A self inoculating inoculation loop model by battery heating to increase safety in microbiology hood

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Abstract

An inoculation loop is used in microbiology hoods to transfer culture strains. To prevent contamination they are sterilized by disinfecting with alcohol and with exposure to Bunsen burner flame. Thus this provides for a hazardous condition. A self heating inoculation loop is proposed which via battery heating reaches the temperature for alcohol to burn thus disinfecting the loop. This model increases the safety of the entire hood
A self inoculating inoculation loop refers to the inoculation loop being disinfected by alcohol with a self heating electrical mechanism to burn the disinfecting thus doing away the Bunsen burner alcohol hazard in the hood.
A battery heating mechanism of passing current through a high resistance material forming the loop is suggested in this regard. This enables a safe configuration in the hood. Thus the inoculation loop consists of a high resistance end exposed to the cell culture which when completed is disinfected with alcohol and then self heated by a button operating the current flow from a battery set up which only heats it to sufficient temperature for burning the alcohol thus enabling a safe disinfection.
This device can be in principle sought by every microbiological hood as a replacement to the current use of alcohol separately with the Bunsen flame. The self inoculating inoculation loop can be made affordable on mass production with standardization of the temperatures reached optimized to battery consumption.