



Vacuum Packing

Theory:

Vacuum packing is a process commonly used to preserve food freshness and extend the storage life of common foods found on the grocer's shelf. Its use is nothing more than an application of the relationships between three gas variables: pressure, temperature and volume. The concept of a vacuum being the absence of air, is often a difficult one for students to understand. In this demonstration, students will get firsthand exposure to what it feels like to be in a vacuum in a safe way.

Materials:

- Vacuum cleaner with hose attachment
- Sponge or foam ball
- Large plastic bags (large custodial garbage bags or lawn trash bags work well)

Safety Precautions: To prevent suffocation, always vacuum pack an individual from the neck down. Also, once someone is vacuum packed, they will not be able to move. For the safest results, have the person sit down inside the bag with their legs crossed to prevent them from falling over during the process.

Preparation:

1. Attach the hose adapter to a typical household vacuum cleaner.
2. To the opening in the hose, attach a sponge or foam ball to prevent objects from getting sucked into the vacuum during the demonstration.

Demonstration Procedure:

1. Select a willing individual and instruct him/her to sit down cross-legged inside the giant garbage bag.
2. Place the end of the vacuum hose inside the bag along with the student.
3. Turn the vacuum on.
4. Hold the opening of the garbage bag closed to create the best vacuum.

Disposal: None needed. If the trash bags do not break during the demonstration, reuse the bags year after year.

Reference:

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