THE PAHs DISTRIBUTION AND IT SOURCE OF CONTIMINATION IN SEDIMENT AT KERTEH RIVER, TERENGGANU

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The PAHs distribution and it source of contimination in sedimen at Kerteh River, Terengganu / Mohd Faiz Jaya.

Lihat sebelah

THE PAHs DISTRIBUTION AND IT SOURCE OF CONTIMINATION IN SEDIMENT AT KERTEH RIVER, TERENGGANU

By

Mohd Faiz bin Jaya

Research Report submitted in partial fullfillment of
The requirement for the degree of
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DEPARTMENT OF MARINE SCIENCE
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DECLARATION AND VERIFICATION REPORT

FINAL YEAR RESEARCH PROJECT

It is hereby declared and verified that this research report entitled:
The PAHs Distribution And It Source Of Contimination In Sediment At Kerteh River, Terengganu By, Mohd Faiz bin Jaya Matric No UK16728 have been examined and all errors identified have been corrected. This report is submitted to the Department of Marine Science as partial fulfillment towards obtaining the Degree of Bachelor of Science (Marine Science), Faculty of Maritime Studies and Marine Science, Universiti Malaysia Terengganu.

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TABLE OF CONTENTS

LIST OF TABLE

LIST OF FIGURE

LIST OF ABBREVIATIONS/SYMBOLS

µL	microliter
%	percentage
cm	centimeter
g	gram
GC-FID	Gas Chromatography – Flame Ionization Detector
GPS	Global Position System portable
DCM	Dichloromethane
HLC	Hydrochloric Acid
L	liter
S	second
Min	minute
H	Hour
ml	Milliliter
mm	millimeter
Na2SO4	Anhydrous Sodium sulphate.
oC	celcius
AH	Aliphatic Hydrocarbon
TAH	Total Aliphatic Hydrocarbon
PAH	Polycyclic Aromatic Hydrocarbon
ppm	Par Permilion

LIST OF APPENDICES

ABSTRACT

Soil sample were taken from 10 stations in Sungai Kerteh and 3 stations at Port of Kerteh have taken soil samples to determine the level of Polycyclic Aromatic Hydrocarbon content, PAH. Sampling was conducted at two times that on the 26-28 April 2010 for the first sampling. For the second sampling conducted on the 21-23 October 2010. Sample were extracted by Soxhlet method and used to separate Coloum Packed were used to separate TAH and PAH, before analyzed using gas-flame ionization detector chromatograph, GC-FID was used to obtain readings. A total of 16 species of Polycyclic Aromatic Hydrocarbon, PAH and 35 species of Total aliphatic hydrocarbon, TAH has been used as a benchmark to look for a compound found in soil samples taken in the area of sampling. Total Aromatic Hydrocarbon, TAH found in this area is in the range of ND - 14839.601 μg/g to the river in the port area mean while amount that is due to the content found within the ND-2315.420 μg/g for the first sampling. For the second sampling of content is found in the River Kerteh from ND - 24268.442 μg/g and ND-215583μg/g. Through this study, the type of distribution and the fraction of PAH molecules by the presence of the indicator member, or from natural occurring sources of pollution. From these studies also find that the area is still safe and accepted level of pollution does not exceed the highest level.

TABURAN DAN SUMBER PENCEMARAN PAH DI SUNGAI KERTEH DAN PELABUHAN KERTEH, TERENGGANU

ABSTRAK

Sebanyak 10 stesen di Sungai Kerteh dan 3 station di Pelabuhan Kertah telah diambil sample tanah untuk diuji tahap kandungan Polycyclic Aromatic Hydrocarbon, PAH. Sampling telah dijalankan sebanyak 2 kali iaitu pada 26-27 April 2010 untuk sampling pertama kali. Untuk sampling kedua dijalankan pada 21-23 Oktober 2010. Sample-sample tersebut telah dianalisis menggunakan kaedah Soxhlet dan Packed Coloum digunakan untuk memisahkan TAH dan PAH. Untuk mendapatkan bacaan, Gas chromotograpi- flame ionization detector, GC-FID telah digunakan untuk mendapatkan bacaan. Sebanyak 16 spesis Polycyclic Aromatic Hydrocarbon, PAH dan 35 spesis Total Aliphatic hydrocarbon, TAH telah digunakan sebagai penanda aras untuk mencari compound yang terdapat pada sample tanah yang diambil dikawasan sampling. Jumlah Aromatik Hydrocarbon yang dijumpai di kawasan ini adalah berada dalam lingkungan ND - 14839.601 μgL^{-1} untuk kawasan sungai Kerteh manakanla di kawasan pelabuhan Kerteh jumlah kandungan ynag dijumpai dalam lingkungan ND-2315.420 μgL^{-1} untuk sampling yang pertama. Untuk sampling yang kedua kandungan yang dijumpai di Sungai Kerteh adalah daripada ND - 24268.442 μgL^{-1} dan ND-215.583 μgL^{-1}. Melalui kajian ini, jenis taburan PAH dan pecahan antara molekul-molekul member penunjuk kehadiran melalui semulajadi atau daripada sumber pencemaran yang berlaku. Daripada kajian ini juga mendapat tahu bahawa kawasan ini masih dalam keadaan selamat dan tahap pencemaran yang berlaku tidak menjangkaui tahap yang tinggi.