

EXTRACTION TECHNIQUE FOR POWER GENERATION ON A VARIETY OF FRESH GREEN LEAVES

P. M. Dighe, Vairal Kailas L. and Mahesh N. Kharde

Padmashri Vikhe Patil College of Arts Science and Commerce, Pravaranagar,

Loni - 413713, Maharashtra, India.

(Affiliated to Savitribai Phule, Pune University, Pune)

Abstract:

In this task we study how to generate non-conventional energy. The present work extract diverse fresh green leaves of plants like as Manikra Zapota, Citrus Aruntifolia, Hibiscus Rosasinensis, Terminalisa Cattapa, Azedirachta Indica, Annona Reticedatu, Mangifera Indica, Saraca Ashoka, Ficus Benghalensis, Aloe vera etc. Using Bio-electrochemical cell in which plant extract used as an electrolyte. In series connection 21-24 maximum voltage (v) found that plant Terminalisa Cattapa, Mangifera Indica, and parallel connection 19-20 maximum current (mA) found that plant Manikra Zapota.

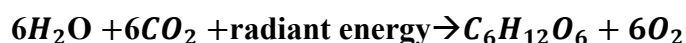
Keywords: Fresh Leaves, Energy, Extract, Plant, Electrochemical Cell.

INTRODUCTION

Now day by day exhausting rapidly conventional energy sources because huge consumption. Today, non-conventional energy sources that obsession the place of conventional energy sources. A non-conventional energy sources like as bio-mass, wind energy, solar energy, geothermal energy, and ocean thermal energy. This non-conventional energy source takes a vigorous role in the world wide development.

The process of photosynthesis, plants translates radiant energy from the sun into chemical energy in the form of glucose.

water + carbon dioxide + sunlight → glucose + oxygen



Most of the researchers shows the several non-conventional energy sources cover the area of conventional energy sources. Jain *et.al.* studied electrochemical cell used commercially existing inorganic salts as electrolytes for energy generation [7]. Prajjal Datta was first introduced a vegetative voltaic cell. He was developed the little cost of cell using supreme usually presented plant [8]. Salisbury *et.al.* studies the plant physiology. They observed that different plant contain organic and inorganic

electrolytes [10]. Now using this concept on present task used bio-electrochemical cell built from the charge battery cells. This experiment used bio electrical cell filled up with fresh plant extract juice are taken as an electrolyte.

EXPERIMENTAL TECHNIQUES

First, we take various plant fresh leaves (250gm) are grinded with distilled water to make overall extract juice(500ml) it. Using pH meter [SYSTRONICS] and specific conductivity meter (ELICO,CM-180) to measure pH and specific conductivity of plant extract juice. This experiment used twenty bio electrical cell filled up with fresh plant extract juice, arranged in two modes (series and parallel connection). The current (mA) and voltage (v) noted that in below table using digital multimeter.

Sr. No.	Plant	pH of plant extract	Specific Conductivity (mmhos)	Connection			
				Series		Parallel	
				Voltage (v)	Current (mA)	Voltage (v)	Current (mA)
1.	P_1	5.5	2.44	18.8	1.5	0.61	19.1
2.	P_2	5.9	1.49	18.4	0.70	0.76	11.5
3.	P_3	5.8	0.54	16.5	2	0.72	15.1
4.	P_4	4.5	1.74	21	1.70	0.54	14.4
5.	P_5	6.1	1.16	18.97	8	0.178	15.5
6.	P_6	5.5	1.64	19.8	1.20	0.138	7.3
7.	P_7	4.3	1.15	23.5	1.30	0.028	5.2
8.	P_8	5.7	1.54	15.70	3.2	0.108	9.3
9.	P_9	6.8	3.13	15.40	1.5	0.50	13.3
10.	P_{10}	4.2	1.70	18.87	1.12	0.82	9

RESULTS AND DISCUSSION

In this work we used fresh green plant such as Manikra Zapota, Citrus Aruntifolia, Hibiscus Rosasinensis, Terminalisa Cattapa, Azedirachta Indica, Annona Reticedatu, Mangifera Indica, Saraca Ashoka, Ficus Benghalensis, and Aloe vera etc. We assigned this green plant like as $P_1, P_2, P_3, P_4, P_5, P_6, P_7, P_8, P_9, P_{10}$. We taking this article two mode of connection; series and parallel. In series connection: 15-17 voltage(v) found

plant P_3, P_8, P_9 , 18-20 voltage(v) found plant $P_1, P_2, P_5, P_6, P_{10}$ and 21-24 maximum voltage(v) found plant P_4, P_7 . In parallel connection: 5-8 current(mA) found plant P_6, P_7 , 8-12 current(mA) found plant P_2, P_8, P_{10} , 13-16 current(mA) found plant P_3, P_4, P_5, P_9 , and 19-20 maximum current(mA) found that plant P_1 .

CONCLUSION

The present article used bio-electrochemical cell. The various plant extract used as an electrolyte. This work used two mode of connections; series and parallel. In series connection the results show that 15-17 voltage(v) found plant P_3, P_8, P_9 , 18-20 voltage(v) shows plant $P_1, P_2, P_5, P_6, P_{10}$ and 21-24 maximum voltage(v) originate plant P_4, P_7 . In parallel connection the outcomes noticed that; 5-8 current(mA) plant P_6, P_7 , 8-12 current(mA) plant P_2, P_8, P_{10} , 13-16 current(mA) plant P_3, P_4, P_5, P_9 , and 19-20 maximum current(mA) found that plant P_1 . In future this article helpful to researchers, students. They can use this technique in own work for nano-electronic devices.

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