

MINERALOGY OF KUALA LUMPUR RIVER  
ESTUARINE SEDIMENTS

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**MINERALOGY OF KUALA IBAI RIVER ESTUARY SEDIMENTS.**

BY

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**DEDIKASI :**

**BUAT KELUARGA TERSAYANG;**

1. **Mr. Abeng bin Mee ( dad )**
2. **Madam Hajjah bte Tony ( mom )**
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## ABSTRAK

Projek ini bertujuan untuk mengenalpasti kandungan dan jenis-jenis mineral serta taburannya yang terdapat di sepanjang 5 km pertama muara Sungai Ibai. Kajian ini telah dilakukan mengikut 10 stesen yang telah di tentukan lokasinya ( 500 m antara stesen ). Sampel sedimen yang telah diambil akan di bawa ke makmal untuk menjalani 3 bentuk analisis yang utama, iaitu *Thin Section Analysis*, *X-ray Diffractometer ( XRD )* dan analisa tekstur sedimen.

Setelah kajian ini selesai, beberapa mineral yang terdapat di muara Sungai Ibai telah dikenalpasti. Selain itu juga, corak taburan mineral–mineral serta kelas-kelas tekstur dan jenisnya juga telah di kenalpasti. Antara mineral-mineral utama yang terdapat di muara Sungai Ibai adalah mineral *quartza*, *feldspar*, *micas*, *kaolinite* dan *chlorite*.

Kajian jenis tekstur telah di gunakan untuk mengelaskan sedimen di muara Sungai Ibai ini berpandukan peratusan kandungan 3 jenis saiz-partikel sedimen yang utama, iaitu jenis pasir, lumpur dan liat. Di dapati stesen 1 dan stesen 2 yang terletak di mulut sungai mempunyai jenis tekstur berpasir, manakala stesen-stesen berikutnya di lihat semakin kurang pasir dan sebaliknya untuk tekstur jenis liat dan lumpur. Dalam kajian ini, kelas-kelas tekstur di tentukan dengan *USDA textural triangle*.

## ABSTRACT

This project was aimed to determine the mineral contents of sediments and their distribution along the first 5 km of Kuala Ibai River. This investigation was done by dividing the sampling site into 10 main stations ( 500 m between each station ). Sample from Kuala Ibai river were brought to laboratory to run 3 main analysis; *Thin Section Analysis*, *X-ray Diffractometer ( XRD )* and *Texture analysis*.

After this study was done, several minerals from Kuala Ibai River were identified. Besides this, the pattern of minerals distribution and their texture classes was also determined. Some of minerals that were identified from Kuala Ibai River sediment are *quartza*, *feldspar*, *micas*, *kaolinite* and *chlorite*. *Quartz* are dominant mineral and for clay mineral, very few amounts of *kaolinite* were observed.

Textural analysis was done to determined the classes of the sediment, according to percentages of *sand*, *silt* and *clay*. Station 1 and station 2 which are located at Kuala Ibai river mouth was mostly sandy, and the next stations have a decreasing trend with sand contents. Clay and silt are increasing from one station to one station. In this study, the texture classes of the sediments were determined using the USDA textural triangle.