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**THE STUDY OF CHANGE IN ATMOSPHERIC LEAD (Pb) LEVELS  
IN COLOMBO WITH THE PHASING OUT OF LEADED PETROL IN  
SRI LANKA**

**A PROJECT REPORT PRESENTED BY**

**RENUKA THANGARAJAH**  
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to the Board of Study in Chemical Sciences of the  
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*in partial fulfillment of the requirement  
for the award of the degree of*

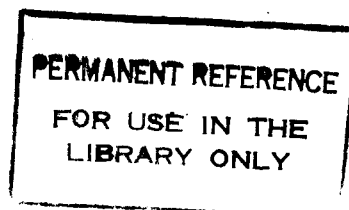
**MASTER OF SCIENCE IN ANALYTICAL CHEMISTRY**

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Lead contamination is now a leading public health problem in the world. Lead is a highly toxic metal when ingested or inhaled. It is a suspected carcinogen of the lungs and kidney and has adverse effects on the cardio, nervous and renal system. Quantitatively lead is emitted to the atmosphere by vehicles burning leaded fuel; this is mostly resulted by the use of "TEL" (tetraethyl lead) additive in leaded gasoline. The Ceylon Petroleum Corporation accelerated this phasing out of leaded gasoline and discontinued the blending gasoline with lead additives in April 2002.

Colombo city has one million population among them 200,000 are school children and 60% of registered vehicles are operated in Colombo metropolitan region. So this is the most polluted area in the island due to vehicle emission.

The research programme encompassed the period of discontinuation during which the studying of ambient lead levels by periodically monitoring from July 2002 to December 2002 at three selected locations in Colombo City. "Particulate" and "Total lead" were collected by 'active sampling' method and analysed by spectrophotometric method. The collected past filter paper also analysed and compared with the different ambient lead levels. This shows the drastic drop in total lead levels and the gradual decline in particulate lead levels.