The Presence of the Bacterial Growth in Cow's Milk for Human Consumption in Puerto Rico Before and After Hurricane Maria

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According to the United States Department of Agriculture (U.S.D.A.) Microbial Standard for a high-quality grade A Pasteurized Product, a total colony count does not exceed 20,000 c/ml. During this investigation was discovered that the Pasteurized milk having significative bacteria growth before the passage of Hurricane Maria. In the absence of electrical power after hurricane, the dairy industry was forced to discard hundreds of liters of cow milk for human consumption, what produced millionaire losses for the dairy industry. Then, it is deciding to investigate the different types cow milk again. Different types of cow milk were tested: Raw, Pasteurized, Ultra High Temperature, Evaporated, “Half & Half” and Condensed. The presence of bacteria growth was verified by three methods: simple stain with Methylene Blue, colony count with Serial Dilution /pour Plate process, and selective media for Gram Positive and Gram Negative. The tests were performed three times to confirm the presence of bacteria. The U.H.T., evaporated milk, “Half & Half” and condensed milk showed lower colony count. The results obtained show that pasteurized milk consumption before Hurricane Maria had a bacterial presence. However, after the hurricane the presence was too low to count. Therefore, the hypothesis was rejected because the presence of bacterial growth in different types of cow milk was less than the previous year, although the lack of electricity caused by Hurricane Maria.

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