




Supplementary Information

Biosorption Potential of the *Aspergillus* sp. and Insights into Secondary Metabolism in the Presence of Copper and Lead

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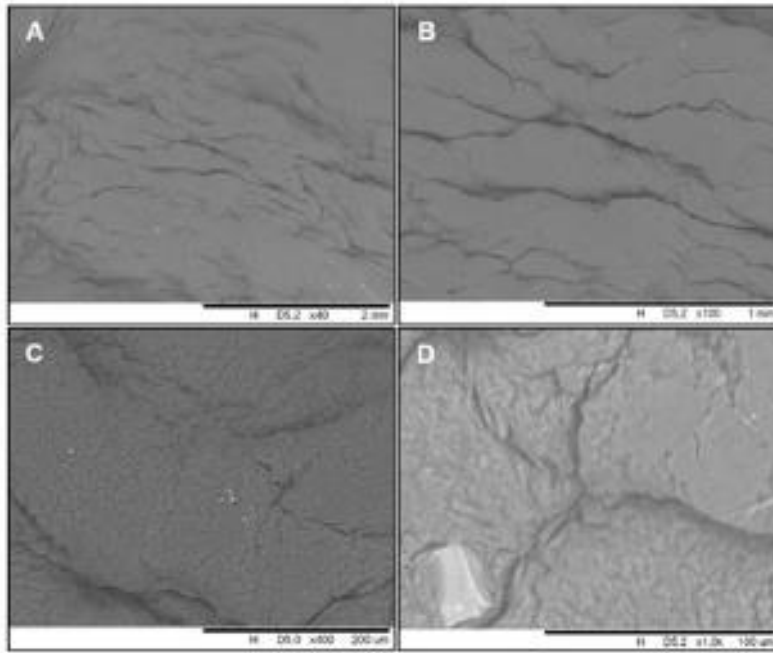


Figure S1. Scanning electron microscopy (SEM) images of the biomass of the biotic control with different magnifications. (A) $\times 40$; (B) $\times 100$; (C) $\times 400$; (D) $\times 1000$.

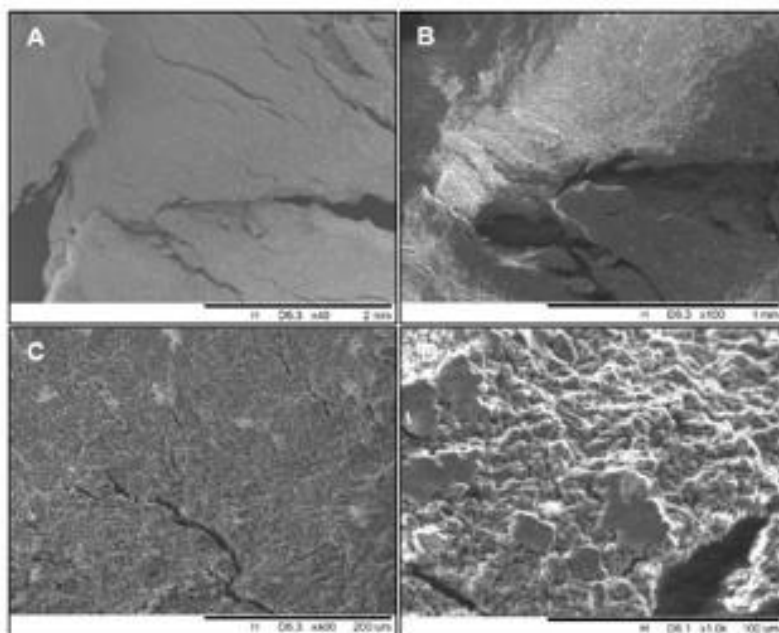


Figure S2. SEM images of the biomass under influence of Cu^{2+} (100 mg L^{-1}) with different magnifications: (A) $\times 40$; (B) $\times 100$; (C) $\times 400$; (D) $\times 1000$.

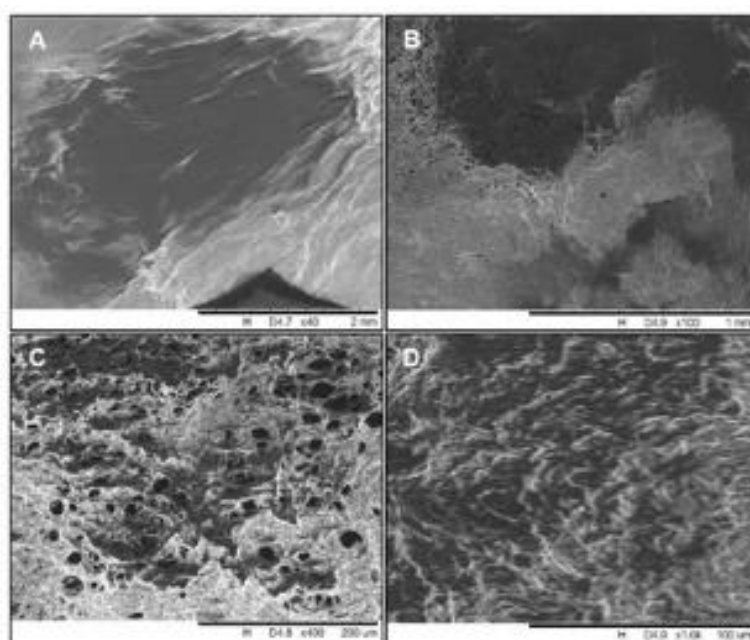


Figure S3. SEM images of the biomass under influence of Cu^{2+} (500 mg L^{-1}) with different magnifications. (A) $\times 40$; (B) $\times 100$; (C) $\times 400$; (D) $\times 1000$.

