

**B314**

**DETOXIFICATION for Cd<sup>2+</sup> in *Azomonas agilis* PY101**

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A cadmium-resistant strain isolated from Anyangcheon, *Azomonas agilis* PY101 exhibited resistance to cd<sup>2+</sup> of 1000 μg/ml. In the presence of cd<sup>2+</sup>, *A. agilis* PY101 produced the water-soluble and fluorescent pigment. This pigment was protein of molecular weight 22,000. In the analytical result of element analysis, this pigment contained a amount of sulfur atom. The dramatic decrease of concentration of cd<sup>2+</sup> in the culture medium during growth of *A. agilis* PY101 was confirmed by the inductively coupled plasma atomic emission spectrophotometer. In the analytical result of transmission electromicrograph, *A. agilis* PY101 actively accumulated cd<sup>2+</sup> in the cytoplasm.

**B315**

**Identification and Characterization of Phosphate  
Removal Bacteria isolated from Activated Sludge**

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The Enhanced Biological Phosphate Removal(EBPR) is one of the most promising modification of wastewater treatment process. Four phosphate-removal bacterial strains were isolated from activated sludge in 5 reactors(excrementitious matter, sewage, stock-breeding wastewater, synthetic wastewater, and flood water). Three strains(PJ101, PJ102, PJ103) were identified as *Acinetobacter lwoffii*, *Pasterulla multocida*, and *Bacillus thuringiensis*zomonas, respectively. The another one strain(PJ104) was an unidentified gram-positive rod. The susceptibility to various heavy metals and antibiotics of these strains was analyzed. All strains identified in this study showed high sensitivity to Mercury ion and resistance to Manganese. In antibiotic resistance test, PJ101 and PJ102 did not show any antibiotics resistance, but PJ103 showed resistance to Ampicillin, while PJ104 did resistance to Kanamycin, Streptomycin. In heavy metal resistance test, these strains were shown high sensitivity to Mercury, while Manganese was shown high resistance. The decrease of concentration of phosphate in the culture