



Harry F. Bader

# Safe method for chlorination of medical gloves

Mr. Harry F. Bader, Vice-President, Latex Services, Akron Rubber Development Laboratory in Akron USA, and a world authority on latex, answers the questions and doubts of readers on latex and latex products.

● **Chlorinated gloves are inflammable. Can any improvement in latex technology arrest the mishap?**

▲ *There have been a number of cases of spontaneous combustion of packaged medical examination gloves. I was contacted by Mr. Andrew Lowery of the U.S. FDA during their investigation. I related to him my experience with chlorinated flocked household gloves which had been on an upper storage rack in a metal warehouse in Oklahoma City, USA, during the summer. When the carton was opened the original yellow gloves were found to be crisp and dark brown (almost black) in colour. Investigation later revealed that the afternoon temperature on that top storage rack exceeded 70°C every afternoon. The heat in the carton stayed at that level for hours.*

*Obviously, it is essential for all latex gloves to be stored in a well ventilated warehouse where temperature do not exceed 50°C. Regardless of any change in technology good storage practices must be followed.*

*Probably chlorination will continue for some time to be a dominant method for achieving a powder free medical glove which can be easily donned. It is therefore wise to carry out the chlorination process in a precisely controlled manner. There are several sources of chlorine gas chlorination systems which provide continuous, accurate and precise concentrations of chlorine water. This equipment was originally designed for municipal water chlorination where precision and accuracy are essential.*

*Along with a good chlorination system which will not over chlorinate there are two other things which you must do.*

1. *Do not overfill either your chlorination washer or your dryers.*

2. *Insure that since chlorination latex is heat sensitive you do not dry your gloves above 50°C.*

● **There is a fear that due to micro porosity, condoms are not an effective barrier against HIV. Please explain that position**

▲ *Latex is a semi-permeable membrane. That property was used in the original dialysis equipment to filter poisons from the blood of patients with poorly functioning kidneys.*

*There have been studies which have indicated that as many as 30% of the condoms in the study permitted the passage of the HIV virus. One of these was done by the U.S. FDA using 100 nm microspheres to stimulate the HIV virus and another was done by the Mariposa Foundation using live virus.*

*However, the U.S. FDA has abandoned the methodology they used. Apparently they found, as did we at the ARDL, that they could not reproduce those results. At the ARDL we found that condoms which showed water leaks were the only ones in our study using the U.S. FDA methodology, which would allow passage of 100 nm microspheres through the film.*

*All data bear out the position that even if the condom is not a 100 per cent sure guarantee of avoiding HIV infection, it is at least 1000 times better than having unprotected sex.*

Send your questions to:

**'The Latex Doctor'**

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