

Instant Snow

Can you create snow? Use a common polymer to see how chemistry creates model snow.



Materials:

- Emesis basin
- Sodium Polyacrylate powder
- Scoops
- Water
- Pipette
- 3 oz paper or plastic cup

Try This:

1. Put the empty cup into the emesis basin.
2. Put 1 scoop of sodium polyacrylate into the 3oz cup.
3. Use your pipette to put water in the powder until it resembles snow.
4. Observe what happens when the sodium polyacrylate powder absorbs the water. What does it look like? What does it feel like?



Want to Know More?

Sodium polyacrylate is a hydrophilic polymer. Hydrophilic means “water loving” and a polymer is a long chain of repeating of molecules. Because it loves water, sodium polyacrylate absorbs many times its weight in water. As it absorbs water, it expands to take up more space, and looks like fluffy, white snow. Sodium polyacrylate is useful in baby diapers because it can absorb so much water. It’s also used in health care as part of nursing mats, medical bandages, and wound dressings. In the agriculture industry it is used to help plants retain water in soil.

Polymers are found all over the world. There are natural polymers like DNA, silk, wool, and proteins that are found in you hair, skin, and nails. There are also synthetic polymers made by humans, like nylon, polyester, Teflon, and glue.

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Facilitator Guide



Learning Objectives:

- What is a polymer?
- What does hydrophilic mean?
- What are some uses for sodium polyacrylate?

Leading Questions:

- How does your instant snow look?
- How does your instant snow feel?
- How is your instant snow similar from real snow? How is it different?

Hospital Accommodations:

- Using emesis basins to make your snow in can be a fun way to play with medical equipment. Consider using a large syringe instead of a regular pipette for even more play.
- Once the powder dries out it will shrink back to its original size. Participants can add more water to repeat the activity.

Key Words:

Absorb - to soak up.

Polymer - a long, repeating chain of molecules. They can be synthetic or naturally occurring.

Hydrophilic - water loving.