ABSTRACT

With recent development of technology, the number of growing industry will also increase. The waste from such industry will be discarded until a water body or river without any process and in turn polluted, the river water which absorbed by the soil along the river may effect the underground water reserve along the river bed. It also occurs in human settlements in Tambak Wedi, Surabaya.

Because of this problem, the idea to conduct a research on remedying those polluted soil using fitoremediation. This fitoremediation will try to restore the quality of underground water reserve, which has been polluted by heavy metal element especially lead (Pb). Plants used were Sansiviera trifasciata which is one of hyperaccumulator plants that can absorb heavy metal elements.

Media created from artificial sample, which is based on the result of preliminary search on Tambak Wedi, Surabaya. The variations that used in this study is a variations of the concentration of heavy metal lead on the soil, planting media variations, and variation in soil pH. The study was conduction for 42 days (6 weeks) with a parameter analyzer as much as 1 per 1 week. Parameter used is the concentration of heavy metal in soil and plants, pH and temperature of the soil, and weight of dry plant.

From the result of the study, it can be concluded that the composition which consist of 50% polluted soil + 50% compost
provides the maximum efficiency in supporting Sansivieria trifasciata remedying a land, which is 96.27% on 200 ppm initial concentration. While the ability of plants to accumulate heavy metal in the body can not be known in optimal because a short period of study, this is evidenced by the small absorption of 2,731 ppm.

**Keywords**: Fitoremediations, Sansivieria trifasciata, Lead (Pb)