

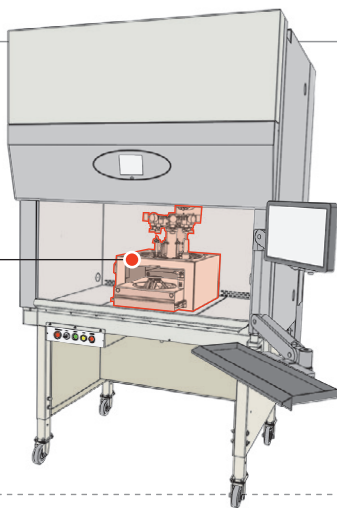
# How does skin printing work?

Scientists at the Nanyang Technological University have managed to print human skin in different colours, which can be used for testing cosmetics and drugs, or even medical treatment.

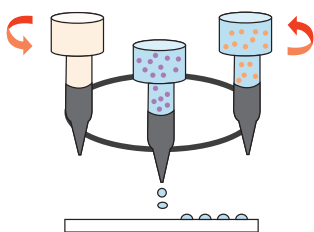
1



The 3D bioprinter is loaded with a mixture of three types of skin cells and a collagen gel, on which these cells will grow.



Bioprint head

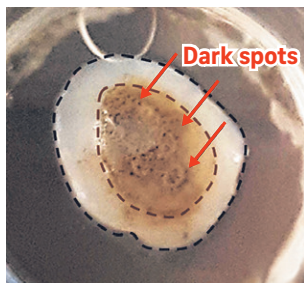


Bioprinting

2

Over several days, the different cells are printed in a very precise pattern. Doing this by hand would result in blotchy and uneven pigmentation.

Manual casting



Dark spots

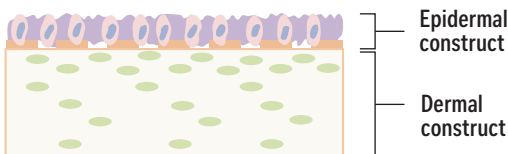


Uniform skin pigmentation

Uneven pigmentation and presence of dark spots

3

The entire construct is cultured for four weeks.

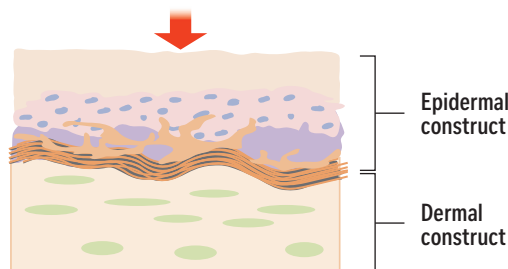


Epidermal construct

Dermal construct

4

The printed skin construct is ready for harvesting.



Epidermal construct

Dermal construct