Heavy metals play an important role in the metabolic processes of the biota, some of them are essential for organisms as micronutrients such as cobalt, chromium, nickel, iron, manganese and zinc They are involved in redox processes, to stabilize molecules through electrostatic interactions, as catalysts in enzymatic reactions, and regulating the osmotic balance.It can effectively sequester dissolved metal ions out of dilute complex solutions with high efficiency and quickly, therefore it is a suitable candidate for the treatment of high volumeand low concentration complex heavy metal wastes (Wang and Chen, 2006).The present study aimed to isolate S. oneulensis from soil and identifying it biochemically and molecularly, in addition to determining their ability to remediation Pb and Cd through biosorption processes.Physicochemical methods have been used, such as electrochemical treatment, ion exchange, precipitation, reverse osmosis, evaporation, and sorption (Congeevarama et al., 2007).Thus, bioremediation affords a substitute to destroy estroy or reduce the harmful contaminants through biological activity and this method is cost effective (Salem et al., 2012).