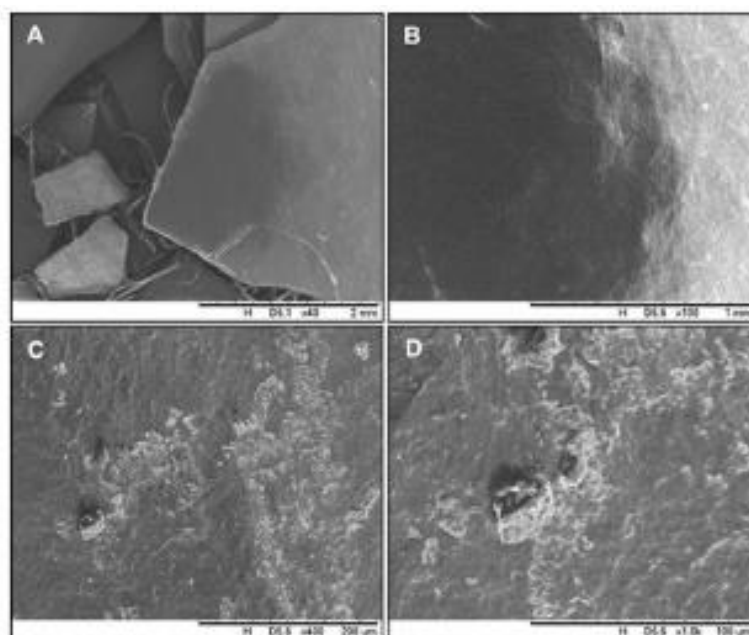


Figure S4. SEM images of the biomass under influence of Cu^{2+} (1000 mg L^{-1}) with different magnifications. (A) $\times 40$; (B) $\times 100$; (C) $\times 400$; (D) $\times 1000$.

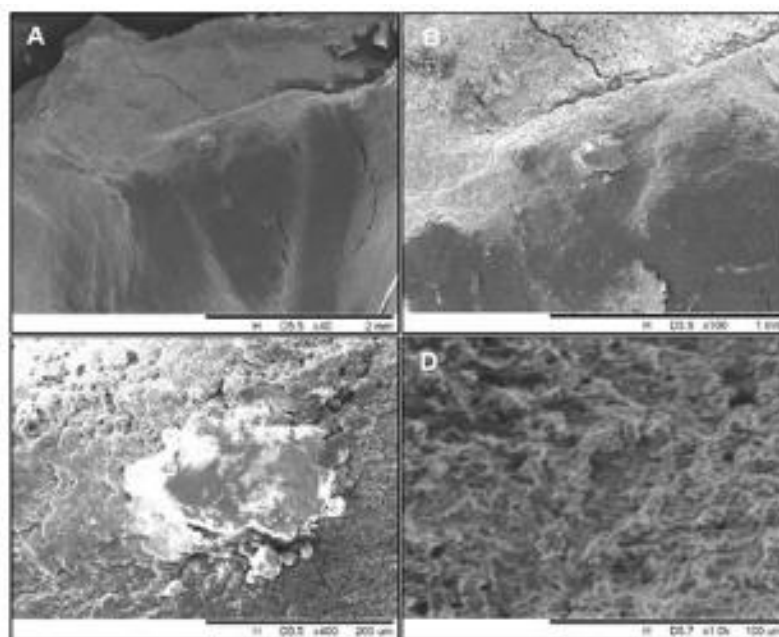


Figure S5. SEM images of the biomass under influence of Pb^{2+} (100 mg L^{-1}) with different magnifications. (A) $\times 40$; (B) $\times 100$; (C) $\times 400$; (D) $\times 1000$.

