A team from NTU Singapore has developed a portable device that produces high-resolution images of human skin within 10 minutes.

It could be used to assess severity of skin conditions such as eczema. It presses a special devised film onto the subject's skin to obtain an imprint, which is then subjected to an electric charge, generating a 3D image.

The researchers designed and 3D printed a prototype of their device using polylactic acid biodegradable bioplastic. The battery-operated device which measures 7cm by 10cm weighs 100 grams.

The made-in-NTU prototype is developed at a fraction of the cost of devices with comparable technologies, such as optical coherence tomography (OCT) machines, which may cost thousands of dollars and weigh up to 30 kilogrammes.