



# How Does The Compostable BioBag come to be ?

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# Before we jump right into the lesson, we will give a little background on BioBags.

- BioBags are a world leader in providing bags and films for the collection of organic waste for the purpose of composting.
- BioBags can only be consumed by micro-organisms that live in the soil, hence why they are called the compostable BioBag.



# What is BioPlastic Made up of?

- Bioplastic is made up of substances made up of cornstarch, renewable raw materials and fossil raw materials.
- You can find the main source for bioplastic in Italy



Compostable Valve

Compostable Zip

Biobased plastics contain both renewable and fossil-fuel-based carbon. Made of natural.

Made of natural raw materials, primarily corn and yam starch, are carbon-neutral. This means that the quantity of carbon dioxide released when incinerated is up to 68% less than conventional plastics.

Increase the renewable content of your products by up to 64%, meet the standard ASTM D 6866 (BIO MATERIAL CONTENT) Reduce your carbon footprint

MST Compostable Pouch

Remains of the package in industrial composting conditions after **About 2 months**

Remains of the package in industrial composting conditions after **About 4 months**

Remains of the package in industrial composting conditions after **About 6 months**

**Fully Compostable**

# What does polymer stand for? And how can you remember the word polymer.

- ▶ Polymer- a substance that has a molecular structure consisting chiefly or entirely of a large number of similar units bonded together.
- ▶ If you can't remember the word polymer just think about Paul the lemur.



# What is polymers made up of?

- Polymers are made up of long repeating chains of molecules being bonded & how they are bonded. Some polymers bend & stretch like rubber & polyesters. Others are hard & tough, like epoxies & glass.

## Polymer molecules

- Polymer molecules are very large: **macromolecules**
- Most polymers consist of long and flexible chains with a string of C atoms as a backbone.
- Side-bonding of C atoms to H atoms or radicals
- Double bonds are possible in both chain and side bonds
- A repeat unit in a polymer chain ("unit cell") is a **mer**
- A single mer is called a **monomer**



# What are polymers used for?

- Polymers can be used for grocery bags, soda/water bottles, textile fibers, phones, computer, food packaging, auto parts and even toys.

<b>Common Uses for Polymeric Materials</b>	
<b>Packaging</b>	<b>Paint</b>
<b>Bottles</b>	<b>Automotive parts</b>
<b>Surgical sutures</b>	<b>Housewares: tupperwares, plates, cups</b>
<b>Electric components</b>	<b>Fabric</b>
<b>Contact lenses</b>	<b>Rubber</b>
<b>Adhesive</b>	<b>Pipes</b>
<b>Medical supplies: bone cement, blood bags</b>	<b>Plastic bags</b>



# Vocabulary



- Carbon Footprint: the total amount of greenhouse gas emissions produced to support an individual's activities, both directly and indirectly
- Commission: to give an order to produce something
- Polymer: A large molecule made up of shorter repeating units called monomers
- Synthetic: Made from a chemical reaction; not natural
- Water Treatment plant: a facility that processes water to remove contaminants

*The End*