

## **Routine assessment of quality of drinking water resources and wastewater on campus Faculty of Dentistry Jatinangor and surroundings nearby**

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### **ABSTRACT**

Water quality in a healthcare facility needs to be supervised and controlled routinely, so that the quality of those water does not contain chemical compounds or microbes which are harmful to it'shealth facilities and the environment. This study was conducted in October 2015 and aimed to analyze the physico-chemical and microbiological parameters contaminating seven drinking-water sources and one of waste-water source in the Faculty of Dentistry Padjadjaran university in Jatinangor and neighborhood nearby. Water samples were taken in a simple manner using a sterile glass bottles (500 mL in size, duplo). The bottle mouth were opened directly into water sources. Then, bottles were stored in ice boxes and taken immediately to the laboratory for analyzing the content of physico-chemical and microbial (coliform and *E. coli*). The analysis results was compared to the water quality standards of the Indonesian National Standard (SNI). The results showed that all ofphysical and chemical parameters of the three drinking water samples were under the permissible standards. Four samples of drinking water had hexavalent chromium levels higher than the standard. Coliform and *E. coli* in all samples of water was below of the standards. Total Suspended Solids (TSS), BOD, COD, and total coliforms / 100mL of wastewaterwere higher than the standards. It was concluded that further research is necessary to study the cause of high levels of hexavalent chromium in the drinking water source. Waste water processing system also needs to be developed to reduce the number of coliforms and to lowering the value of TSS, BOD and COD in term of prevention of contaminating ground-water of settlements nearby.

**Keywords:** Water quality, Physic-chemical parameters, Microbiological parameters, Water quality standard

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