

**E1 222**

## **Utilisation of natural rubber latex after irradiation for large scale production of examination gloves**

Radiation Vulcanization of Natural Rubber Latex (RVNRL) has several advantages over the conventional vulcanization with sulfur such as less or absence of nitrosoamines and accelerator induced allergies, low cytotoxicity and cleaner process.

The present exercise was carried out mainly to study the behavior of the material in production scale by irradiating latex on a large scale and producing gloves in a production scale plant. Two tons of specially prepared centrifuged natural rubber latex was irradiated in Indonesia and the production of examination gloves were carried out in Sri Lanka.

It was found that RVNRL can be used in conventional glove plants without making major alteration to the plant. Quality of the gloves that were produced using RVNRL is acceptable. It was also found that the small deviation of vulcanization dose will affect the crosslinking density of films. This will drastically reduce the tensile strength of the film. Crosslinking density or pre-vulcanized relax modulus (PRM) at 100% is a reliable property to control the pre-vulcanization of latex by radiation.