

Sarcocornia neei; Remediation case for lead (Pb) contaminated ground, from Puchuncavi: Quintero-Ventanas, Chile

Verónica Meza Ramírez

Playa Ancha University, Chile



Abstract

A Phytoremediation process has been done for lead metal (Pb), for 31 days in lab conditions, over contaminated soil from the commune of Puchuncavi and previously propagated plants extracted in Yali wetland, RAMSAR 878 site, both locations from the region of Valparaíso. The purpose was to analyze the phytoremediation potential for the *Sarcocornia neei* (Lag.) [1]. [2] Soil fertility analysis was made, as well as heavy metals concentration with compound samples from six sample point and 6 sub points, which met all protocols for soil extraction establish in NCh 3400/2: 2016 and standard methodology for metal chemical analysis in soil analysis lab and foliar samples at Pontificia Universidad Católica de Valparaíso (PUCV), besides vegetal tissue analysis in both areas in order to identify changes in the different conditions in which they live. During this process it was determined the most appropriate form to propagation of *Sarcocornia neei* in two substrates. In order to determine kind of inferential analyses to be done, normality test had performed, concluding its reject, and because of that, the contrasts were made by non-parametric tests, particularly Wilcoxon. In the develop of this kind of tests, software r-project was used, particularly the Rcommander package. In the results of the collected soil samples, acid pH, between 5,77 to 6,38 was observed, low levels of electric conductivity (EC) and Organic material (OM), as well as high concentration for heavy metals, prevailing Pb with a concentration of 77,97% mg/kg. Because of the species characteristics, the phytoremediation efficiency in the soil's samples were 99,8%. The results were contrasted with international regulations, referred to metals concentration in soil. Histological cuts demonstrate maybe there is an adequation of the individuals to the environment conditions in where they live.

Biography

Verónica Meza- Ramírez, Mg. Ingeniero Agrónomo, has his expertise in soils, contamination of heavy metals in soils and bioremediation techniques in soils. Strengthening capacities in communities affected by pollution.

Publications

1. Finding the right problem
2. Philippine maritime and nursing education: Benchmarking with APEC best practices
3. Migrant Education in Philippine Higher Education Institutions: Drivers, Experience and Challenges to Continuous Quality Improvement
4. Social Enterprise: Social enterprise and integral human development
5. Working Overseas: Towards rationalization of the overseas employment industry for domestic workers
6. Forms of Social Security services for Filipino workers in Japan: Implications to migrant labor policy and practices
7. Comparative study of Workers Cooperative in Japan and in the Philippines
8. Cooperative Best Practices in Japan and in the Philippines: Basis for OFW Welfare through Cooperativism
9. Fil-Am Visual Art: A Hybrid of Two Worlds
10. Constructing the Road Leading to Internationalization of Higher Education through Quality Assurance

10th World Congress on Chemistry & Medicinal Chemistry | Rome | Italy | 28-29 February, 2020

Abstract Citation: Verónica Meza Ramírez, *Sarcocornia neei; Remediation case for lead (Pb) contaminated ground*, from Puchuncavi: Quintero-Ventanas, Chile, Chemistry 2020, 10th World Congress on Chemistry & Medicinal Chemistry, Rome, Italy, 28-29 February, 2020, 27