

THE SEDIMENT'S GEOCHEMICAL PROFILE OF SOME
CHEMICAL ELEMENTS IN TROPICAL AND SUBTROPICAL MANGROVE
FORESTS OF TROPICAL ISLANDS, MALAYSIA

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**THE SEDIMENT GEOCHEMICAL PROXY OF SOME CHEMICAL
ELEMENTS IN DUNGUN AND PAKA MANGROVE FOREST IN TERENGGNU,
MALAYSIA**

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ABSTRACT

There are not many researches done in the mangrove forest of Malaysia especially in the geochemical field. This research is carried out in the mangrove forests of Paka and Dungun, Terengganu. From each mangrove forests surface sediments samples were collected. Geochemical proxy of Al, Mn, Co, Cu and Cr, and organic carbon were carried out to assess the paleoproductivity of the mangrove forests. The total mean value for the geochemical elements in Dungun mangrove forests are, Mn (196.82ppm), Al (8.66%), Co (55.09ppm), Cu (67.40ppm) and Cr (96.38ppm), whereas for Paka mangrove forests mean value for geochemical elements are, Mn (317.38ppm), Co (33.76ppm), Cu (44.07ppm), Cr (66.02ppm) and Al (5.03%). The total mean value of the organic matters content in Dungun mangrove forests is 3.135% and 3.23% for Paka mangrove forests. Normalization and correlation of the elements were carried out to determine the source and the correlation with organic carbon in the mangrove forests. Most of the geochemical elements are anthropogenic sources except for Al, Mn and Co for Dungun mangrove forests and Co and Cr for Paka mangrove forests.

ABSTRAK

Tidak terdapat banyak kajian dilakukan terhadap hutan paya laut terutamanya di dalam bidang geokimia. Kajian telah dilakukan di Hutan paya laut Paka dan Hutan paya laut Dungun. Sampel permukaan sediment telah diambil dari Hutan Paya Laut Paka dan Dungun., Terengganu. Faktor geokimia sediment bagi Mn, Al, Co, Cu dan Cr dan juga karbon sedimen telah dikaji untuk mendapatkan poleoproduktiviti hutan paya laut. Nilai purata bagi elemen geokimia dalam sediment permukaan hutan paya laut Dungun ialah Mn (196.82ppm), Al (8.66%), Co (55.09ppm), Cu (67.40ppm) and Cr (96.38ppm), manakala bagi hutan paya laut Paka ialah Mn (317.38ppm), Co (33.76ppm), Cu (44.07ppm), Cr (66.02ppm) and Al (5.03%). Nilai purata kandungan sedimen karbon bagi sediment permukaan bagi hutan paya laut Dungun ialah 3.135% dan 3.233% bagi hutan paya laut Paka. Normalisasi dan korelasi bagi elemen kimia adalah bertujuan untuk mengetahui punca dan korelasi dengan sedimen karbon dalam sediment permukaan hutan paya laut. Secara keseluruhannya, elemen geokimia adalah dari punca antropogenik bagi Cu dan Cr di hutn paya laut Dungun dan Co dan Cu hadir secara antropogenik di hutan paya laut Paka, Terengganu,