ABSTRACT

Phytoremediation of Shoot Culture *Brassica chinensis* L for Co$^{2+}$ Metal in Various Concentrations

Shoot culture of *Brassica chinensis* L was treated in media containing Co$^{2+}$ with various concentration (0, 10, 20 and 30 ppm Co$^{2+}$). Each group consists of a number of culture bottles that were grown for three weeks. Growth index and many leaves will be measured on each week to see the stability of the shoot culture. The ability of *Brassica chinensis* L to remediate the cobalt in the media will be measured by analyzing the Co$^{2+}$ residue and it’s accumulation in the shoot culture biomass with Atomic Absorption Spectrophotometer instrument. The accumulation of Co$^{2+}$ in *Brassica chinensis* L biomass was 252.8±23.4 μg/g DW, 898.3±42.1 μg/g DW, and 1465±96.3 μg/g DW for shoot culture group 10, 20, and 30 ppm Co$^{2+}$ respectively. The highest accumulation is 1465±96.3 μg/g DW or 0.15% w/w DW. This accumulation was higher than 0.1% w/w DW and proved that the shoot culture of *Brassica chinensis* L have an ability to be hyper accumulator plant.