Available online at **www.joac.info**

ISSN: 2278-1862

Journal of Applicable Chemistry

2019, 8 (3): 1432-1438

(International Peer Reviewed Journal)

Studies on Prepared Vermicompost from *Rosa Berberia* (Rose Flower) Mixed with Cow Dung

Rippu Daman* and K. K. Singh

Post Graduate Department of Environmental Science, A. N. College, Patna, Bihar, **INDIA**

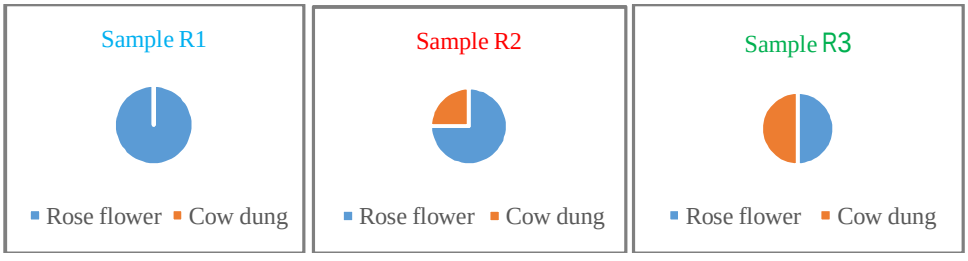
Email:damanrippu@yahoo.com

Accepted on 6th April, 2019

ABSTRACT

Vermicomposting is a method of making compost, with the use of earthworms which generally live in soil, eat biomass and excrete it in digested form. This compost is generally called vermicompost or Worm compost. The increasing quantity of solid waste is rapidly exhausting. The exhausting capacity of landfills and establishment of new sites are very difficult targets to achieve. Alternative practices to solid waste disposal can be reduction of solid waste at source of production, recycling, composting the organic waste and incineration. Patna the capital city of Bihar state has large number of temples, Mosques, Churches and Gurudwars. Devotees of different faith and religion profusely offer flowers, fruits, cotton, clothes etc. While performing prayers and rituals at their religious places. After the prayers or rituals are over these worship materials, mostly organic in nature are carelessly thrown away in nearby areas land or water bodies. According to one estimate organic waste worship materials constitute some 5-7 % of the total organic solid waste generated in the municipal area of Patna. Our present research work describes environment friendly disposal of organic components of the worship materials from some selected Temples, Mosques, Churches and Gurudwars of Patna through their vermicomposting using Eisenia fetida and Eudrilus eugenia species of earthworms. In this paper we study about the variation of micronutrients content in the process of vermicomposting. For this purpose, three composts are prepared R1, R2 and R3. R1 contains 100% rose flower, R2 contains 75% rose flower and 25% cow dung while R3 contains 50% rose flower and 50% cow dung. We analyze the macronutrients contents available in each compost and compare the findings.

Graphical Abstract



Percentage mixing of cow dung to rose flower.

Keywords: Organic floral waste, Vermicomposting, *Rosa Berberia* physiochemical analysis, *Eisenia Foetida* and *Eudrilus Eugenia* species of earthworms, Micronutrients.