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Title: A Comparative study on PKL (*Bryophyllum Pinnatum*), Aloe Vera, Lemon and Tomato juice for Electricity Generation

Abstract: This paper represents the comparative study for electricity generation technology using PKL (Pathor Kuchi Leaf), Aloe Vera, Lemon and Tomato juice with load condition for 2:1 Zn/Cu based electrodes. For this experiment, I used 1 Ω resistance, No of Anode (Zn) = 6, No of Cathode (Cu) = 3 where distance between Anode & Cathode are 5 mm. Volume of Electrolyte is 720 cc or 720 ml, for each case we have been taken (PKL, Aloe Vera, Tomato and Lemon) sap 576gm and fresh water 144gm. Results show, maximum power of PKL (Pathor Kuchi Leaf) is 2.256W , Aloe Vera is 0.588W, Lemon is 1.416W and Tomato is 0.714W. In both cases, observed that the performance of PKL (Scientific name- *Bryophyllum pinnatum*), is better than others. This is really very helpful to construct a mini power plant by any people using this technique with an affordable price in the rural areas. Most of the results have been tabulated and graphically discussed.

Keywords: BPL/PKL (*Bryophyllum Leaves*), Biomass energy, Electrical Performances, on grid connectivity