The Latex Doctor

In today's world what value do you see in having regional NRL and NR sources? The question has particular value for the North American region.

Anonymous: International Latex Conference, NC, USA.

For many years the US Government has recognised the need for a 'strategic' supply of natural rubber. It may still be the case that, as with oil, a stockpile is maintained by the US Government. I haven't kept current on that information.

However, in the period before World War II a rubber stockpile was collected. At that time, A.N. Spanel, the founder of Playtex and several other companies, attempted to convince the US Government to stockpile NR latex. He was unsuccessful and he decided to gather his own stockpile.

A small underground tank farm was constructed and the Playtex (then International Latex Corp.) plant in Delaware and several tanker loads of NR Latex were put into those underground tanks. That latex was "commandeered" by the US Government at the start of World War II and could not be used for commercial products until well after the end of the war.

NR latex continues to be an important raw material for a host of commercial and medical-related products. I believe that will continue to be the case.

Therefore, 'new' natural lattices such as those from guayule and Russian dandelion should quickly find a place as viable substitutes for the imported Hevea natural latex.

It will be necessary to expand the supply of these materials and, probably more important, to educate the manufacturing community in the techniques needed to produce superior products from these materials.

This does not address the 'protein allergy' and provides an advantage to the 'new' lattices versus Hevea. Manufacturers internationally must also consider this when making a decision on which latex to use for their product.

Latex protein-related allergy

What is the estimated lower limit for reducing latex protein-related issues through combinations of powder-free and reduction technologies?

Anonymous: International Latex Conference, NC.

I don't believe it is likely that the "protein related issues" of Hevea natural rubber latex will be either eliminated or greatly reduced.

I believe latex protein allergy claims were and are greatly overstated mainly due to the misdiagnosis of contact dermatitis as an allergic condition.

To reduce these issues, it will be necessary to convince the latex product users that the allergy-causing proteins are no longer present and, possibly more important, it will be necessary to ensure that residual contact sensitisers are removed from the latex product.

Do age of tree matters?

Is the latex from very mature trees different from that of very young ones? What are the advantages/disadvantages for certain products that are made using one versus the other?

Anonymous: International Latex Conference, NC.

I'm not aware of the nature of the differences or if these differences would result in advantages or disadvantages for certain products.

However, there is a major problem that must be resolved. That is one of segregation of latex from 'young' trees and 'mature' trees. I would expect a great deal of experimentation...
tion would be needed to establish the differences and to determine at what point in time a 'young' tree become a 'mature' tree.

To begin with, we have to find out about advantages/disadvantages of latex from young versus mature trees.

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**Disposal of old latex**

What are the recommendations for the 'disposal' of old latex?

Anonymous: International Latex Conference, NC.

This is a repeat of a question which was asked 2-3 years ago at the same conference.

If the latex is still a liquid, mix it well and add it (no more than 5% DRS) to a fresh batch of latex compound. This should be done before filtrations before it is added to the dip tank. However, if you don't want to do this, I suggest you dump the old latex into a container of old coagulant. After a few days, remove the coagulated latex, dry it and treat it as normal scrap rubber.

If the old latex has coagulated, I suggest it should be dried and included with normal scrap.

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**Vulcanisation accelerators**

What are your suggestions for reducing zinc in a latex dipping plant effluent?

Anonymous: International Latex Conference

There are two suggestions. 1. Change the zinc vulcanisation accelerators to sodium salts of the same accelerator. This also gives the benefit of not needing a dispersion of that accelerator.

2. Investigate the use of nano-zinc oxide. The quantity of ZnO can be substantially reduced and, therefore, the Zn in the effluent will be reduced.

CAUTION: This requires experimentation to ensure that physical properties are not affected and that process changes are evaluated to give the desired product properties.