

Application of Eco-Enzyme to the Environment - A Review

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Abstract - As of late Environmental Pollution has turns out to be excessively achieved lifted levels which is influencing water, air and soil and are of highly worry for people and other living life forms. Because of the fast development of urbanization and promotion the issue of natural solid waste administration or trash winds up broad basic. Thus it is important to discovering powerful, Eco-accommodating and perhaps minimal effort instruments to relieve the contamination and to tidy up and reestablish dirtied condition. As, the enzymes assumes imperative part to impetuses and ready to change an assortment of mixes including natural poisons. Eco enzyme is the aged item which is produced using organic products, fruit peeled waste, vegetables waste and brown sugar. By comprehension above ideas and components this review is made for concentrate different utilization of Eco-enzyme in environmental field as an Eco friendly material.

Keywords — Environmental pollution, Eco-friendly, Environment, Eco-enzyme, Organic waste.

I. INTRODUCTION

India is the one of the populated nation and this is the main purpose behind huge waste being created frequently out of family and modern exercises like peeling and cutting of crude natural product squanders and vegetables squander utilized for preparing, eating and cooking. On the off chance that these natural waste or refuse when transparently dumped in open spots causes contamination or make hurtful consequences for soil, water, air and groundwater. [1]

Indeed, even today, huge part of solid waste is dumped on edges of towns or urban communities with no earlier treatment this prompts groundwater tainting and increment in air contamination and increment in air contamination due to leachate permeation and increment in gases individually. Different examination uncovers that out of aggregate strong waste 80% can be used again either by reusing or reusing. [2]

For the most part in Indian urban areas the formal preparing and recuperation of units are not built up and the money related ramifications of recuperation and reusing has not been examined or considered to utilize strong waste for fund age. [3]

Today is the green economy period and green methodologies like reusing can give an incredible advantage to inn industry. Appropriate administration of waste can prompt higher gainfulness for inn and spare ecological contamination. [4]

II. ENZYME

Enzymes is bio catalyzes, are proteins that allow that a great number of biological reactions take place at rate much

quicker than in its absence. These molecules show high specificity for the recognition of the substances to be transformed and they have evolved during thousands of years to make possible a wide variety of transformations related to all forms of life. [5]

Enzyme technology is a settled branch of the biochemical science which is experiencing a period of development and additionally evolution.[6]As the request is for cleaner and greener innovation to save our mom earth for our future age, the utilization of compounds that can supplant destructive concoction responses are to a great degree significance and a large portion of the current R&D on catalysts is coordinated towards this issue. Since compounds are presently generally utilized as a part of bio change and thinking about the significance of chemicals in the blend of choral atoms of pharmaceutical significance, a different area on proteins engaged with bio change are likewise inspected in detail. [6] An assortment of catalysts from plants and microorganisms have been accounted for to assume critical parts in a variety of waste treatment applications. Prior to the maximum capacity of catalysts might be understood, various huge issues stay to be tended to. These include: advancement of ease wellsprings of catalysts in amounts that are required at the mechanical scale; show of the attainability of using the proteins effectively under the conditions experienced amid wastewater treatment; portrayal of response items and evaluation of their effect on downstream procedures or on nature into which they are released. [7]

III. ECO-ENZYME

A. Origin Of Eco-Enzyme

The Eco-enzyme recipe was examined and advanced by the author of the Organic Agriculture Association of Thailand, Dr. Rosukon Poompanvong who won a FAO grant in 2003. For her exceptional commitment to natural cultivating, through her work in utilizing aged natural waste as composts, pesticides and domesticated animals encourage. [8]

B. What Is Eco-enzymes And What Do They Do?

Eco enzyme is only a vinegar or liquor got from aging new kitchen waste, for example, veggie and natural product residue (peels, cuttings and bits), sugar (dark colored sugar, jaggery or molasses sugar) and water. The chemical is inferred after one channel and evacuates the deposit following 3 months. The key fixing is molasses, which the microscopic organisms and microorganisms show in the waste use into liquor. This is diminished in its last shape to acidic corrosive or vinegar. Vinegar with its acidic properties is outstanding as an inside and out non-lethal more clean.[8]

