

**PREPERATION OF LICHEN STANDARD REFERENCE
MATERIAL FOR ENVIRONMENTAL APPLICATION**



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ABSTRACT

Lead has been known as potential health hazard. It is a known man and wildlife toxicant which necessitates its continual determination in the environment. Automobiles and industrial machinery exhaust are well known for contributing environmental lead burden. The present investigation was undertaken for environmental assessment of different areas with respect to eight selected heavy metal contaminations including Chromium (Cr), Cadmium (Cd), Copper (Cu), Iron (Fe), Manganese (Mn), Nickel (Ni), Zinc (Zn) and Lead (Pb). A Standard Solution was also prepared for Lead as a reference material for future studies. All working standards were prepared using the “Spex” 1 mg mL⁻¹ standards. All dissolutions or dilutions required for preparation of standards were carried out using double distilled deionized water (DDDW). The study area includes central and outskirts of Islamabad. Samples of available lichen species were collected, dried, digested, and analysed using inductive coupled plasma spectrometer. The certified concentration of Lead in prepared lichen standard reference material was found to be 48.2 ppm. The data obtained through this study do confirm the existence of the lead pollution along the road sides and the results confirmed that the lichen species could be used for monitoring the lead pollution levels as and where required.

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