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Xanthoria parietina as a biomonitor of airborne heavy metal pollution in forest sites in the North East of Morocco

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Xanthoria parietina, common foliose lichen, growing in its natural habitat, was analysed for the concentration of five heavy metals (Fe, Cr, Zn, Pb and Cu) from different forest sites of North East of Morocco (Kenitra, Sidi Boughaba, Mkhinza, Ceinture Verte near Temara city, Skhirat, Bouznika and Mohammedia). The quantification was carried out by inductively coupled plasma – atomic emission spectrometry (ICP –AES). Results were highly significant $p < 0,001$. The concentration of metals is correlated with the vehicular activity and urbanization. The total metal concentration is highest at the Kenitra area, followed by Ceinture Verte site near Temara city, which experience heavy traffic throughout the year. Scanning electron microscopy (SEM) of particulate matter on lichen of Xanthoria parietina was assessed as a complementary technique to wet chemical analysis for source apportionment of airborne contaminant. Analysis revealed high level of Cu, Cr, Zn and Pb in samples near roads.

Biography

Ghita ELRHZAOUI is preparing her PhD from the Faculty of Science of Mohammed V University. She has published 3 papers so far in reputed journals like Lazaroa. and working in parallel as a scientific communication counsellor in forest and water departement. she is also expert in auditing and the application of quality management system in firms and laboratories.

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