

Estimating limestone dissolution rates in the Kinta and Lenggong valleys using the micro erosion meter: a preliminary study

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Limestone dissolution rates have been measured using micro erosion meter in the area of Kinta and Lenggong valleys. Limestone samples in the form of tablets are used with the micro erosion meter which measures the lowering of the tablets' surface after being exposed in certain environments of erosion. The samples are left in three different conditions in the field: in running streams, in stagnant pond water and exposed to the subaerial condition.

Thirty one (31) samples were left to be dissolved and due to the time constraint, the last measurements were taken after 5 to 14 months in the field. The results obtained showed that the rates for each tablet are highly variable with the range of about 1.830 to 0.005 mm/yr. More reliable results are considered representative of dissolution rates in/under running water and stagnant water environment, with values of 0.369 and 0.244 mm/yr, respectively. Depositions are also common on some sample surfaces, believed to be due to the airborne dust and material from quarrying activities in the study area. Growth of mosses on the samples left in the subaerial condition is also common. For these samples, the erosion rate could not be obtained.