



Harry F Bader

Latex medical gloves do not protect against all substances

Can research laboratory use latex medical gloves for protection against the chemicals it uses?

P.T. Kuriakose
—Kottayam

Definitely not! Even to say "may be" would be a bad answer.

Throughout the medical community we have grown familiar with boxes for examination gloves being virtually everywhere. Even though they are everywhere, they should not be used for everything! Latex gloves provide excellent protection against body fluids. However, many common chemicals and solvents will permeate a latex glove in a few minutes or even a few seconds. If your need for protection goes beyond human or animal body fluids, ask your industrial glove supplier to recommend a glove for the specific protection you need. There is a glove for every need. Make sure that what you use fits your need.

In the Latex Doctor Column of Rubber Asia of July-August 1997 you said about dipping angles and entry speeds as important parameters for good dipping. But how do you consider chemical stability in this area and how would you advise companies to measure this parameter? My view is that if the compound chemical stability and coagulant strength are at odds with each other, then everything else comes second.

Richard Scott
— Derbyshire, England

The information on dipping angles and entry speeds provided in the July/August issue was in response to a specific question on that subject. It was stated that a fresh compound will frequently avoid pinhole problems experienced with a less stable compound.

There are a great many important factors which must be considered when one marries good engineering and good latex chemistry to produce a manufacturing facility. I disagree that everything else is secondary to a proper balance of latex stability and coagulant strength. That proper balance is essential. However, many other factors are also essential to a high quality final product.

A zinc oxide viscosity evaluation is fine for determining the stability of both uncompounded and compounded latex, and if some in-house historical data is accumulated, Zahn Cup rather than Brookfield Viscometer readings would be suitable.

What parameters of water temperature, time of immersion, and fresh water makeup will provide optimum leaching of latex proteins and residual accelerators from medical examination gloves?

Sharat Chandra
— Archer Exports Ltd, Mumbai

There may be some disagreement with these parameters. These are based on my personal experience plus observations of what other manufacturers are doing and the protein reduction they are experiencing.

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.

- Temperature : 65°C minimum
- Immersion time : 20 minutes
- Fresh make-up : One litre per water
100 gms of gloves processed

In addition to these basic conditions the immersion must be turbulent. Turbulent flow greatly multiplies the effect of leaching. Fresh make-up water should be added at the point where the mandrels are coming out from the leach tank. This allows the gloves to come in contact with increasingly pure water as they progress through the leach.

The point in the process where leaching is most effective is immediately after the latex is gelled sufficiently to avoid rupture by the leaching turbulence.

Leaching removes both prote-

ins and accelerator residues from the film. However, a reasonable portion of what is removed from the film remains on the inside of the glove. This is sometimes evident as small pouches in the glove fingers as the mandrels come out from the leach. To remove this residue, post strip wet processing of some sort is necessary.

I have encountered manufacturers that achieved less than a 50 ug/gm protein level by the manner in which they used the above general conditions of leaching.

Send your questions to:

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