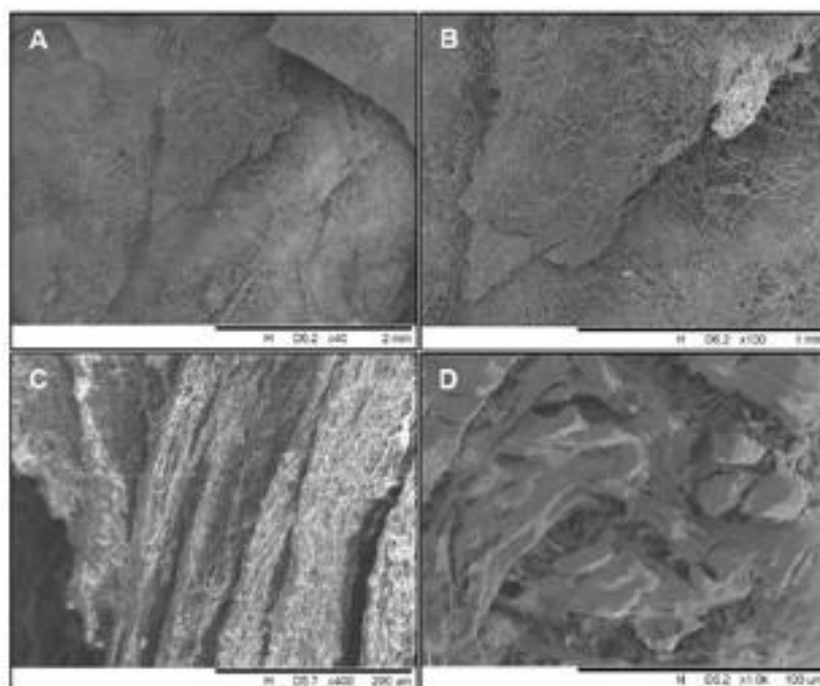


Figure S6. SEM images of the biomass under influence of Pb^{2+} (500 mg L^{-1}) with different magnifications. (A) $\times 40$; (B) $\times 100$; (C) $\times 400$; (D) $\times 1000$.

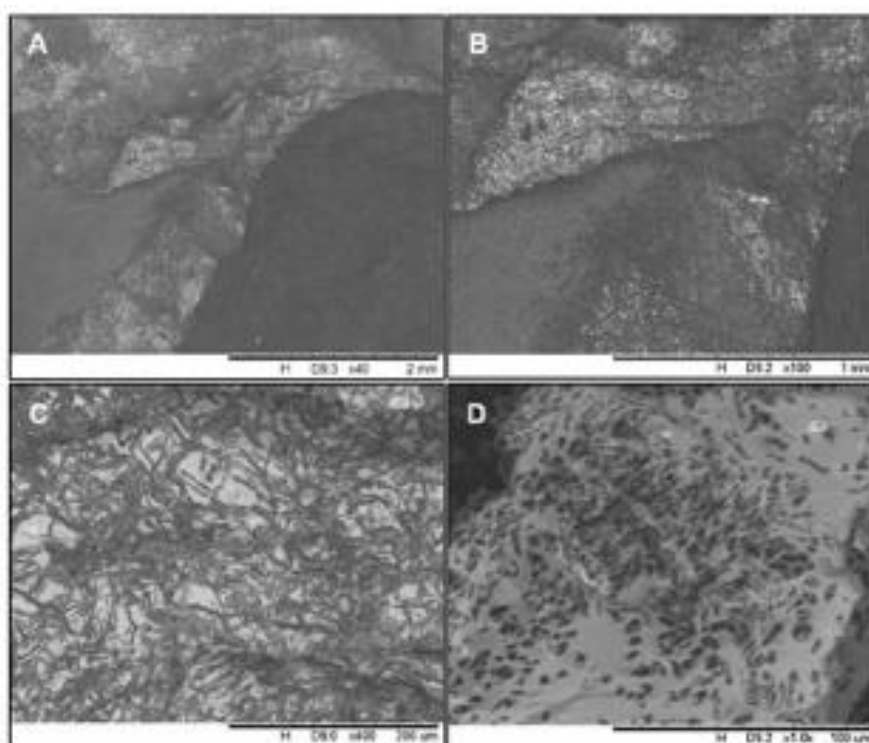


Figure S7. SEM images of the biomass under influence of Pb^{2+} (1000 mg L^{-1}) with different magnifications. (A) $\times 40$; (B) $\times 100$; (C) $\times 400$; (D) $\times 1000$.

