P: ISSN NO.: 2394-0344 RNI No.UPBIL/2016/67980 VOL-3* ISSUE-10 (Part-1)* January 2019
E: ISSN NO.: 2455-0817 *Remarking An Analisation*

To Replace Plastic and Thermocol Disposable Utensils and Items by Natural Disposable Utensils and Items

Manmohan Verma
Assistant Professor,
Dept. of Chemistry,
Government Degree College,
Babrala, Gunnaur, Sambhal,
U.P., India

Abstract

The problems of plastic & thermocol wastes in india is very grave and devastating, but the efforts from govt ,NGOs and social sides are not sufficient to encounter the menace of plastic and thermocol to all kind of life on the earth.

The situation is so dangerous that we can not imagine life without plastic now. But the reality is this that we can not survive healthy if condition of plastic & thermocol wastes remain as it is, plastic & thermocol wastes like carry bags, cups, plates, glasses, bowls, thermocol sheets, boxes. Packaging etc contaminate our environment. Many harmful chemicals leach in the pure water, air, soils of our environment making our environment unhealthy and squalor. Thus it is very very urgent to find a solution of this annihilating puzzle.

In my point of view the solution of this problem is to make natural disposable utensils/ items such as cups, plates , glasses , and carry bags of big leaves of plant/trees like- banana , sagwan , teak , peepal etc. these leaves might be used in single or in combined form to prepare above said items. The gum we can use to join these leaves might be plant gums. These disposable utensils/items are free from all kind of harmful chemicals. Thus our soil fertility, water resources, and air quality will increase. Thus this will be one step to save life of all animals as well as human being, our environment and our ecosystem.

Keywords: Disposable Utensils, Big Leaves, Ecosystems, Non-Biodegradable.

Introduction

There are many kind of plastic like - LDPE, HDPE, PVC, Nylons, Polyesters, poly urethanes, thermocols packing items, melamine etc, which are used in every corner of life. These are making poisonous our every corner of ecosystem, because their wastes are useless and non biodegradable in near future. But these plastics very slowly release harmful and carcinogenic chemicals as-lead, arsenic, mercury, isocyanates, Free radicals, intermediates in the water resources, soils, and air . If we burn these plastics wastes to destroy them, they produces poisonous chemicals/gases as CO, hydrocarbons hydrocarbon- derivatives, lead, arsenic, mercury, isocyanates, free radicals etc.

The only ways to save our environment from plastic threat are just not to use plastic items.

The largest wastes come from packaging sector of maximum industries and plastic disposable items. We have to stop all uses of plastic items for packaging and disposable.

The best ways are to use natural fibers, woods, leaves, papers, cardboards for packaging sector. Big leaves of plants and trees can be used to make natural disposable utensils/ items.

Review of Literature

About 10% of all plastic made has been recycled. While 12% of all plastic waste having been incinerated. The remaining 80% has accumulated in either landfill or in natural environment.

One million seabirds and 100,000 marine mammals die every year from plastic pollution in our oceans.

The best way to fight plastic pollution is to live by example for other. When you buy any products, ensure that you buy a product which are produced with both ethics and the environment in mind.

When you buy coffee cups from Starbucks or from other shops, ensure that these are reusable coffee cups which are made out of 100% food safe silicone.

BPA is very harmful chemical which is found in plastic products that can leak into your water and other beverages. Some stainless steel drink bottle is 100% BPA-free. This way makes it a safe, sustainable to consume your favorite beverages.

Uniboard has pioneered the use of renewable fibers like corn stalks and hops.There are no added formaldehyde (NAF) resin but glue is used.

Some biodegradable items have made globally like stainless steel straws, silicone lid which can stretch to fit over all shapes, toothbrushes, bamboo etc. Another product is collapsible silicone microwave popcorn. Other are cotton grocery bags, Muren biodegradable leaf pattal plates.

