"NGLANGGERAN VILLAGE WATER QUALITY, PATUK DISTRICT,GUNUNGKIDUL REGENCY, SPECIAL REGION OF YOGYAKARTA"

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ABSTRACT

The research was conducted at Nglanggeran Village, Patuk District, Gunungkidul Regency, Special Region of Yogyakarta. The increasing of groundwater exploitation could bring a negative impact for the groundwater itself and the surrounding environment. Exploiting of groundwater which exceed the ability of the aquifer to store water, can be reduced quantity and quality of groundwater, seawater intrusion and land subsidence.The purpose of this research was to evaluate the quality of groundwater, based on the physics, chemistry, and biological parameters on the research location, and to determine the feasibility of groundwater were used by people around the research location for everyday necessary,by the quality standards.

The method used is the method of survey and laboratory analysis, with random sampling as a sampling technique. The parameters used are the physical quality (flavor and colour of water), chemical and biological quality (pH, Hardness, Iron, Zinc, Chloride, BOD, COD, and total Coliform), and also the groundwater level, which refers to Government Regulation Number 82 of 2001 About Water Quality and Water Pollution Control and the Republic of IndonesiaHealth Minister RegulationNumber 416 of 1990 About Conditions and Water Quality Monitoring.

The results of chemical test showed that the temperature of water is27° C; pH = 5,8 - 6,4; Iron = 0,02 – 07 mg/l; Hardness =28 – 108 mg/l; Chloride =4 - 12,5 mg/l; BOD = 1,4 - 3,8; COD = 9,4 - 18,3 mg/l,Zinc < 0,0022 - 0,0209 mg/l;and total Coliform is> 1600/100ml sample water.By the research result, general condition of water quality on the research location was classified into 2nd class,whisch can be used for water recreationinfrastructure / facilities, freshwater aquaculture, farms, agriculture irrigation, and the other uses that require the same water quality with the utility.

Keywords : water quality, groundwater