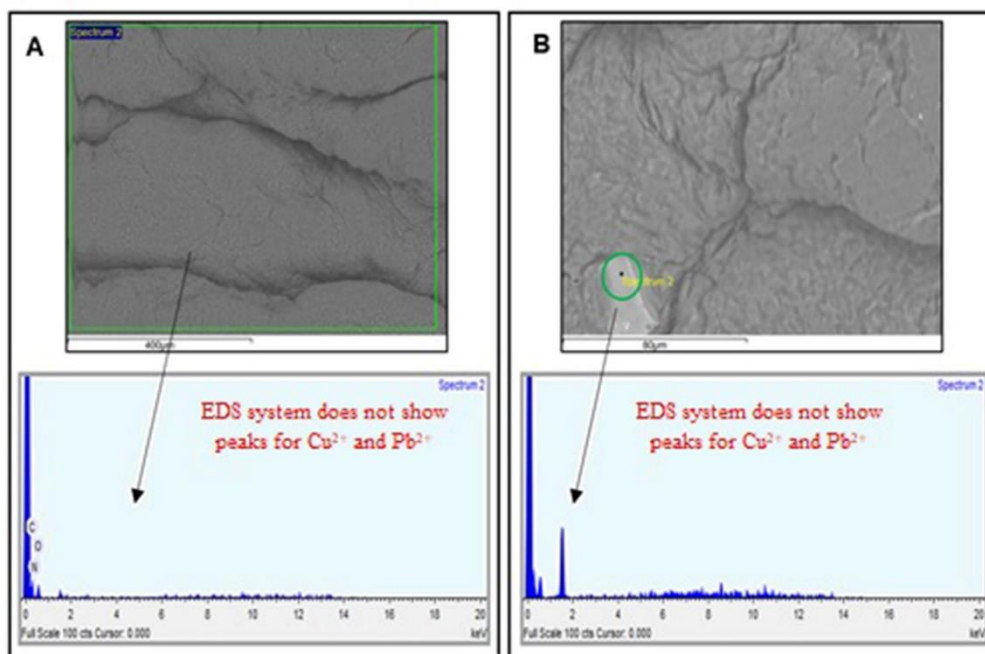


Figure S8. SEM-EDS of the biomass of the biotic control. (A) Scan; (B) spot.

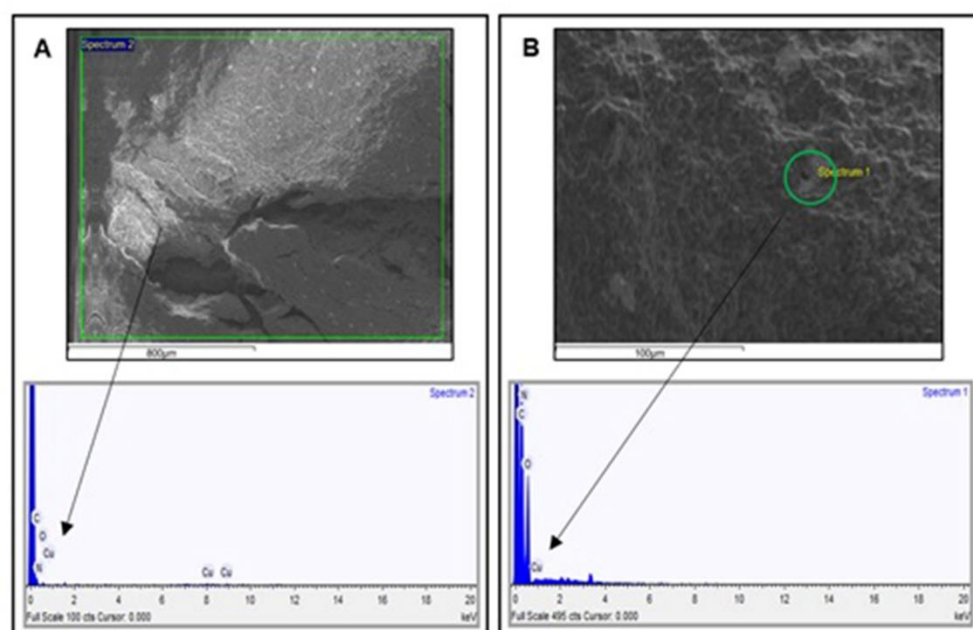


Figure S9. SEM-EDS of the biomass under influence of Cu²⁺ (100 mg L⁻¹). (A) Scan; (B) spot.

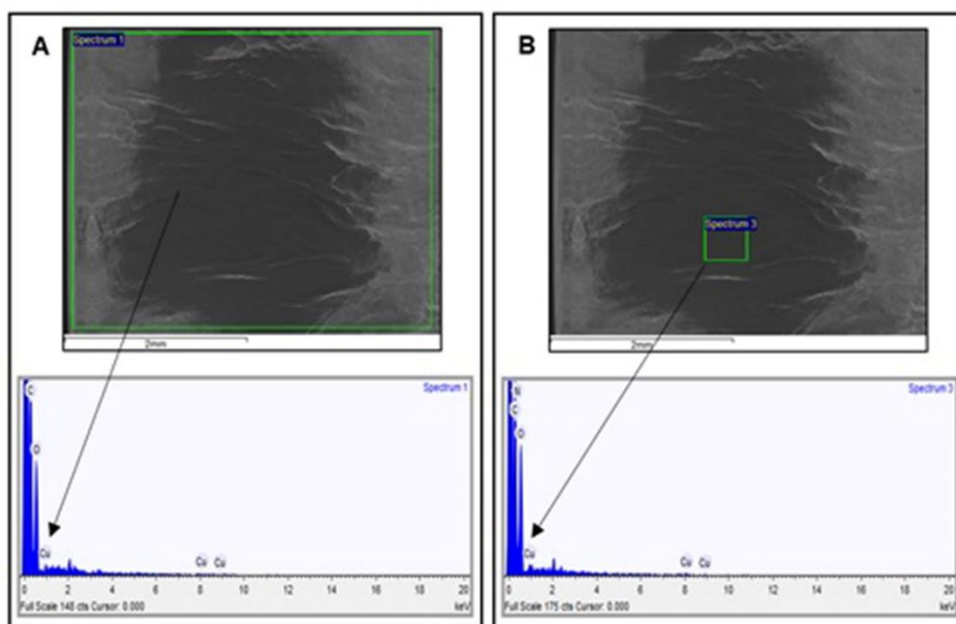


Figure S10. SEM-EDS of the biomass under influence of Cu^{2+} (500 mg L^{-1}): (A) Scan; (B) spot.

