

Provide some ideas for testing the effectiveness of hairspray

These ideas came from an AI chatbot.

Use your judgement to think carefully about if the property is important, and if the method will work to test it.

Only try out the ones you think will be effective.

1. Hold strength test (stiffness)

- **Method:** Spray hairspray on strips of paper or card and compare how much they bend under a weight.
 - **How:**
 1. Cut strips of paper or card.
 2. Spray some with hairspray (different brands, or different amounts).
 3. Place the strips across two supports like a bridge.
 4. Add small weights (e.g. paperclips, washers) one at a time until the strip bends or collapses.
 5. Record how much weight each strip can hold.
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2. Curl/shape retention test (simulated hair)

- **Method:** Use wool, string, or natural hair extensions. Curl them tightly around pencils, spray with hairspray, let them dry, then remove pencils and measure how long the curl lasts.
 - **Variation:** Place samples in a humid environment (like near a beaker of hot water) and see which loses its shape fastest.
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3. Stickiness test (adhesion)

- **Method:** Spray a surface (e.g. plastic sheet, glass slide, cardboard) and sprinkle with small objects (glitter, sand, salt). Shake off the excess and weigh what sticks.
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4. Drying time test

- **Method:** Spray hairspray onto a surface and use a stopwatch to measure how long until it's no longer tacky.
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5. Comb-through test

- **Method:** Spray wool or synthetic hair, allow to dry, then measure the number of strokes needed to comb it smooth again.
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Safety considerations in a school lab:

- Work in a well-ventilated space (hairspray is flammable and solvent-based).
- Avoid open flames / Bunsen burners.
- Use small amounts.
- Protect eyes and surfaces (use safety goggles and bench mats).