati Bt Mohamad (Kak Ti) and family

Siti Nurul Hazlina Bt Mohamad (Kak Na)

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Muhammad Zarim Bin Mohamad (Adik)

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LIST OF ABBREVIATION / SYMBOLS

%	percentage
°C	degree Celcius
L	liter
mL	milliliter
µm	micrometer
cm	centimeter
mm	millimeter
g	gram
>	More than
<	Less than
K	Kaolinite
I	Illite
Qz	Quartz
Fd	Feldspar
XRD	X-Ray Diffraction

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ABSTRACT

This study was conducted to determine the mineral contents of Klang Port Rivers sediments. The sediments were taken from ten stations along the Klang Port River. The sediments were collected using Van Veen grab and were processed for sand and clay fractions separation by sedimentation and decantation. The mineral contents in the clays were determined using X – Ray Powder Diffraction (XRD) while the sand fraction were determined using a petrographic microscope having an image analyzer. Results of the sand fractions showed that quartz is the dominant mineral found in the study area while feldspar in station 9 and moderate in station 7. For the clay mineral, kaolinite is moderate in stations 4, 5, 7, 8 and 9 while few in station 10. Illite is moderate in stations 8 and 10 while few in stations 4 and 7. Opaque materials were also present a few in stations 4, 7, 8 and 10. Hydrometer method is used for soil texture analysis. Sand is dominant in stations 1, 2, 3 and 6 while clay is dominant in stations 4, 5, 7, 8, 9 and 10.

ABSTRAK

Kajian ini dijalankan adalah untuk menentukan kandungan mineral dalam sedimen di Sungai Pelabuhan Klang. Sedimen diambil dengan menggunakan alat penyampelan iaitu pencekau Van Veen dan pengasingan agihan pasir dan liat dengan menggunakan kaedah pemendapan dan penyaringan. Sebanyak sepuluh sampel diambil di sepanjang muara sungai di sekitar kawasan Pelabuhan Klang Utara. Kandungan mineral liat ditentukan dengan menggunakan alat pengasingan iaitu X – Ray Powder Diffraction. Sementara itu mineral bagi pasir pula ditentukan menggunakan mikroskop petrografik dengan menganalisis imej. Keputusan yang diperolehi menunjukkan kuarza hadir di semua stesen. Manakala bagi kaolinit hanya terdapat di stesen 4, 5, 7, 8, 9 dan 10. Material opaque hanya wujud dalam jumlah yang sedikit di stesen 4, 7, 8 dan 9. Kaedah hidrometer digunakan untuk menentukan jenis tanah yang membentuk sedimen. Keputusan menunjukkan tekstur tanah didominasi oleh liat di stesen 4, 5, 7, 8, 9 dan 10 manakala pasir lebih dominan di stesen 1, 2, 3 dan 6 .