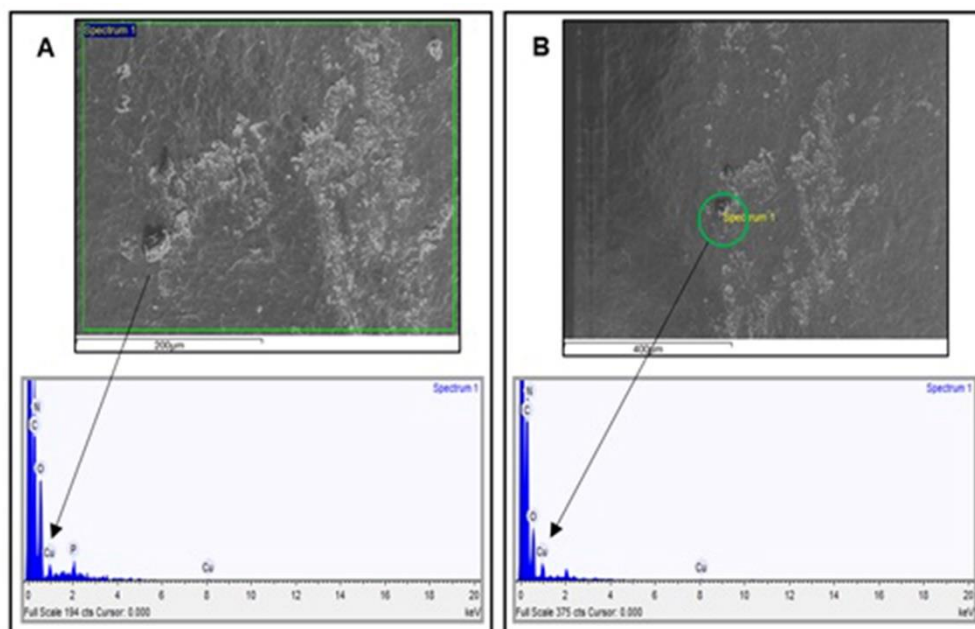


Figure S11. SEM-EDS of the biomass under influence of Cu^{2+} (1000 mg L^{-1}): (A) Scan; (B) spot.

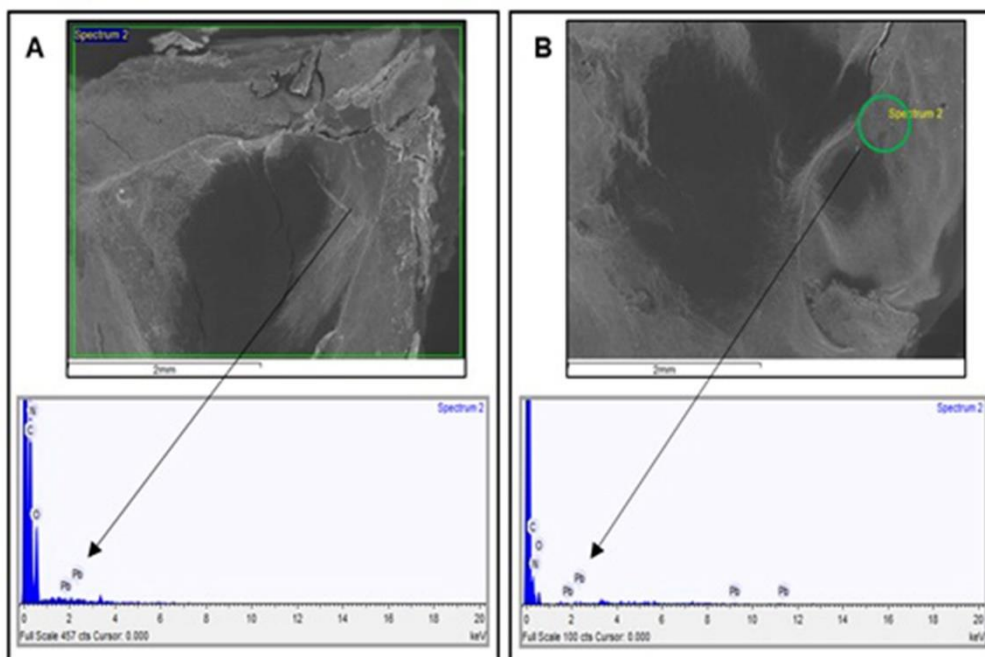


Figure S12. SEM-EDS of the biomass under influence of Pb^{2+} (100 mg L^{-1}): (A) Scan; (B) spot.

