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Chem

**DETERMINATION OF LEAD (Pb), CADMIUM
(Cd) AND MERCURY (Hg) IN VEGETATION
ALONG LANGATA ROAD**

TRADE PROJECT

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ABSTRACT

A project was carried out to determine the levels of mercury, lead and cadmium in vegetation along Langata road. The vegetation is a food source for both humans and animals and animals living in the proximity of the road.

Samples were collected during the month of July 2000 from different distances from the Langata road. The samples were grouped into five classes, those that were 0.1 – 6.0 metres, 6.1-12.0 metres, 12.1 –18.0 metres, 18.1 – 24.0 and 24.1 – 30.0 metres from the road. The samples were dried, digested with acid and diluted to 50ml. The samples were then analysed using Varian spectra A.A.10 atomic absorption spectrophotometer (A.A.S) made in United Kingdom.

The levels of the metals was determined and the levels of lead before dilution ranged between 45-15 p.p.m. The mean and mode concentration detected was 30 and 25 p.p.m respectively. This was higher than the W.H.O maximum allowable levels of 7 p.p.m. The levels of cadmium ranged between 1.5 –1.0 p.p.m with a mean and mode concentration of 1.5, which was higher that the W.H.O tolerable intake of 1.0 p.p.m. No mercury was detected in any of the samples.

The vegetation along Langata road was therefore found to be unsuitable for both human and animal consumption. The level of lead decreased with increase in distance from the road, thus a distance of 50 metres from the road was considered to be a safe distance when planting food crops in the proximity of a busy road.

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