

Activity 3 – Extracting Polymer Strands from Soda Bottles

Materials:

- Safety glasses
- Gloves
- 1 Hot Plate
- 1 Piece of PET
- 1 Piece of Foil
- 1 Wooden Stick per Person
- 1 Pair of Tweezers or Forceps

Instructions:

1. Cut a small piece of plastic out of the soda bottle and place it on the foil on your hotplate (make sure the hotplate has cooled down!). (Ensure the plastic is fully on the foil).
2. Set your hotplate to medium high and wait until the plastic begins to melt.
3. Remove the plastic from the foil using your tweezers.
4. Use your wooden sticks to try to draw out polymer strands from the molten plastic, see how long a strand you can make! *Allow the plastic to cool on a piece of foil.
5. Try to pull and bend the polymer strands after it has cooled.

Activity 3 Discussion Questions

1. In what ways are the plastics you made similar to PET?
2. When the PET was hot, could you change its shape?
3. After the PET cooled were you able to change its shape?
4. Why do you think the PET might have different properties at different temperatures?