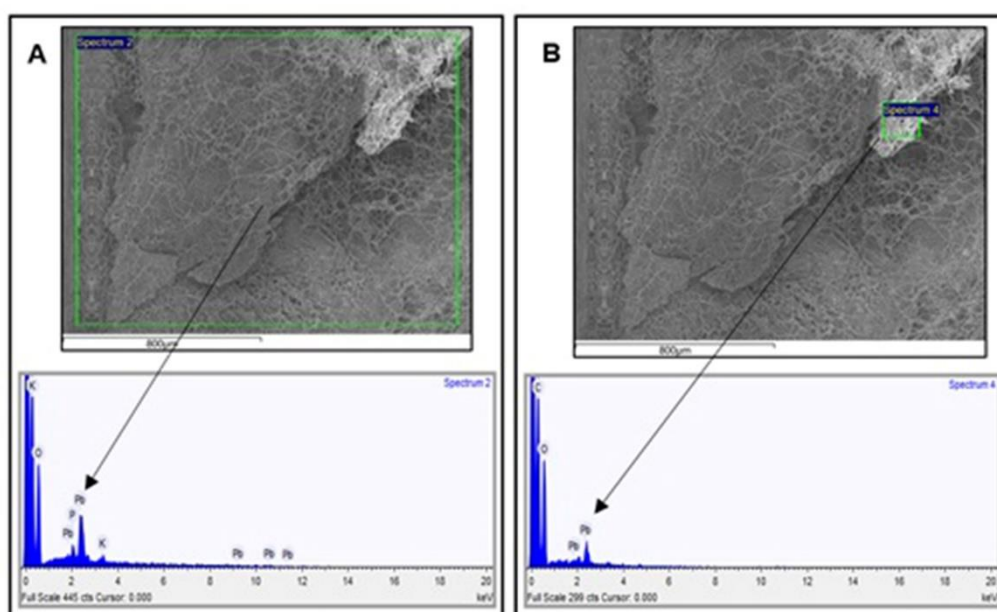


Figure S13. SEM-EDS of the biomass under influence of Pb^{2+} (500 mg L^{-1}): (A) Scan; (B) spot.

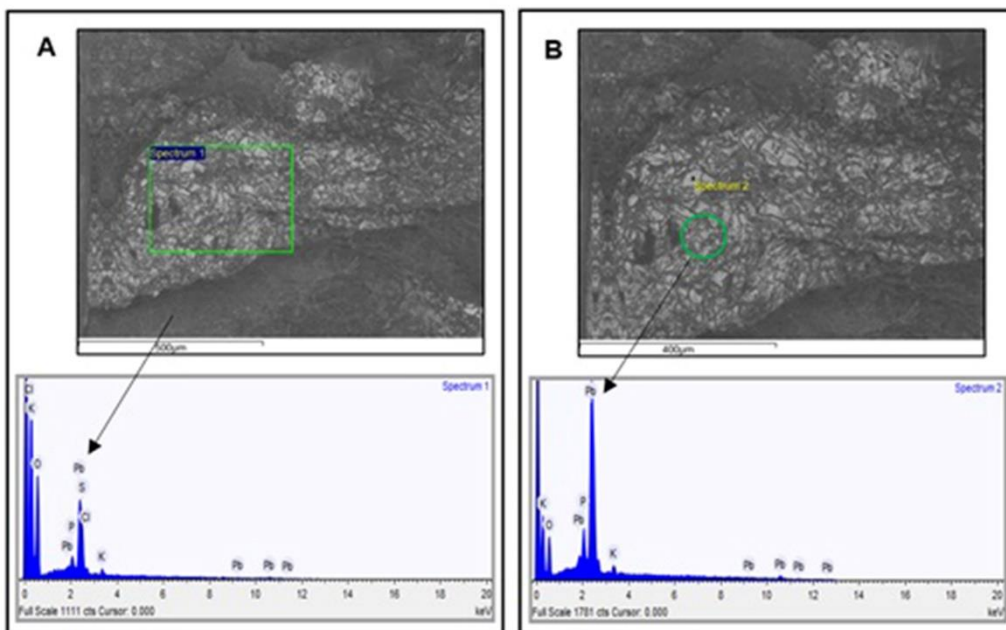


Figure S14. SEM-EDS of the biomass under influence of Pb^{2+} (1000 mg L^{-1}): (A) Scan; (B) spot.

