

DTU develops hand washing instruction device

Practicing good hygiene, especially frequent and proper hand washing, is the simplest and the most effective way to prevent a variety of pathogens from entering our bodies and making us sick. Clean hands correctly and regularly can also stop germs from spreading from person to person and throughout an entire community.

Researchers at the DTU Laboratory for Corporate Electrical-Engineering Research have recently developed a hand washing instruction device to ensure that everyone performs their hand washing properly to get rid of germs and prevent the spread of Coronavirus (COVID-19).



DTU lecturers, staff and students are provided step-by-step hand washing instructions

We use hands to hold housewares or perform actions like wiping our face or covering mouth and nose when coughing or sneezing, or touching our eyes without even realizing it. This gives germs a chance to enter our body and cause illness. Therefore, washing our hands frequently with soap and water is one of the cheapest, easiest, and most important ways to prevent the spread of coronavirus and other viral illnesses such as cold and flu.



Hand washing instruction device installed at DTU

The device integrates a hand wash pump and an automatic tap with sensors to detect people in front of the washbasin and when hands are brought forward for washing, taking soap... After collecting signals, the device will issue step-by-step handwashing instructions in accordance with standard guidelines and warnings if hand washing is not done correctly. The device operates on battery or grid and is very compact.

When someone is standing in front of the washbasin, the device will play a greeting and giving step-by-step handwashing instructions, including:

- wet hands with water,
- apply enough soap to cover entire hand surface,
- rub hands palm to palm,
- right palm over left dorsum with interlaced fingers and vice versa,
- palm to palm with fingers interlaced,
- backs of fingers to opposing palm with fingers interlocked,
- rotational rubbing of left thumb clasped in right palm and vice versa,

- rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.

- rinse hands under clean, running water and gently wash away the soap

The device will automatically adjust the times to perform each step and make sure that the total hand washing process taking at least 30 seconds. After someone has correctly washed his hands, the device will give thanks for washing hands to stop the spread of infectious disease, together with DTU.

The devices have been installing at DTU to guide lecturers, staff and students to wash their hands properly.

Some video clips:

Appropriate hand hygiene demonstration

Voice prompts if failure to rub hands

Voice prompts if failure to rub hands

Voice prompts if failure to rub hands

Incorrect handwashing: washing hands with only water

(Media Center)