

## **The Study of the Absorption and Translocation of Chromium by Lygeum spartum in the Mining Region of Djebel Hamimat and Soil-Plant Interaction**

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**Abstract :** Since century of the Development Activities extraction and a dispersed mineral processing Toxic metals and much more contaminated vast areas occupied by what they natural outcrops. New types of metalliferous habitats are so appeared. A species that is Lygeum spartum attracted our curiosity because apart from its valuable role in desertification, it is apparently able to exclude antimony and other metals can be. This species, green leaf blades which are provided as cattle feed, would be a good subject for phytoremediation of mineral soils. The study of absorption and translocation of chromium by the Lygeum spartum in the mining region of Djebel Hamimat and the interaction soil-plant, revealed that soils of this species living in this region are alkaline, calcareous majority in their fine texture medium and saline in their minority. They have normal levels of organic matter. They are moderately rich in nitrogen. They contain total chromium content reaches a maximum of 66,80 mg Kg<sup>-1</sup> and a total absence of soluble chromium. The results of the analysis of variance of the difference between bare soils and soils appear Lygeum spartum made a significant difference only for the silt and organic matter. But for the other variables analyzed this difference is not significant. Thus, this plant has only one action on the amendment, only the levels of silt and organic matter in soils. The results of the multiple regression of the chromium content of the roots according to all soil variables studied did appear that among the studied variables included in the model, only the electrical conductivity and clay occur in the explanation of contents chromium in roots. The chromium content of the aerial parts analyzed by regression based on all studied soil variables allows us to see only the variables: electrical conductivity and content of chromium in the root portion involved in the explanation of the content chromium in the aerial part.

**Keywords :** absorption, translocation, analysis of variance, chrome, Lygeum spartum, multiple regression, the soil variables

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