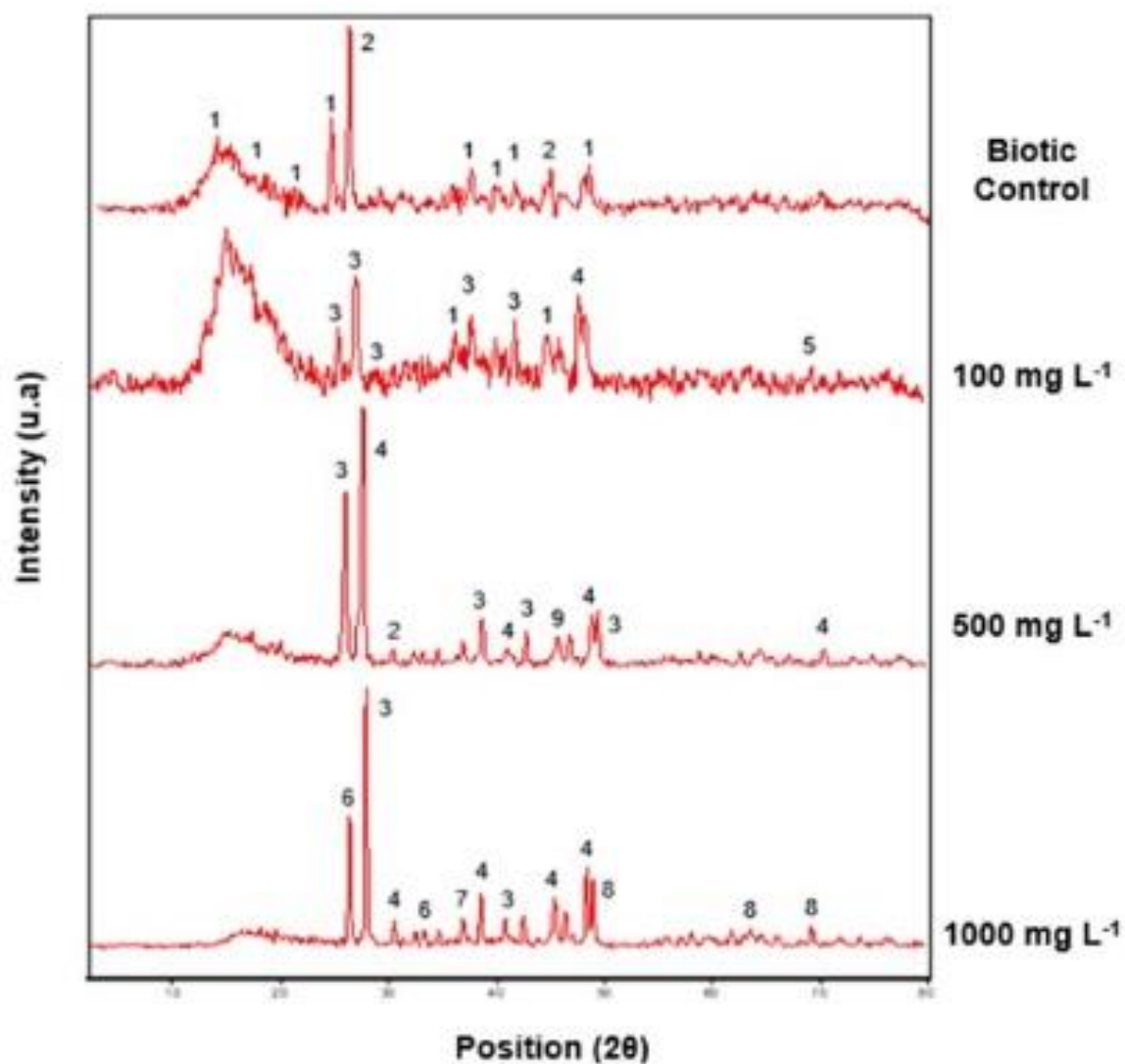


Figure S15. XRD analysis of the biomass of the biotic control and the biomasses enriched with copper. 1: Carbon monoxide (CO); 2: nitrogen monoxide (NO); 3: thiazyl nitrate (NSNO₃); 4: copper sulfate (CuSO₄); 5: sulfur (S); 6: copper oxide (Cu₂O); 7: copper azide (CuN₃); 8: carbon; 9: copper Nitrate [Cu(NO₃)₂].

