

ABSTRAK

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Nisrina Zain Syadza

PEMANFAATAN BIJI PEPAYA (*Carica papaya l.*) DALAM PENURUNAN KEKERUHAN AIR PERMUKAAN

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Waduk Gonggang dimanfaatkan sebagai penyedia air baku PDAM bagi masyarakat di Kecamatan Poncol, Lembeyan, Parang, dan Ngariboyo dan juga digunakan sebagai sarana irigasi pertanian oleh masyarakat sekitar. Kondisi fisik air permukaan Waduk Gonggang keruh dan berwarna kecoklatan. Air yang keruh dapat menyebabkan berbagai masalah lingkungan dan kesehatan. Untuk mengurangi kadar kekeruhan dapat dilakukan dengan koagulasi-flokulasi. Tujuan penelitian ini adalah untuk mengukur kadar dan penurunan kekeruhan sebelum dan sesudah penambahan serbuk biji pepaya (*Carica papaya l.*) dengan dosis 1 gr, 2 gr, dan 3 gr.

Penelitian ini pra eksperimen *one grup pretest-postest design*. Sampel air permukaan Waduk Gonggang koagulasi flokulasi menggunakan serbuk biji pepaya (*Carica papaya l*) sebelum perlakuan, 1 gr, 2 gr, dan 3gr, serta masing-masing kelompok dilakukan pengulangan sebanyak 6 kali. Analisis data yang digunakan uji *One-way Anova*.

Hasil penelitian didapatkan sebelum diberi perlakuan diperoleh hasil rata rata 45,43 NTU perbedaan kadar kekeruhan dengan dosis 1 gr sebesar 59,35%, dosis 2 gr sebesar 27,65%, dan dosis 3 gr sebesar -18,54%. Berdasarkan analisis uji *One-way Anova* didapatkan hasil *p value* > 0,05 maka ada perbedaan penurunan kadar kekeruhan untuk dosis 1 gr dan 2 gr dan didapatkan hasil hasil *p value* < 0,05 maka tidak ada perbedaan penurunan kadar kekeruhan untuk dosis 3 gr. Saran bagi peneliti yang akan melanjutkan adalah dapat dilakukan pengurangan dosis dan menggunakan jenis pepaya yang berbeda yang banyak ditemukan daerah sekitarnya.

Daftar Bacaan : 62 (2015-2024)

Kata kunci : Biji Pepaya, (*Carica papaya l.*), kekeruhan, air permukaan

Nisrina Zain Syadza

UTILIZATION OF PAPAYA SEEDS (*Carica papaya* l.) IN REDUCING SURFACE WATER TURBIDITY

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*The Gonggang Reservoir is used as a source of PDAM raw water for the community in Poncol, Lembeyan, Parang, and Ngariboyo Districts and is also used as a means of agricultural irrigation by the surrounding community. The physical condition of the surface water of the Gonggang Reservoir is cloudy and brownish. Turbid water can cause a variety of environmental and health problems. To reduce the level of turbidity, coagulation-flocculation can be done. The purpose of this study is to measure the level and decrease of turbidity before and after the addition of papaya seed powder (*Carica papaya* l.) with doses of 1 gr, 2 gr, and 3 gr*

*This study is a pre-experiment of one group pretest-posttest design. Surface water samples of the Gonggang Reservoir. coagulation flocculation using papaya seed powder (*Carica papaya* l) before treatment, 1 gr, 2 gr, and 3 gr, and each group was repeated 6 times. Analysis of the data used in the One-way Anova test.*

The results of the study were obtained before being given the treatment, an average result of 45.43 NTU was obtained with a difference in turbidity level with a dose of 1 gram of 59.35%, a dose of 2 gr of 27.65%, and a dose of 3 gr of -18.54%. Based on the analysis of the One-way Anova test, a p value of > 0.05 was obtained, so there was a difference in the decrease in turbidity for 1 gr and 2 g doses and the p value of < 0.05 was obtained, so there was no difference in the decrease in turbidity for the 3 gr dose. The suggestion for researchers who will continue is that the dose can be reduced and use different types of papaya that are widely found in the surrounding area

Reading List: 62 (2015-2024)

Keywords: *Papaya Seeds, (*Carica papaya* l.), turbidity, surface water*