

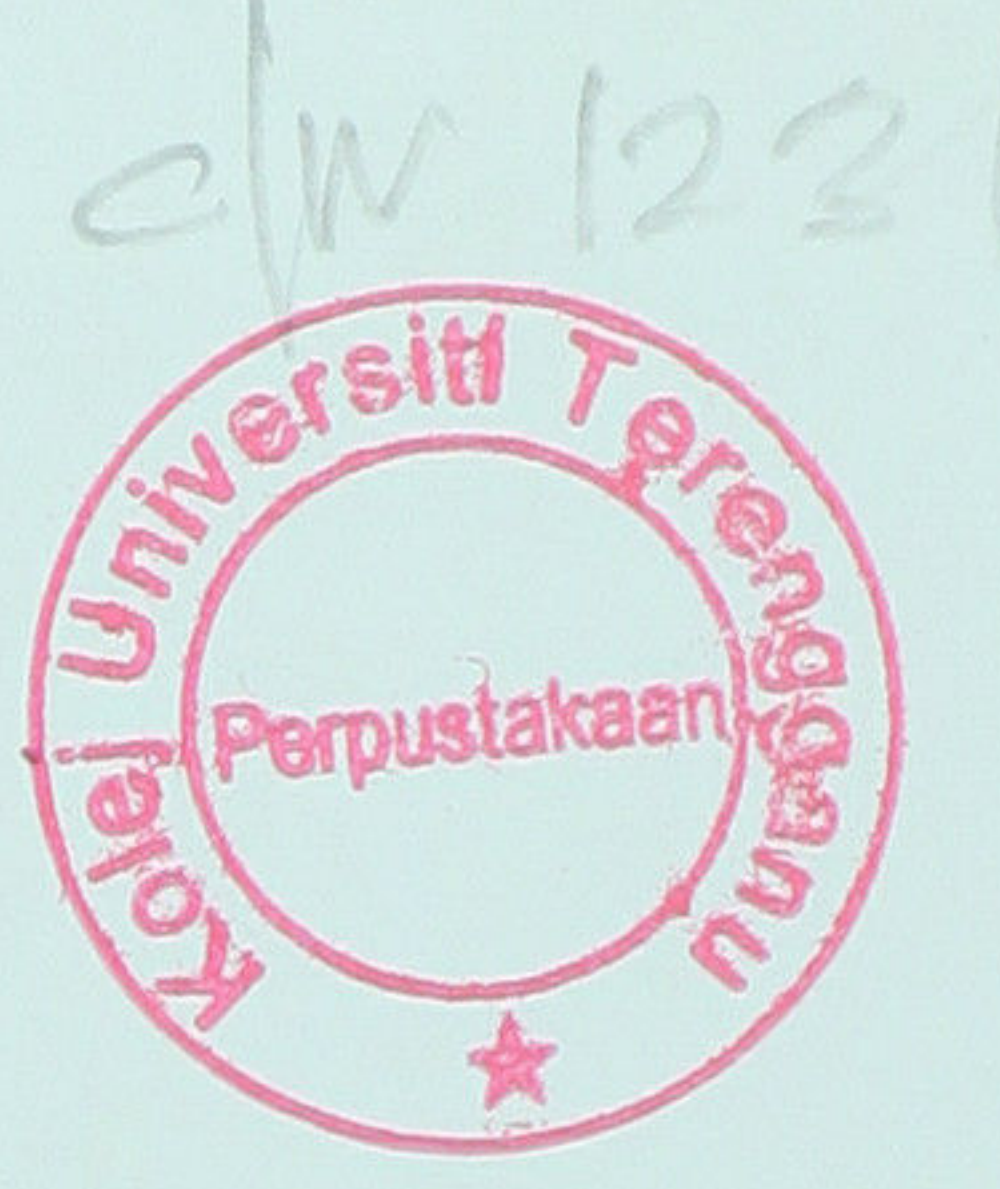
LABORATORY PREPARATION AND CHARACTERIZATION  
OF CEMENT FROM RICE HUSK ASH

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2002

1100024651



LP 4 FST 4 2002



1100024651

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No. Panggilan: LP 4 FST

Judul: Laboratory preparation and characterization...

Tarikh	Waktu Pemulangan	Nombor Ahli	Tanda tangan

18/2/10

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2002

HAK MILIK  
PERPUSTAKAAN KUSTEM

**LABORATORY PREPARATION AND CHARACTERIZATION  
OF CEMENT FROM RICE HUSK ASH**

**By**

**CHIOK KIAN SOON**

Thesis submitted in partial fulfillment of the requirement  
for the Degree of Science (Hons.)

