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PRELIMINARY STUDIES ON ACID RAINS IN SRI LANKA

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Industrial and automobile emissions which concentrate SO_x and NO_x compounds in the air contribute primarily to the increase of acidity in rain water. With the establishment of new industrial complexes and increasing motor traffic in congested cities in Sri Lanka, conditions suitable for acid rain precipitation may prevail.

Preliminary investigations were carried out in four localities in the Kandy area, namely Kadugannawa, Peradeniya, Kandy and Katugastota. The object of the study was to examine if there is any acidity in the rain water in Sri Lanka.

The acidity of the rain water was measured *in situ* while the NO_3^- and SO_4^{2-} determinations were carried out in the laboratory. A total of 50 samples were analyzed. The town of Kandy had the highest acidity in the rain water (pH : 3.5 - 4.8). Katugastota and Peradeniya situated north and south of Kandy respectively, both showed a pH of 4.5. Kadugannawa had the lowest acidity in the rain the pH being 5.0 - 6.0. In view of the limited industries emanating fumes in the area, the high traffic density and the automobile exhaust fumes could be the cause of acidification. However, the SO_4^{2-}/NO_3^- ratios were higher in the Katugastota region (4.0) reflecting a combination of higher SO_4^{2-} levels and lower NO_3^- levels. In the Kandy district, the Kandy-Katugastota highway had the highest pollution levels.

Reference

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