



Fig. S1. Results of indexes (a)DI, (b)TI, (c)AI and (d)CI in copper concentration of from 18.75 to 300 ppb. The unit for time is minute and Rep# refers replication number of test. All of tests were triplicated.

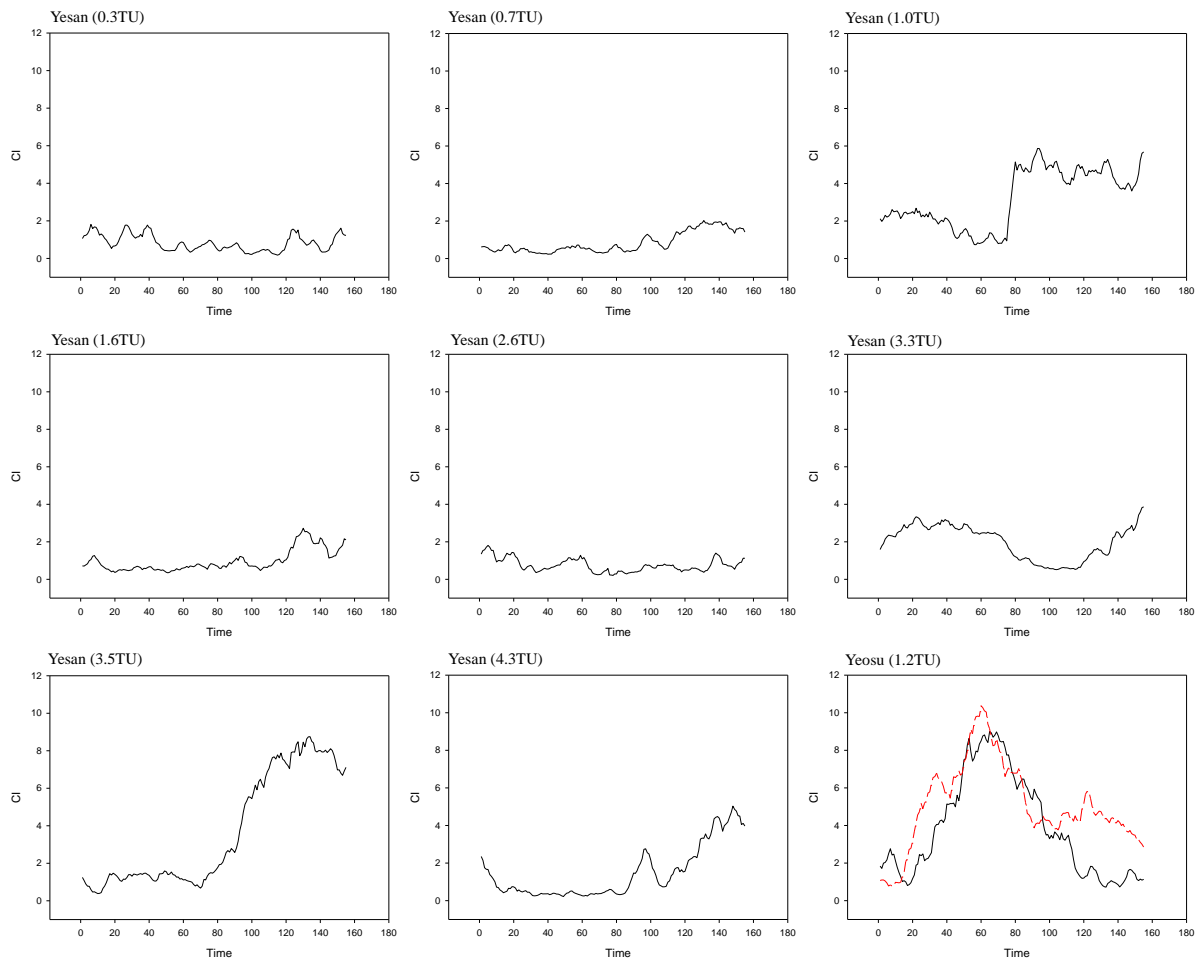


Fig. S2. Results of indexes Combined Index in different effluents and various toxic units. The unit for time is minute and the test for Yeosu effluent was duplicated.

Sampling site	Dissolved oxygen(mg/L)	pH	Conductivity(mS/cm)
Iksan	4.67	7.24	5.99
Yeosu	3.70	8	15.77
Yesan	4.32	6.81	0.399

Table 1. Parameters of effluents used in this study

Ion	Ca <sup>2+</sup>	Mg <sup>2+</sup>	K <sup>+</sup>	Na <sup>+</sup>	F <sup>-</sup>	Cl <sup>-</sup>	SO <sub>4</sub> <sup>2-</sup>	Br <sup>-</sup>	NO <sub>3</sub> <sup>-</sup>
Concentration (mg/L)	501.5	52.61	137.3	3724.1	29.9	6284.2	2270.3	60.5	124

(Kim et al., 2009)

Table 2. Ion concentration of effluent from Yeosu

**<References>**

Kim, S. D., Ra, J. S., Kim, K. T., Kim, J. Y., Park, J. E., Kim, H. D., and Kim, E. Y. Identification of ecotoxicity from wastewater treatment facilities and investigation of sources of toxicity. Ministry Of Environment, Republic of Korea, 2009.