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Clay mineralogy of Kuala Ibai River sediment / Donnie Patrick Amir.

Lihat sebelah

CLAY MINERALOGY OF KUALA IBAI RIVER SEDIMENT

By

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TABLE OF CONTENTS

LIST OF FIGURES

FIGURE

LIST OF TABLES

TABLE

LIST OF ABBREVIATION

°C	degree Celsius
μm	micrometer
mL	millimeter
L	liter
St.	station
HCL	Hydrochloric Acid
H_2O_2	Hydrogen Peroxide
$NaHCO_3$	Sodium bicarbonate
Å	d – spacing

LIST OF APPENDICES

Appendix

ABSTRAK

Sebanyak sepuluh sampel telah diambil semasa penyempelan, dimana ia telah dijalankan di muara Sungai Ibai. Sampel sedimen telah di lakukan analisis untuk menunjukkan kandungan mineral liat dan juga tekstur sedimen untuk sedimen permukaan muara Sungai Ibai. Alat X-ray diffractometer (XRD), telah digunakan untuk menganalisis mineralogi manakala bagi tekstur sedimen, kaedah ayak basah telah digunakan. Secara umumnya, sedimen di Sungai Ibai didominasikan oleh kuarza dimana peratusnya melebihi 70%. Selain itu, kajian juga menunjukkan sedimen dikawasan tersebut juga didominasikan oleh mineral primer yang lain. Disamping itu, terdapat juga kehadiran mineral lain seperti micas, feldspar, kaolinite dan klorit, namun begitu, kewujudannya sangat sedikit. Seterusnya, bagi tekstur sedimen pula, tekstur berliat mendominasi kawasan penyempelan terutama di stesen 6, 7, 8, 9 dan 10. Namun begitu, tekstur berpasir mendominasi sedimen di kawasan muara Sungai Ibai.

ABSTRACT

Ten sediment samples were collected from the Ibai River estuary. The sediments were analyzed to determine the clay mineral contents and to study the sediment texture in the Ibai River estuary surface sediment. The mineralogy was analyzed using the X-ray diffractometer (XRD) while the texture analysis was determined using the wet sieving method. Generally, the sediments in Ibai River are low in clay mineral contents, where quartz is dominant in the area, which was over 70%. Thus, the study also indicates that the study area, is dominated by primary minerals. In addition, trace amount of other minerals such as feldspar kaolinite micas and chlorite also revealed in this study. Texture analysis shows that the dominant texture in the sediment is clay especially at stations 6, 7, 8, 9 and 10. However, sand texture was dominant the sediment at the river mouth of the estuary.