**Faculty of Science and Technology  
UNIVERSITY COLLEGE OF SCIENCE AND TECHNOLOGY  
MALAYSIA  
UNIVERSITY PUTRA MALAYSIA**

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# LABORATORY PREPARATION AND CHARACTERIZATION OF CEMENT FROM RICE HUSK ASH

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**CHIOK KIAN SOON**

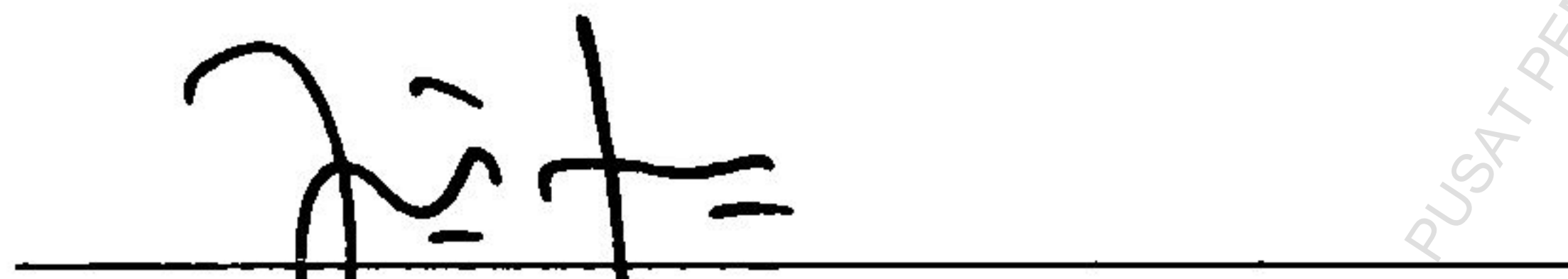
Approved by:

Supervisor

  
(Dr. Misbahul Mohd Amin)

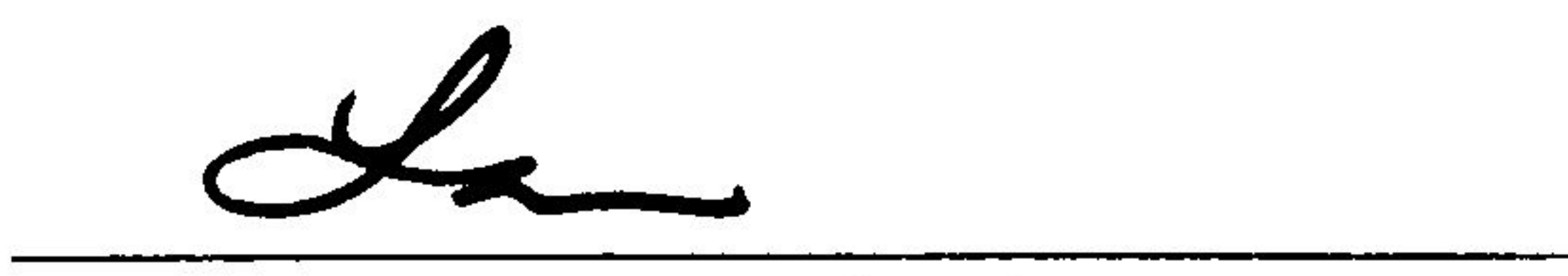
Date: 28.03.2002

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Date: 31/3/02

## ABSTRACT

Cement has been produced at laboratory from the agricultural waste, rice husk ash. For this production, rice husk is fully de-carbonized in an electric furnace to produce rice husk ash. Two sets of cement samples have been prepared by mixing 24.5 and 26.5% rice husk ash respectively with other chemicals. The formulated cement samples were tested for their chemical composition and physical characteristics. The tests were done at Pahang Cement Sdn. Bhd. The results of tests showed that the chemical composition of produced cement was close to ordinary Portland cement, but the ideal percentage of rice husk ash that should be use is predicted as 23.5%. On the other hand, the samples failed in physical tests due to insufficient burning condition. Furnace with the desired burning temperature was not available at the time this project was carried out. Based on the overall results, rice husk ash can be use in the production of cement.

## ABSTRAK

Kajian ini melibatkan penyediaan simen di dalam makmal daripada abu sekam padi. Untuk tujuan ini, sekam padi dibakar untuk menghilangkan kandungan karbon dengan menggunakan relau elektrik dan menghasilkan abu sekam padi. Dua set sample simen disediakan dengan mencampurkan 24.5 dan 26.5% abu sekam padi masing-masing dengan bahan kimia yang lain. Hasil simen ini diuji atas kandungan kimia dan sifat-sifat fizikalnya. Ujian-ujian ini dijalankan di Pahang Cement Sdn. Bhd. Keputusan ujian menunjukkan sampel simen mempunyai kandungan kimia yang hampir serupa dengan simen yang dijual di pasaran, namun peratusan abu sekam padi dijangkakan paling sesuai digunakan adalah sebanyak 23.5%. Di sebaliknya, sampel simen gagal dalam ujian fizikal disebabkan suhu pembakaran yang tidak memadai. Relau dengan suhu pembakaran yang tinggi tidak terdapat pada masa projek ini dijalankan. Merujuk kepada keputusan keseluruhan, dapat disimpulkan bahawa abu sekam padi boleh digunakan untuk menghasilkan simen.