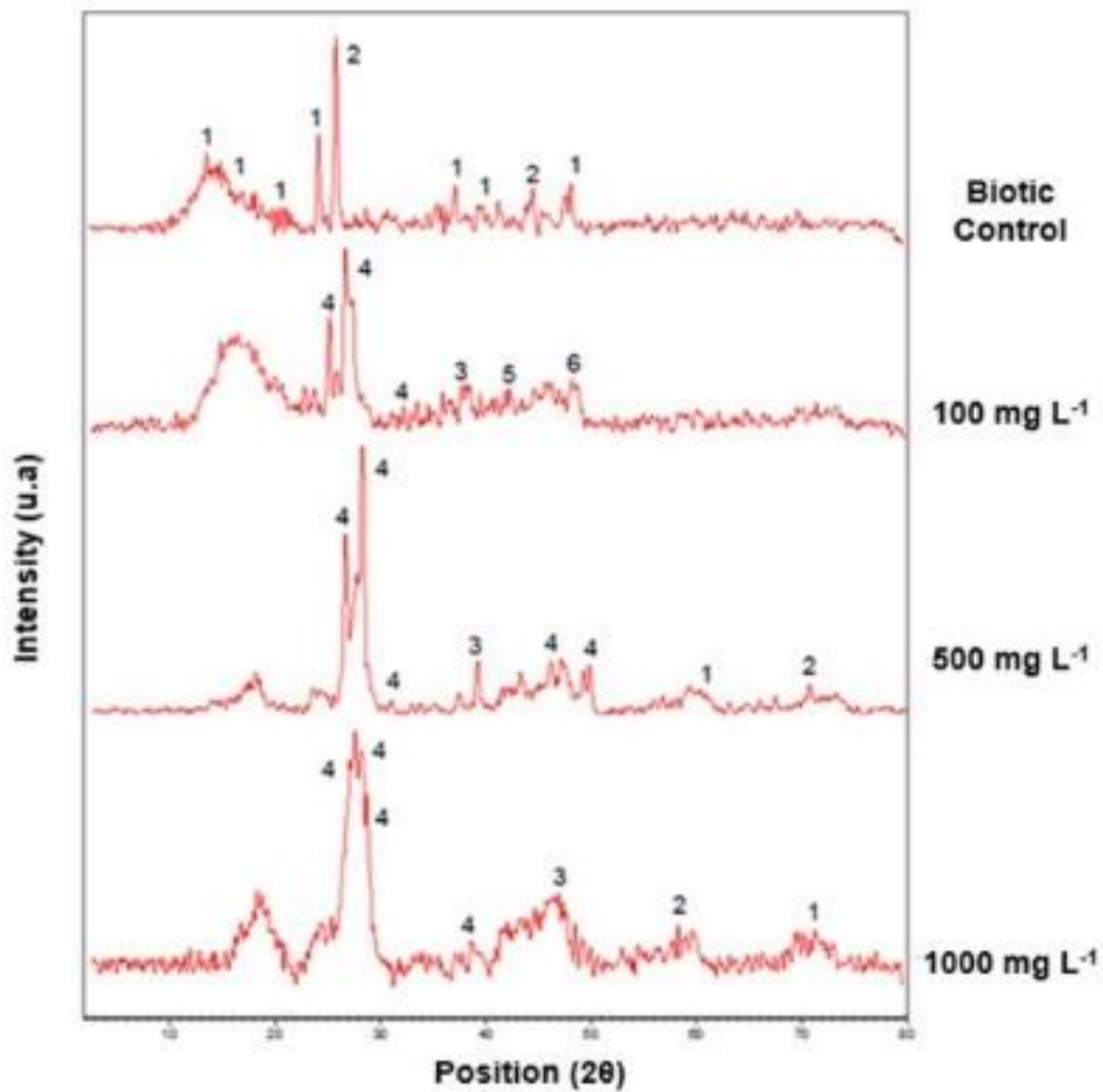


Figure S16. XRD analysis of the biomass of the biotic control and the biomasses enriched with lead. 1: Carbon monoxide (CO); 2: nitrogen monoxide (NO); 3: carbon (C); 4: lead oxide (PbO); 5: nitrogen (N); 6: oxygen (O).

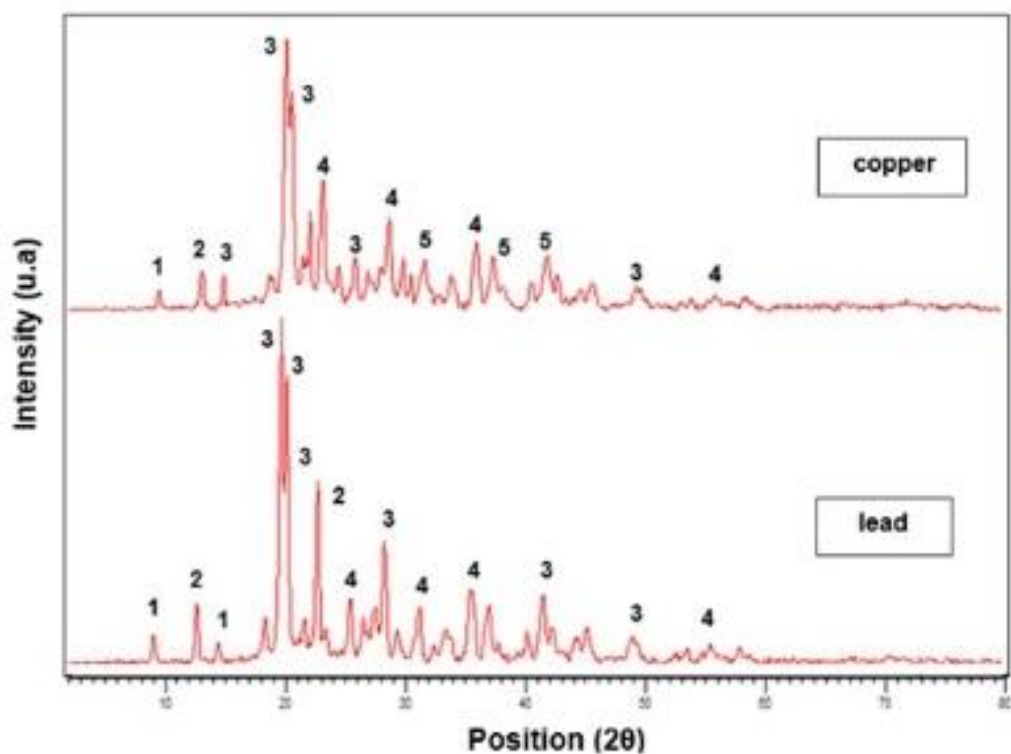


Figure S17. XRD analysis of the biomass of the abiotic control enriched with copper and lead (1000 mg L^{-1}). Copper- 1: carbon monoxide (CO); 2: nitrogen monoxide (NO); 3: sulfur (S); 4: copper sulfate (CuSO_4); 5: copper sulfide (Cu_2S). Lead-1: Carbon monoxide (CO); 2: nitrogen monoxide (NO); 3: lead oxide (Pb_2O_4); 4: lead nitrate [$\text{Pb}(\text{NO}_3)_2$].