National Journal of Advanced Research
ISSN: 2455-216X; Impact Factor: RJIF 5.12
Received: 03-07-2019; Accepted: 05-08-2019
www.allnationaljournal.com
Volume 5; Issue 4; October 2019; Page No. 12-13

Automatic waste segregator machine: A review

Mansi Rudrawar[1], Shivshankar Patil[2], Athrav Murkute[3], Sunil kumar Verma[4], Sairaj Mahadik[5]
[1] Lecturer Civil Department Y B Patil Polytechnic, Pune, Maharashtra, India
[2-5] Civil Department Y B Patil Polytechnic, Pune, Maharashtra, India

Abstract
Considering our rapidly deteriorating ecological conditions due to waste incineration, underground water contamination from garbage landfills and ocean dumping, there is obviously a serious waste management problem. A large portion of our garbage (trash) can be reclaimed, recycled and resold. Traditionally waste containers have not been designed to facilitate the source separation required for highly effective recycling programs to be successful. Nor have they incorporated the convenience required to encourage wide spread, willing participation.
Therefore, in this present work, an attempt is made to study to separate the biodegradable and non-biodegradable waste. In non-biodegradable waste we will separate the metal and plastic. This machine will be designed as to automatically separate biodegradable waste (banana peel, vegetable waste, fruit waste etc.) and non-biodegradable waste (soda cans, chocolate wrappers, plastic bottle etc.) in commercial building, where people throw all types of waste together hence require more time for separating waste from dustbin.

Keywords: moisture sensor, motor dual shaft, metal detector, jumper wire

1. Introduction
From the beginning of the human civilization, people used various methods of waste disposal to get rid of unwanted material. Sometimes it was buried in the land, thrown in the sea, fed to the animal or burnt. Getting rid of unwanted material is always a major concern for the modern society. Trash has played a tremendous role in history. The Bubonic Plague, cholera and typhoid fever, to mention a few, were diseases that altered the populations of Europe and influenced monarchies. They were perpetuated by filth that harboured rats, and contaminated water supply. When wastes are not properly managed then it may cause serious hazard, as seen in 1350. "Black plague" erupted and more than 25 million people from all over Europe fall victim to it in just five [years]. There is an increasing rate of waste generation in India. The Waste Generation Rate (kg/cap/day) is expected to increase to 0.6 in 2025. A significant percentage of the population has zero access to proper waste disposal services, which will in effect lead to the problem of waste mismanagement. The total waste collection rate in major cities of india. When waste is not properly collected, it will be illegally disposed of and this will pose serious environmental and health hazards to the people of India. This is not the only problem of indian city but also for other big cities around the world. With so much concern recently about being greener and economically friendly, waste management has become a very important topic. People and companies are starting to realize that the things they use and the way they dispose of them can make a big impact on our world. Proper management of waste plays a vital role in global environment. That is why a waste sorting system is designed which can be used in houses, offices, industries as a part of smart waste man.

2. Methodology

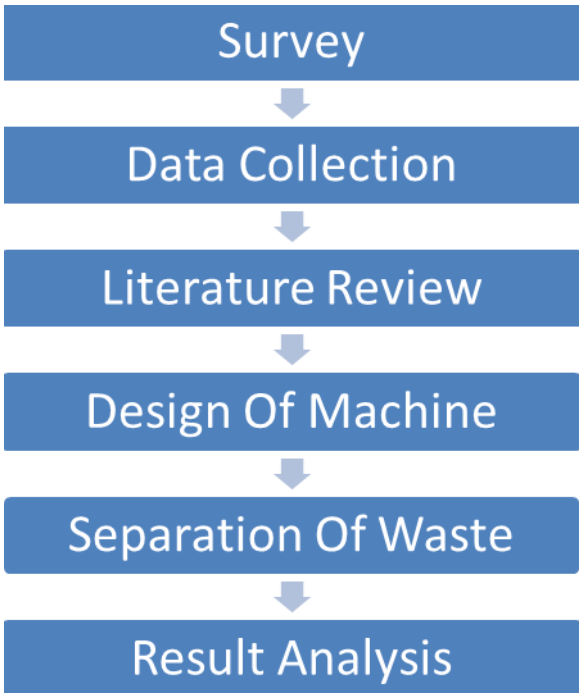

Fig 1

References
1. Adzimah SK, Anthony S. Design of garbage sorting machine. American J. of Engineering and Applied Sciences. 2009; 2(2):428-437.
2. Anderson P, Edwards J, Garfield M, Gregory J, Liss G, Lombardi E, et al. Impact of waste industry

consolidation on Recycling, MSW management magazine, 2001.
3. Bamgboye AI, Ojolo SJ. Characterization of Municipal Solid Wastes Being Generated in Lagos State, Nigeria, Lautech Journal of Engineering and Technology. 2004; 2(1):36-38.
4. Cheremisin off NP, Graffia ML. Environmental and Health & safety management – A guide to compliance, Noyes Publications, U.S.A, 1995.
5. Dubanowitz JA. Design of a Materials Recovery Facility (MRF) For Processing the Recyclable Materials of New York City's Municipal Solid Waste, M.Sc Thesis, Department of earth and environmental engineering, Columbia University, v.
6. Falayi FR, Adetuyi BO, Adesina A. Development of small scale municipal waste sorter, J. Eng. Applied Sciences. 2007; 2:1640-1645.
7. Hristovski K, Olson L, Hild N, Peterson D, Burge S. The municipal solid waste system and solid waste characterization at the municipality of Veles, Macedonia, International Journal of Integrated Waste management, Science and technology. 2007; 27(11):1680-1689.
8. Last S. Waste Technology: Mechanical Biological Treatment, retrieved from www.mbt. landfill-site.com, 2010.
9. Lee CC, Lin SD. Handbook of environmental engineering calculations, McGraw-Hill companies, U.S.A, 2000.