

Kaitlyn Dumm  
*Pasteurization*

The purpose of this experiment was to determine if the process of pasteurization (defined as the process of exposing food to a high temperature for a period of time to destroy microorganisms that can cause disease) is effective at killing bacteria that contaminate milk, and to determine if raw milk is healthy to drink, since some people feel that pasteurization takes away good nutrients and changes the quality of the milk. This experiment was conducted by taking both raw milk and pasteurized milk samples and culturing the samples to see if bacteria would grow. The samples were put on different growth media and placed in an incubator. The samples were then checked for bacteria growth. Laboratory tests were performed on the bacteria to see which type, if any, had grown. My hypothesis was that the process of pasteurization is effective at removing the bacteria that contaminate milk. Also, even though raw milk may contain more nutrients, I believed that the risks would outweigh any benefits, and that the bacteria in this milk would make it very unhealthy to drink. The bacteria found in raw milk have been shown to cause disease in humans. The experimental data supported my hypothesis that pasteurization killed bacteria effectively because the pasteurized milk samples did not grow any bacteria at all (although it did grow mold, which is a fungus). The raw milk samples grew five different types of bacteria in just eighteen hours. This data supported my hypothesis that raw milk contains numerous bacteria that are harmful to drink. In conclusion, my hypothesis that pasteurization is an effective way of killing bacteria of many species in raw milk was proven true. Also, the types of bacteria that grew in the contaminated samples can cause many diseases, making drinking raw milk potentially dangerous to your health, further supporting my hypothesis.