**ABSTRAK**

**Yogyakarta Politechnic of Healt**

**Environmental Health Department**

**A Thesis, August 2010**

**Yoseva Ika Lelana Sari**

**The efektifity water of filtration by Using ’Zekua’ toward the decreasing of the degree of the iron of well water in Dusun Senden Ngawen Klaten**

**(xvi + 53 + 7 Appendix)**

The background problem of this research is the clean water supplying is one of the problems faced by developing countries, including Indonesia. Water becomes the problem when the quality of clean water cannot fulfill the standard of quality in Permenkes RI No. 416/Menkes/Per/IX/1990 about standard about standard of clean Water.

The degree of elements contained in clean water must base on which is stated in the standard of clean water quality in order not to emerge the healthy upset or technical and financial loss. The upset can emerge if the water contains the elements in over amount. The degree of the iron of the water in Senden is 1,73 mg/L. The degree of iron has already been over the standard the quality in Permenkes RI No. 416/Menkes/Per/IX/1990. In which the standard of quality for the degree of iron is 1,0 mg/L.

The aim of this research is to decrease the degree of iron of the well water in Dusun Senden Ngawen Klaten, and for knowing the volume efektife of decreasing the degree of iron from the filtration media. This is the true experiment with Pre test- Post test research group design, in which the treatment of well water processing by using “Zekua’. The research is done through five times repetitions.

The result of this research known that there is the decreasing of the degree of iron and the less decreasing in volume 300 L is 0,04 mg/L. The quality of the water after the processing has fulfilled the quality of clean water standard. After tested statistically by using *t- Test*, the decreasing of the iron of the water shows that there is a significant between before and after the processing. Therefore the processing by filtration by using the ‘Zekua’ can be used as the alternative choice to decrease the degree of the iron of the water.

The conclusion of this research is the effect of treatment with 'Zekua' as lowering Fe dug well water. In addition there is no effective water volume in the processing of the 'Zekua' as lowering Fe dug well water. It is seen from the graph that decrease Fe content decreased continuously.

Key Words : ’Zekua’ Media , Filtration, zeolith, pasir kuarsa , sand, the degree of iron.

Bibliography : 15 books (1985-2007)