

Nursing Students Develop Face Masks from Bagasse Sugarcane

During the recent outbreak of Covid-19, medical students invented several different devices to contribute to Vietnam's current successful suppression of the virus. From the outset, there was a race to purchase essential equipment, such as face masks, and then to develop a suitable vaccine. Meanwhile, the wave in July 2020 caused all activities in Danang to stop due to the lockdown order.

A group of three junior students from the DTU Nursing Faculty, Nguyen Hong Dung, Vo Thi Han Chau, Nguyen Le Nhat Mai, Nguyen Thi Thanh Nga, and two senior students from the DTU Faculty of Business Administration then created an environmentally friendly Covid-19 face mask, made of bagasse sugarcane, under the guidance of Dr. Le Hoang Sinh, Director of the DTU Center of Advanced Chemistry.



Students display the mask fabric. Photo: AN

Nguyen Hong Dung, the team leader, said: *“During the epidemic, masks have become a lifesaver for everyone. However, the discarded masks tend to litter the streets, so my team decided to develop one that*

decomposes quickly and harmlessly. Research has also shown that bagasse sugarcane is widely used in the production of plastic cups, food boxes, notebooks and calendars, but not yet for face masks.”

“In practice, having an idea is one thing, but researching and creating a product is quite another,” added Thanh Nga. “Although we were guided by our dedicated lecturers from the Nursing faculty and Dr. Le Hoang Sinh, who already researches environmentally friendly sugarcane by-products, it took us many days to research and test for a perfect model.”

Dr. Le Hoang Sinh praised the students’ creativity and practicality. He said: *“In my research, I extract fibers from agricultural residues, such as bagasse sugarcane and rice husk, to develop products such as disposable cups. I am very supportive of the students’ project because the market is in desperate need of medical masks. Research is not limited to postgraduates alone, undergrads can also conduct projects appropriate to their majors. This may involve refining medical equipment that has been in use for a long time, when the invention a new product is not required. Research requires passion, patience and creativity.”*

People used to think that nursing students mainly learn about how to take care of the patient's health. Few of them know that nursing students also love applying their own expertise and time to research.



Ms. Nguyen Thi Hong Hanh, Deputy-Head of DTU Nursing Photo: AN

Ms. Nguyen Thi Hong Hanh said: *“We consider research very important and it must be included in our education programs to increase nursing skills. Today, it is essential that nurses are highly trained based on a scientific foundation, to ensure that they graduate as real healthcare professionals.”*

According to Ms. Hong Hanh, DTU has introduced basic research activities into second-year nursing courses so that students can become acquainted with the laboratory environment. In their final year, they will be required to implement their own research projects, in contrast to other universities.

She added: *“When Dung's group suggested the idea of manufacturing face masks from bagasse, the Faculty provided a mentor to support them. Their contribution demonstrates the importance they attach to assisting the community during the pandemic.”*

The group is currently refining the product to meet healthcare safety standards to then submit it to the Ministry of Health for certification and production permission as soon as possible.

(Media Center)