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P-286 Construction and Demolition Wastes and its Management: A Case Study in Klang Valley, Malaysia

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Many activities in construction and demolition projects are generally considered as complicated and unfriendly that may affect surrounding environment and public health. Construction, remodeling, repairing or demotion works of buildings and roads generate large amounts of hazardous and non-hazardous materials. This study highlights the major types of wastes and the specific causes of their generation. We also discuss the present ways of managing those materials. The paper concludes by providing recommendations on how to better manage the C&D wastes. As a case study, Klang valley in Malaysia has been considered. Major construction activities were taken place in Klang Valley and its surrounding areas include Federal Territory of Kuala Lumpur. In the present research project, a modest attempt has been made to highlight a number of issues in waste management, particularly C&D waste management in the Klang valley of Malaysia.

P-287 Homology Modelling and Structural Analysis of Phytases

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Homology modeling is a powerful tool in predicting the three dimensional (3D) structure of a protein using a solved structure within the same family as template. Compared to other methods such as X-ray crystallography and NMR, homology modelling has the advantage of being a fast yet reliable technique in solving proteins' 3D structures, starting from their amino acid sequences. In this study, homology modelling was used to obtain the 3D structure of two different phytases using only their amino acid sequence; phyFAUIA1_H which belongs to the histidine acid phosphatases, and *Bacillus subtilis* SAUIA243 which belongs to the β -propeller phytases. *E. coli* phytase (PDB code 1dkm) was used as a template for phyFAUIA1_H model with 99.512% sequence identity. On the other hand, *Bacillus amyloliquefaciens* (PDB code 2poo) was used as a template for *B. subtilis* SAUIA243 model with 71.268% sequence identity. The BLAST (Basic Local Alignment Search Tool) algorithm was used to find the highest scoring ungapped local alignment between the query and database sequences. This particular score uses the BLOSUM substitution matrix, which is a block substitution matrix that uses segments of blocks corresponding to the most highly conserved regions of proteins. Both models were evaluated and found to be quite satisfactory without being manually modified. Phytases are important constituents in Animal feed industry. These models can now be used to design new phytases, with improve properties such as enhanced enzyme activity, pH tolerance, and thermostability.

P-288 Study on the Effectiveness of Coir Fibre Geo-Textile for Erosion Control Under the Dynamic Approach

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This paper presents the effectiveness of coir geotextiles for erosion control. In the context of sustainable slope management, coir is a cheap and locally available material that can be used to strengthen traditional earthen bunds or protect the banks of river from erosion. Particularly in developing countries, where coir is abundantly available and textiles can be produced by small-scale industry, this is an attractive alternative for conventional methods.