**INTISARI**

**Politeknik Kesehatan Yogyakarta**

**Jurusan Kesehatan Lingkungan**

**Karya Tulis Ilmiah, Agustus 2010**

**Eni Nur Cahya Rini**

**Penurunan Kadar Fe dan Kekeruhan dengan Menggunakan Saringan Zeolit dan Pasir kuarsa di Murtigading Sanden Bantul Yogyakarta**

 **(x + 50 + 6 Lampiran)**

Masalah penyediaan air bersih atau lebih khusus air minum yang sehat merupakan salah satu masalah yang dihadapi oleh negara berkembang, termasuk di Indonesia. Air bersih menjadi masalah apabila kualitas air tidak memenuhi baku mutu dalam Permenkes RI No. 416/Menkes/Per/IX/1990 tentang Persyaratan Kualitas Air Bersih.

Kadar unsur-unsur yang terkandung dalam air bersih harus sesuai dengan yang tercantum dalam baku mutu kualitas air bersih, supaya tidak meenimtimbulkan gangguan kesehatan atau kerugian teknis dan ekonomi. Gangguan atau kerugian dapat timbul apabila air mengandung unsur-unsur dalam jumlah yang berlebihan. Kadar Fe di Murtigading Sanden adalah sebesar 4,714 mg/L sedangkan kadar kekeruhan adalah sebesar 42,91 NTU. untuk kadar Fesudah melebihi baku mutu Permenkes RI No. 416/Menkes/Per/IX/1990 dan kadar kekeruhan melebihi baku mutu. Baku mutu kadar Fe adalah 1 mg/L sedangkan kadar kekeruhan adalah 25 NTU.

Tujuan penelitian ini adalah untuk menurunkan kadar Fe dan kekeruhan air sumur gali di Murtigading Sanden Bantul Yogyakarta. Jenis penelitian ini adalah *true eksperiment* dengan desain penelitian *Pre test – Post test*, dimana dilakukan perlakuan pengolahan air sumur gali dengan sarigan zeolit dan pasir kuarsa. Penelitian dilakukan sebanyak 3 kali pengulangan.

Hasil penelitian diketahui bahwa terjadi penurunan kadar Fe sebesar 3,88 mg/L dan penurunan kadar kekeruhan sebesar 26,30 NTU. Kualitas air setelah pengolahan sudah memenuhi standart kualitas air bersih yang ditentukan. Setelah diuji secara statistic dengan *one way anova*, penurunan kadar Fe dan kekeruhan menunjukkan adanya beda yang bermakna antara sebelum dan sesudah pengolahan. Alat ini belum diuji lama efektivitasnya, sehingga belum dapat digunakan secara maksimal.

|  |  |  |
| --- | --- | --- |
| Kata kunci | : | Filtrasi, zeolit, pasir kuarsa, kadar Fe, dan kekeruhan |
| Kepustakaan | : | 16 buku (1984-2007) |

**ABSTRACT**

**Yogyakarta Polytechnic of Health**

**Environmental Health Department**

**A Thesis, August 20100**

**Eni Nur Cahya Rini**

**The decreasing the degree Fe and turbidity by filter zeolit and pasir kuarsa in Murtigading Sanden Bantul Yogyakarta**

**(x + 50 + 6Appendix)**

The problem of clean water supplying, specifically health drinking water is one of the problems faced by developing countries, including Indonesia. Clean 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.

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 and the loss can emerge if the water contains the elements in over amount. The degree of the Fe of the water is 4,714 mg/L while the degree of turbidity is 42,91 NTU. For the quality of Febeen over under the standard of quality in Permenkes RI No. 416/Menkes/ Per/ IX/1990 and the degree of turbidity has already been over the standard the quality. Standard of Fe of water quality is 1 mg/L while the degree of turbidity is 25 NTU.

The aim of this research is to decrease the degree of Fe and the turbidity of the well water in Murtigading Sanden Bantul Yogyakarta. This is the true experiment with Pre test- Post test research design , in which the treatment of well water processing by using filter zeolit and pasir kuarsa. The research is done through three times repetitions.

From the result of the research can be known that there is the decreasing of the degree of Fe 3,88 mg/L and the decreasing of turbidity 26,30 NTU. the quality of the water after the processing has fulfilled the quality of clean water standard. After tested statistically by using *one way anova*, the decreasing of the Fe and turbidity of the water shows that there is a significant between before and after the processing. This tool has not tested its effectiveness for a long time, so can not be used maxsimal.

Key Words :Filtration, zeolith, pasirkuarsa, the degree of Fe and turbidity

Bibliography : 16 books (1984- 2007)