Lab Investigation: Lab Safety and Safety Data Sheets (SDS)

Background
The guest demonstrator you saw used an unlabeled white powder in their demonstration. It is important to know the identity of all substances used in the lab so you can follow proper safety precautions while working with and disposing of them.

Prelab Questions
1. What observations did you make about the unknown white powder during the demonstration?

Objective
Determine the identity of the unknown white powder by conducting tests based on information from the safety data sheets of three possible identities of the powder.

Safety
- Always wear safety goggles when handling chemicals in the lab.
- Wash your hands thoroughly before leaving the lab.
- Follow the teacher’s instructions for cleanup of materials and disposal of chemicals.
- Always use caution around open flames. Keep flames away from flammable substances.
- Always be aware of an open flame. Do not reach over it, tie back hair, and secure loose clothing.
- Open flames can cause burns. Liquid wax is hot and can burn the skin.
- Exercise caution when using a heat source. Hot plates should be turned off and unplugged as soon as they are no longer needed.
- When lighting the match and wooden splint, be cautious with the flame.
- When working with acids and bases, if any solution gets on your skin immediately rinse the area with water.

Procedure
Record your step-by-step procedure below for determining the identity of the unknown white substance. Make sure to include at least three different tests. Get your procedure initialed by the teacher before performing any tests.

Teacher Initials ________
Procedure (continued...)

Teacher Initials ________

Observations and Results
Record your observations from your tests below:
## Analysis/Conclusion

**Guiding Question:** What is the identity of the unknown white powder?

**Claim:** We think the unknown white powder is:

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<thead>
<tr>
<th>Evidence (summarize the data you collected):</th>
<th>Reasoning (explain how your evidence supports your claim):</th>
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1. How should your teacher properly dispose of the substance according to the safety data sheet?

2. What precautions should the demonstrator have taken while they were working with the substance?