

Biodegradable plastics the way to improve the environment

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Abstract: Plastic is a term meaning deformable. plastics are soft by heated. And come in any form such as play dough. The analysis of the polymeric in nature, consequences of indiscriminate use of them has become an environmental problem. Thus use of biodegradable plastics, that have source of plant. Beside waste management issues, industries and separation from source is negotiable Search. The news of Plastic food, perhaps, Many people are surprised. But the true is now the world tends to produce and use of biodegradable plastics and Edible. Why industrialized countries and advanced extensive research on construction of biodegradable plastics has begun. [Yousefi K, Alimoradi H, Bashiri E. **Biodegradable plastics the way to improve the environment**. *Nat Sci* 2013;11(7):100-101]. (ISSN: 1545-0740). <http://www.sciencepub.net/nature>. 16

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1. Introduction

Today the plastics have a special place in industry. Because of the special characteristics such as ease of formability, strength, cost effectiveness, resistance to corrosion and have been replaced of Many materials. In a variety of packaging, particularly in terms of cost reduction, the volume of waste (1) and use of energy are good substitutes for metals. Around us is full of plastic. What we do, every product that we use, from the food we eat and appliances, Somehow it has handles With plastic. And, at least these materials are used in packaging. The term biodegradable, means that the material is simply, by biological activity, Decomposed into their sub-blocks and therefore do not remain in the environment.

The kind of biodegradable plastic is a mixture of natural plastic and synthetic. Such as films prepared from a mixture of starch and polyethylene that after a while, after being discarded, destroyed or decomposed and disappears. This type of packaging by Microbes, Bacteria and enzymes in soil, or in the presence of sunlight convert to water and carbon dioxide and destroyed.

2. Samples packaged with biodegradable plastic

Plastics are prepared from corn starch, whey and peel shrimp, are proteins plastic. As well as a coating, are used on fruit, meat and food or drug. And as dietary supplements are edible. For example the cover of some tablets and capsules, are edible. After taking, in the body breaks down and disappears. The types of other that our researchers have focused on it, is plastic is made from the beer cheese cheesy water containing about 30 to 60 percent protein, and is used in manufacturing potato chips and snack. Researchers of protein of beer cheese and zein in waste left after extraction of corn starch, are made slips of edible and

biodegradable packing. Although it has not reached the stage of mass production and industrialization but it has commercialization capabilities. From of this food packaging, can be used as a coating on sweets, cakes, fruits, sweets, and can be used below chips pizza. From of all proteins of plant and animal can be made films and edible laminates (2).

3. Types of coatings

Edible coatings: contain of cover of poly Sucrose, alginate, Carrageenan, starch, Dextrins and cellulose derivatives, gum.

Protein covering: Because of the attention to detail we refer to this type of coverage.

Casein: Casein is specific groups of proteins of milk eg : phosphate ester linkages, high levels of propylene, Low levels of cysteine, low solubility in PH 4-5.

Gelatin: Gelatin is a combined protein of derived from Collagen. Which contains 18 kinds of amino acids, gelatin produce of heating reversible gels.

Zein: particles of proteins that are soluble in alcohol.

Gluten: Insoluble proteins in water of wheat flour.

Lipid coating: The use of covered fats in food products has long history. Especially in the case of new products, confectionery products. composition of Lipid used as protective coatings, Containing acetylated mono-TG, natural waxes and compounds of making surface active. Because these compounds have low polarity, the main function of this cover is generally prevent of moisture transfer. The most important points are being biodegradable. Thus industrialized countries in the world, the factory of making plastic have obliged to manufacture biodegradable plastics. Though their cost twice the

price of conventional plastic. But health and environmental reasons, their use is recommended. Final synthesized plastics can act as fertilizers to enhance soil after decaying (3).

4. Results

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