

ABSTRACT

Arifin, Farikhah. 2012. *Capacity Examination of Chlorella sp. as Bioremediator of Liquid Waste of Tofu*. Thesis. S1 Biology Department of Science and Technology Faculty of Maulana Malik Ibrahim State Islamic University of Malang. Advisor I. Romaidi, M.Si. Advisor Umaiatus Syarifah, M.A.

Key words: Liquid waste of tofu, BOD, COD, NH₃, NO₂, NO₃, pH and *Chlorella*.

Liquid wastes of industry contain organic substances such as protein, carbohydrate, fat, oil and acid amino. The existence of this organic compounds in liquid waste of tofu cause the liquid waste of tofu industry contain BOD (*Biological Oxygen Demand*), COD (*Chemical Oxygen Demand*), TSS (*Total Suspended Solid*), nitrogen, and, concentrate of isolator *Chlorella* sp. as a bioremediation liquid waste of tofu. It also directed to know the growth of microalgae *Chlorella*, sp. in the media of liquid waste of tofu.

This research was conducted during June - July 2012 in Ecology & Biological Natural Resource Laboratory, Genetic Laboratory of Biology Department of Science and Technology in Maulana Malik Ibrahim State Islamic University of Malang and Chemistry Laboratory of Muhammadiyah University of Malang. The observed parameters are BOD, COD, NH₃, NO₃, NO₂, and pH. The method used to analyze the data was descriptive qualitative.

The research showed that several parameters when they were used under the defining standard. The value of BOD: 56.404 mg/l < standard quality (BM): 150 mg/l. Value COD: 133 mg/l < BM: 300 mg/l. Value NH₃: 5.42 mg/l < BM: 5 mg/l. Value NO₃: 14.47 < BM: 30 mg/l. Value NO₂: 2.23 mg/l < BM: 3 mg/l. Value pH increased from 5 to 8. It is in line with the BM: 6-9. *Chlorella* sp cell that was cultivated in media of liquid waste of tofu grew rapidly because the liquid waste of tofu contains nutrition that is needed by *Chlorella* for its growth.