Aim of the Study

The aim of this paper is to make our air ,soil , and water pollution free to make water drinkable. Pollution have gone up to such wretched level that water of most of the cities are not directly drinkable. The soils have been contaminated by plastic wastes. Poisonous gases come out in the production of plastics and from slow leaching of chemicals from plastic wastes. It is urgent to make our air up to that level so that we can breathe in tolerable air without harm. This is possible by making our citizens aware of consequences of plastic and thermocol wastes. We must start to use natural things in our daily life. These plastic and thermocol packaging and disposable items are generally non-biodegradable.

Big problem of environmental pollution is that nutrients of our crops products such as wheat, pulses, vegetables have been decreased by considerable % in comparison to earlier time.

Methods and Meterials

To prepare natural disposable/ items, It is very necessary that big dry leaves should have flexibility so that it does not crakes. These leaves should be able to be moulded in suitable shapes such as cups, glasses, plates, carry bags etc.

I found banana, Baniyan, sal, palm leaf, sangwan, teak leaves very suitable for this purpose.

There are following steps to prepare disposable utensils/items.

1. Prepare separate moulds for different utensils/items such as cups, plates, glasses, and carry bags etc.
2. Find the big leaves with suitable flexibility. Cut the big leaves according to the desired shape of items.
3. Like for a cup we get a circular leave part of about 7 cm diameter.
4. For a glass we get a circular leaves part of about 10 cm diameter.
5. For a plate we get a circular leave part of about 12 cm diameter.
6. For a carry bag of 2-kg weight capacity we require about 10 inches × 22 inches rectangular part.
7. We keep a leave of suitable shape and size in a proper mould and hot press it for 2- seconds. In this time this leave part acquire the shape of mould.
8. Then we cut the extra part to give final finish to the products.
9. We use natural gum to join leaves for the preparation of carry bags.
10. The strength of carry bags are adjusted in such a way that it can hold about 2-kg of weight during your long journey.
11. We package our final products by cotton threads or jute ropes.

Result

It is possible to use some natural alternative to the plastic and thermocol disposable utensils and items. These are easy to make and absolutely environmental friendly. Even we can make carry bags of 2-kg or more weight capacity by big tree leaves. It will also solve the problem of polythene carry bags. which are very big challenge to the environment now a days. It is easy, possible and urgent need to prepare natural disposable utensils/items.

Banana leaves, sagwan leaves, leaves and skin of poplar, conifers, teak leaves, money plant leaves, peepal leave, skin of soft woods are some examples which can be used to prepare natural disposable utensils and items.

Discussion

We all know that our environment is in very critical condition. In several states and cities, like water is not drinkable in Delhi, Agra, and cities near industrial establishment. Even upper level ground water is not good for health. Several industries have made their surrounding water abominable for drinking purpose.

All the thermocol and plastic wastes items release hazardous chemicals slowly in soil. They also inhibit the growth of plants.

Conclusion

Packaging sector of industries and plastic & thermocol disposable utensils/items such as cup, plate, glass carry bag, thermocol sheet, thermocol boxes and packing plastic foam / cussions etc are major dreadful crux of drain blockage, water, soil and air pollution. Thus these must be replaced by some natural disposable utensils and items. Skin of soft woods, big & flexible leaves of trees, fibers of jute, linen (flax), cotton, coir etc can be used to prepare disposable utensils/items.

We can use cardboard and reinforced corrugated paper sheet in place of thermocol sheet in packaging industries.

Thus we can save our natural environment and can stop water, soil, air pollution up to some extent.

References

BBC Future. By Adrienne Bernhard 28 January 2019

Buckley Michael(2005)" a basic guide to soft woods and hardwoods" retrieved 1 oct 2017

Buzzfeed Reviews. Small things to help the planet. Posted on February 11, 2019, at 12:31 a.m

Things we make from softwood trees. forestry.gov.uk. 11july 2017 retrieved 1 oct 2017

Wikipedia content on soft wood