

BIODEGRADABLE PACKING PEANUTS



Materials

- 1 package frozen corn
- Potato masher
- Bowl
- Slotted spoon
- Cheesecloth
- Iodine
- Tablespoon and teaspoon
- 1 teaspoon water
- Paper cups
- Stir stick

DIRECTIONS

These packing peanuts are almost entirely made of corn! They are totally water soluble and biodegradable.

1. Place frozen corn in a bowl and thaw.
2. Crush thawed corn with a potato masher and cover with water. Let stand for 24 hours.
3. Remove corn from the bowl with a slotted spoon. Allow water to stand an additional 15 minutes.
4. Pour the water through the cheesecloth. This traps the cornstarch in the cloth.
5. Allow students to see and feel the starch left in the cloth. Demonstrate the presence of

starch on the cloth by placing a small drop of iodine on an area near the edge of the cloth. If starch is present, the iodine will change from reddish-brown to blue-black.

Let the cloth dry overnight.

6. The starch has dried and turned into powder. Let students feel and taste it.

Mix 1 tablespoon cornstarch with the water in a paper cup, stirring until it forms a workable paste.

Microwave the paste on High for 15 seconds to provide a more consistent product for examination. Congratulations! You now have a biodegradable packing peanut!

Observations:

Have students place their peanut and a traditional packing peanut in separate glasses of water and observe the two.

- Which peanut would be best for the environment? Why?
- Bury both peanuts in soil to compare biodegradability. Track and compare results.