C. How Eco-enzyme preparation is are made?

In an impenetrable plastic container, measure and add 1 part Jiggery or darker sugar+ 3 sections veggie/natural product peels + 10 sections water. Case by weight: Weight 100g molasses or darker sugar + 300 g of veggie/organic product peel + 1000g of water Use any products thereof, keeping up a similar proportion. Give the blend a decent shake, and screw on the top firmly. The entire procedure takes under 5 minutes to make once you're good to go up with the fixings and compartment, and the maturation takes at least 3 months, so it's best to stun the chemical making in clusters with names on the holder demonstrating the date they are made. This will guarantee a standard supply later on. Following 3 months, you can channel the buildup to get a reasonable, dull dark colored fluid that has a crisp, acrid possess an aroma similar to vinegar. [8, 9]

D. Advantages of Eco-Enzyme

- 1) *Save Money*: Turn kitchen squander into normal Cleaning item.
- 2) *Multiple utilization*: Naturaliy more clean, air purifier, deodorizer, bug spray, cleanser, body mind, auto mind, natural compost, and so on.
- 3) *Reduce contamination*: Methane gas discharged from arranged waste can trap 21 times more warmth than CO₂, intensify the worldwide temperature alteration.
- 4) *Purify air*: Remove smell. Disintegrate harmful air discharged from smoking, auto fumes, concoction buildups from family unit items, and so on.

5) *Purify underground water*: Enzyme that stream underground will inevitably sanitize the waterway and the ocean.

6) *Natural pesticides*: Reduce mosquitoes, flies, rats or cockroach, and so on.

7) *Anti-bacterial and infection*: Natural sterile for your home.

8) *Prevent drainpipe blockage*: Release buildups collected in the pipe of bowls or latrine bowls. (8)

E. Application of Eco-Enzyme

- 1) *Agriculture- Plants Growing Organic-* Growing plants without using chemical fertilizers can protect the environment and keep us healthy. Eco Enzyme is very useful for agriculture. Eco Enzyme is a natural fertilizer. It can make a barren land fertile. Eco Enzyme can enhance photosynthesis. As a result, plants will get more nutrients and their roots can absorb more air. In addition, ozone, which is emitted by Eco Enzyme, can help plants grow better and faster.
- 2) *Livestock Farming- Keeping healthy Domestic Animals-* Utilizing Eco-Enzyme to clean territories for keeping domesticated animals can influence them to wind up more beneficial. Eco Enzyme is characteristic air freshener. Showering it on the floor of the shed for keeping creatures can fend off flies and foul scent. Accordingly, local creatures will have a cleaner place to live. Adding Eco Enzyme to sustenance and water for encouraging local creatures can support their invulnerable framework and enhance the nature of poultry or meat.
- 3) *Drainage System—Cleaning Pipes And Water.-* By pouring Eco Enzyme or its buildups into sewers, cesspools and trench, we can keep funnels from being blocked, refine wastewater and eventually clean streams and seas. When waste framework turns out to be spotless, fish and shellfish that have vanished from streams will develop once more. Subsequently, biological systems will be reestablished.
- 4) *Eco Living—Going Green-* Eco Enzyme can supplant cleaning chemicals that we regularly utilize Diluted Eco Enzyme can be utilized to wipe out scent, shape, earth and oil cleaning floor, aeration and cooling systems, toilets, debilitate fans and so on. Furthermore, nuisances, for example, flies, mosquitoes, rats and cockroaches will wind up less on the off chance that we utilize Eco Enzyme to clean our homes. Keeping individual cleanliness. [8]

IV. CONCLUSION

Because of the quick development of urbanization and promotion the issue of organic solid waste administration or rubbish winds up broad basic. As, this is the time of upset and utilization of green innovation. It is important to reuse and use item from the waste. A different catalysts from plants and microorganism have been accounted for assume essential part in squander treatment application. From the different examination it is watched that enzyme can change the qualities of crude material and aides in changing over the waste material into esteem included items.

Eco enzyme is a product created with the utilization of crude material, for example, organic fruit peeled and vegetable waste, jaggary or dark colored sugar and water with the formula and techniques distributed in media. Creation of Eco enzyme is twofold invaluable that it can diminish stack on natural solid waste administration and furthermore have the different application in horticulture, domesticated animals cultivating, household cleaning and so forth.

In any case, before maximum capacity of Eco enzyme can be known. Some significant issues stay to be tended to. For example, portrayal of Eco enzyme, Assessment of their effect on the earth, recognizable proof of strategies for transfer of strong buildup left after the filtration of test.

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