Para rubber mannequins for medical education and training, veterinarian, vet nurse and side course

Executive summary

Since 1991, Para rubbers have been an important economic crop and export product of Thailand, a country that accounts for 36% of global para rubbers production capacity.

However, almost 90% of para rubber production was exported as natural latex or other forms of rubbers.

Foreign investors often bought the remaining 10% to make tires.

In our opinion, this 10% of para rubber could have been processed as something more valuable that could potentially generate hundreds of millions of Thai baht.

For instance, we can turn para rubber into 3D models of organs and animal bodies for educational purposes or medical practices.

These traditional educational mannequins are often made of expensive synthetic resins, fiberglass, or silicon due to importation from foreign countries.

As a result, para rubber mannequins not only decrease the need for the importation of expensive mannequins but can also be used as advanced educational materials for veterinarian students.

The manufacturing of para rubber for educational mannequins is as follows

1. Use computer graphic programs to create 3D images of the mannequin molds. Supplement important parts with delicate hand-modeling techniques.

    1.1 Head and neck

    1.2 A whole body

2. Use silicon to create an external mold and use resin to increase stability of the mold. Then, use metal materials such as iron or brass as an internal mold.

Techniques to form a mold can be separated into two parts as described below

2.1 Single combine mold for head and neck parts of the body

2.2 Triple level modeling complex for the whole-body models

3. Place supplement materials in the designated areas

4. Pour para rubber compound MA65 formula into the mold

5. Heat with steam until the para rubber mannequins are hardened

6. Remove the hardened para rubber mannequins from the mold

7. Trim as needed, then decorate

MED
SCIENCE LATECH