Penjerapan Cd^{2+} Dalam Larutan Menggunakan Serbuk Tangkai Daun Enceng Gondok {*Eichhornia crassipes* (Mart.) Solms} Kering *Mesh* 30/40

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ABSTRAK

Pencemaran air yang terjadi sebagian besar karena kurangnya penanganan yang baik terhadap limbah industri. Maka harus dikembangkan suatu metode pengolahan air limbah. Dalam penelitian ini diteliti kemampuan dari serbuk tangkai daun enceng gondok {*Eichhornia crassipes* (Mart.) Solms}kering *mesh* 30/40 untuk menjerap ion Cd yang banyak ditemukan dalam limbah. Serbuk tangkai daun enceng gondok {*Eichhornia crassipes* (Mart.) Solms}kering *mesh* 30/40 sebanyak 0,5 gram direndam dalam sampel buatan Cd^{2+} dalam larutan pada pH 4-5 selama 2 jam. Kemudian sampel dianalisis dengan *Inductively Coupled Plasma Spectrometer* (ICPS) Fisons 3410+. Dengan meningkatnya kadar awal Cd^{2+}, maka mg terjerap/g penjerap akan meningkat (0,57-40,46 mg terjerap/g penjerap), sampai terjadi keseimbangan (40,46 mg terjerap/g penjerap), kemudian terjadi penurunan jumlah ion yang dijerap (38,26-37,30 mg terjerap/ g penjerap).

Kata kunci: *Eichhornia crassipes*; ICPS; Logam Berat, Penjerapan.

Uptake of Cd^{2+} by Dried Stalks of Water Hyacinth {*Eichhornia crassipes* (Mart.) Solms} with *Mesh* 30/40

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ABSTRACT

Water pollution occured because of lack of treatment of industrial waste water. Thus, because of the lack of good treatment for industrial waste, a method for waste water treatment must be developed. In this research, dried stalks of water hyacinth *mesh* 30/40 is examined for its adsorption ability on Cadmium ion that mostly found in waste water. Dried stalks of water hyacinth *mesh* 30/40 0.5 gram was soaked in cadmium solution at pH 4-5 for two hours. Then, this solution is checked by Inductively Coupled Plasma Spectrometer (ICPS) Fisons 3410+. Within the increment of initial Cd^{2+} consentration, the amount of mg adsorbed/g adsorbent increased (0,57-40,46 mg adsorbed/g adsorbent) until the equilibrium state was reached (40,46 mg adsorbed/g adsorbent), and then the ion adsorbed will decrease (38,26-37,30 mg adsorbed/g adsorbent).

Keywords: Eichhornia crassipes; ICPS; heavy metal; adsorption