

Abstract:

Does temperature affect how fast cheese molds? A piece of mold from a strawberry was placed on six single slices of provolone cheese to increase mold growth and was left for a month to find out which one would mold faster. One was placed in a refrigerator, an incubator and in room temperature. This tells us how temperature affecting the rate of growth of the mold.

Hypothesis:

If mold from a strawberry is placed on a piece of cheese, then the mold will grow faster in a higher temperature.



Effect of Temperature on the Growth of Mold on Provolone Cheese

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Introduction:

Does the rate of growth of the mold increase in different temperatures, the answer is yes. It has been proven that mold species can grow from humidity only if the humidity stays high for a long period of time ("How to prevent mold", 2019). Also it is known that humidity needs to be higher than 55 degrees Fahrenheit before some mold bacteria can grow ("Mold: Where Can it Grow", 2019). This group decided to measure the mold growth on provolone cheese in various temperatures. The six slices of provolone cheese that were received from the campus cafeteria were placed in ziploc baggies and the bags were labeled A and B. Two slices of cheese were put in an incubator at the temperature of 93.2 degrees Fahrenheit, as well as another set of two slices of cheese were placed in the refrigerator at the temperature of 17 degrees Fahrenheit and another two slices of cheese were left out in the room at room temperature 72 degrees Fahrenheit. It has been determined that the rate of mold growth will increase in higher temperatures. If cheese is kept in temperatures below 20 degrees Fahrenheit and stored in a secured container the mold will grow slower. Controlling mold growth is important, because if it's not kept properly the mold can cause illnesses ("Mold 101 Effects on Human Health", 2011).

Procedure:

The project started with six single slices of provolone cheese from the Campus Cafeteria. A piece of mold from a strawberry was placed onto the provolone cheese to increase mold growth then each piece of cheese was placed in separate Ziploc baggies marked A and B. Then placed the cheese in their designated spots which were in the classroom at room temperature, the refrigerator, and a incubator. They were measured every week one time for a month this procedure was done. The materials that was used for this experiment are provolone cheese, ziploc baggies, ruler, moldy strawberries, marker, incubator, refrigerator,.

Results:

There was more mold growth on the cheese located in the incubator. A white fuzzy mold grew on the cheese in the incubator. Meanwhile, there was little to no mold growth on the cheese in the refrigerator. The color of the cheese was still red like the strawberry from when it was first placed on it. The cheese in room temperature had some mold growth but not as much as in the incubator. An almost black color of mold grew on the cheese in room temperature.

Observations:

The Cheese that was placed in the incubator grew a mix of white fuzzy mold and black mold. The cheese located in room temperature grew a black and brown color of mold. Lastly, a red color of mold was found on the cheese in the refrigerator.

Conclusion:

Placing cheese and other foods in colder temperatures will limit the mold growth. If food is placed in a warmer climate then mold is more likely to grow. Also the temperature the food is in will change the color of the mold as well.

References:

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