

# **STRATEGI OPERSIONAL SBR(*SEQUENCING BATCH REACTOR*) SECARA AEROB-ANAEROB PADA PENYISIHAN KARBON DAN NITROGEN**

SUPRIYATIN

Wiharyanto Oktiawan, ST, MT dan Junaidi, ST

## *Abstract*

*In Biological wastewater treatment by using SBR occurs removal carbon and nitrogen on the system. The removal carbon and nitrogen are influenced by the strategy of operational and ratio C/N. This research purpose to decide strategy of operational aerobic-anaerobic and ratio of C/N removal of carbon and nitrogen.*

*In research was used reactor from plastic material with diameter 25 cm and high is 25 cm, volume of wastewater in reactor is 5 liter and volume of sludge is 35% from volume of wastewater that 1,75 liter. Waste that used was artificial waste glucose soluble with 1013.9 mg/l concentration of COD. As independent variable are strategy of operational: (aerobic-anaerobic; aerobic-anaerobic, aerobic-anaerobic; aerobic-anaerobic, aerobic-anaerob, aerobic-anaerobic) and ratio of C/N (100:5, 100:15, 100:30, 100:45, 100:60), if dependent variable are removal of carbon and nitrogen.*

*As the result this research shows that the finest of carbon removal is occurred in strategy of operational aerobic-anaerobic, and ratio of C/N (100:5) is 97.93%..*

*The finest removal of nitrogen on form ammonia is occurred on strategy of operational aerobic-anaerobic, aerobic-anaerobi, aerobic-anaerobic, and ratio of C/N (100:5) is 98.04%.*

*Keywords: strategy of operational, ratio of C/N, Sequencing Batch Reactor, removal of carbon, removal of nitrogen*