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REMOVAL OF WHITE SILICONE POWDER FROM REUSABLE GLASS PIPETTES

The problem of white powder on glass pipettes is caused by the over-heating of the silicone pads during dry-heat sterilization cycles. The decomposition temperature for the silicone formulation is 550°F (288°C). As the pads undergo decomposition, they will deposit a white powdery film on the inside of the can and on the surfaces of the pipettes. The film has little effect on most applications and is inert to most chemicals.

The following procedure should give the best possible results.

Bellco recommends a maximum temperature of 500°F (260°C) which falls within most dry-heat protocols. On occasion ovens are set too high and a thermostat may break or the oven may establish a significant temperature gradient. Either condition may result in the decomposition noted. Normal cleaning procedures will not remove this film. One option is wash with trichloroethylene which is the solvent used by silicone manufacturers to thin the product when cleaning machinery. The second option is a 50:50 vol/vol mixture of acetone and toluene. In both cases, the pipettes are soaked in the solvent with additional agitation being helpful.