

## **ABSTRAK**

### **ANALISIS KARAKTERISTIK ELEKTRIK LIMBAH SAYURAN SEBAGAI SUMBER ENERGI LISTRIK TERBARUKAN**

**Oleh**

**HARJONO**

Karakteristik elektrik limbah sayuran telah diketahui dengan menggunakan pasangan elektroda Cu-Zn. Pengukurannya dilakukan pada tegangan berbeban dari rangkaian LED dengan hambatan 1000  $\Omega$ . Volume limbah yang digunakan adalah 30 ml dan 50 ml. Limbah sayuran tersebut terdiri atas 12 yaitu kangkung, kentang, wortel, tomat, sawi, kacang panjang, kol, bayam, labu, terong, daun singkong dan campuran dari 11 limbah tersebut. Berdasarkan penelitian limbah sayuran yang memiliki tingkat keasaman atau nilai pH nya lebih kecil dapat menghantarkan arus listrik yang besar. Pada percobaan yang telah dilakukan nilai tegangan terbesar dihasilkan oleh limbah sayuran campuran 2,97 volt dan arus terbesar dihasilkan oleh limbah campuran 173  $\mu\text{A}$ .

**Kata Kunci:** Karakteristik Elektrik, Limbah Sayuran.

## ABSTRACT

### ANALYSIS OF THE ELECTRICAL CHARACTERISTICS OF VEGETABLE WASTE AS A SOURCE OF RENEWRABLE ELECTRICAL ENERGY

By

**Harjono**

The electrical characteristics of vegetables waste could be perceived using a pair of electrodes Cu-Zn. Measurement of the electrical characteristics of vegetable waste was carried on load voltage of the LED circuit with resistance value of 1000  $\Omega$ . The volume of vegetable waste that used are 30 ml and 50 ml. Vegetable waste used are 12 , kale, potato, carrot, tomato, mustard green, bean, cabbage, spinach, pumpkin, eggplant, cassava leaves and mixture of the 11 wastes. For characterization ,the measurement of voltage value, current value and pH were conducted. Vegetable waste with highlevel of acidity or lower pH value can conduct large electric current. In the conducted experiment, the highest voltages generated by the mixture of vegetable waste was 2.97volts and the highest current generated by mixture of vegetable waste was 173  $\mu$ A

**Keyword:** Electrical Characteristics, vegetable wate.