

COLLABORATION OPPORTUNITIES AT KL-KEPONG RUBBER PRODUCTS SDN. BHD.

CHENG PHOOI YANN
29-Jun-2021

For MRC Industry Linkage Fund

Highlights

- ❖ **INTRODUCTION**
- ❖ **COLLABORATION OPPORTUNITIES**
- ❖ **OUR EXPECTATIONS**

Introduction

KL-Kepong Rubber Products Sdn Bhd started operations in 1987 under the name of its subsidiary, Masif Latex Products in Ipoh.

KLKRP has since grown to become one of the Malaysia's leading rubber glove manufacturers specializing in OEM and private label for both household and industrial applications.



Our expansion

In 2021, KLKRP decided to diversify into medical gloves production and distribution.

Installation of new disposable gloves production lines are now progressing extensively, and will come on stream within second half of 2021.

The expansion will enable KLKRP to supply quality disposable gloves to meet global demand.

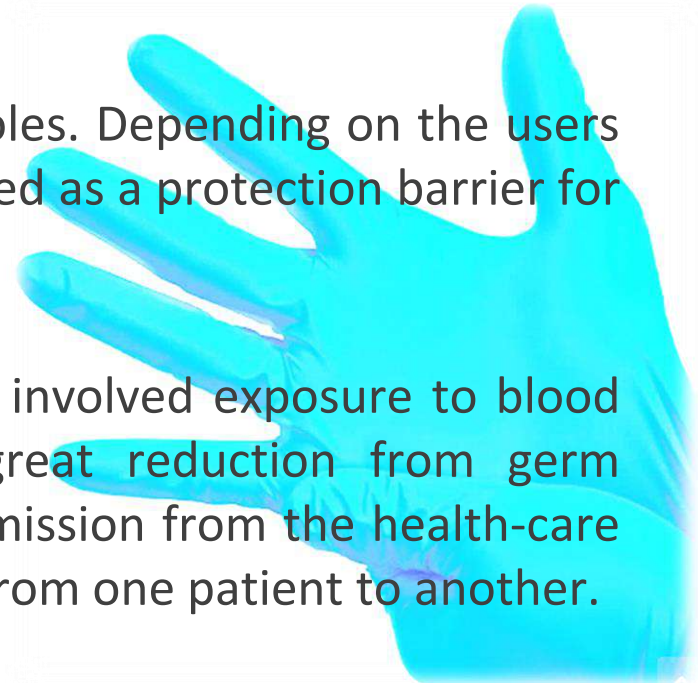


Collaboration opportunities

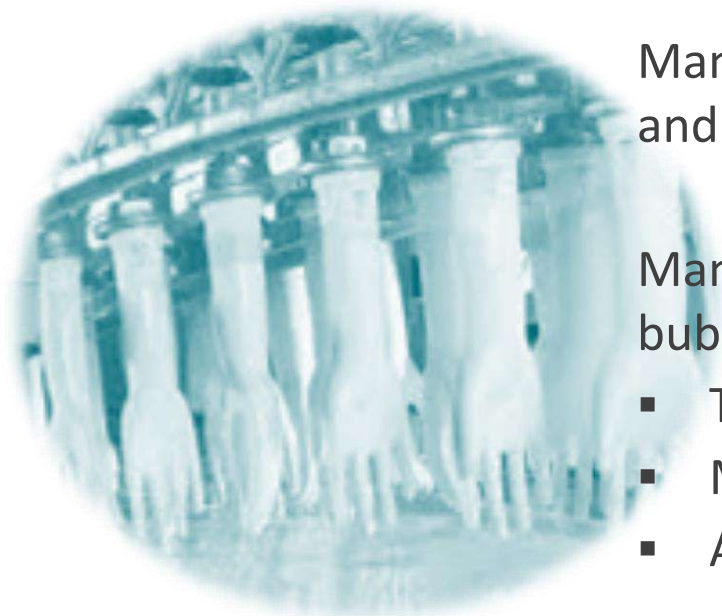
Freedom from Holes

It is critical for rubber gloves to be free-from-holes. Depending on the users environment, gloves are recommended to be used as a protection barrier for chemical and medical applications.

For healthcare workers, the work environment involved exposure to blood and other body fluids. Gloves will enable great reduction from germ dissemination to the environment and of transmission from the health-care worker to the patient and vice versa, as well as from one patient to another.



Collaboration opportunities



Manufacturing focus to ensure gloves are made and free from holes.

Manufacturing processing steps may generate bubbles or holes-making potential upon

- Transfer of latex from one station to another
- Mechanical agitation during latex stirring
- Air trapped during hand mould immersion

Collaboration opportunities

Researchers can assist in

- Designing a robust latex transfer system
- New mechanism or chemicals that allow a fast de-bubbling effects. For chemicals, overdosing to be avoided as it may lead to other new defects
- Improvement on detection during inspection online or offline to reduce the likelihood for defective gloves with holes from reaching end users

Extended collaboration opportunities

Redefining and modifying Nitrile latex characteristics to achieve Natural Rubber-like elasticity

Nitrile latex has shown less elasticity and resilience upon comparing to natural rubber due to different processing techniques and monomers design during the polymerization.

This makes Nitrile gloves becoming stiffer and less comfortable as compared to natural rubber gloves. A new material may be appreciated at right cost.

Extended collaboration opportunities

Improve donning properties of thin examination glove

The ease of donning is appreciated by users at all times.

At present, processing modification as such as chlorination step and use of special polymer coating being used for surface treatment, but it may come with the expense of bad smell and residues left on the hand after extended use.

A new surface treatment is preferred.



Extended collaboration opportunities

Method development on measuring durability of thin examination glove

Gloves are required to undergo stringent testing by regulatory standards, which should represent and maintaining a good properties during application, thus it will not having a premature tearing or deterioration. Example include tensile strength.

Unfortunately, the test may not representative to actual application and duration. This need to be improved. A standardized test package include equipment will be preferred to demonstrate good durability during design and manufacturing of gloves.



Our expectations



MRC Industry Linkage Fund

Industry-University Interaction Session 2021



Thank you...



Organised by:



A collaborative effort with:



FRTAM