

Nitrate levels in the surface waters collected in 2005 from intertidal and urban drainages of the west part of Peninsular Malaysia

ABSTRACT

The intertidal and urban waters of west Peninsular Malaysia are interesting area for ecotoxicological studies because they receive wastes due to agricultural, municipal and industrial wastes along the west coast of Peninsular Malaysia. Surface water samplings were conducted from the intertidal coastal waters and from urban rivers/drainages from northern to southern parts of the west coastal areas of Peninsular Malaysia between January and April 2005. These nitrate levels in the south western part ranged from 0.33-0.56mg/L while those in the north western part ranged from 0.11 to 1.91mg/L. These nitrate levels in these intertidal waters were much lower than those found for urban drainages (0.45 to 2.27mg/L) of Peninsular Malaysia. Overall, the mean values for the nitrate concentrations (mg/L) follow: Urban drainages (1.04)>north western intertidal (0.79)>south western intertidal (0.43). The results showed the occurrence of nitrate contamination in the urban area due to human-induced activities such as domestic wastes. Albeit this study revealed no serious threat of nitrate contamination in the urban and intertidal coastal waters compared to the safety limits, continuous monitoring should be carried out on the concentrations of nitrate in the aquatic ecosystem of Peninsular Malaysia since it could be a harmful nutrient to living organisms if presented in excessive concentrations.

Keyword: Nitrate contamination; Urban drainages; Intertidal waters; West Peninsular Malaysia