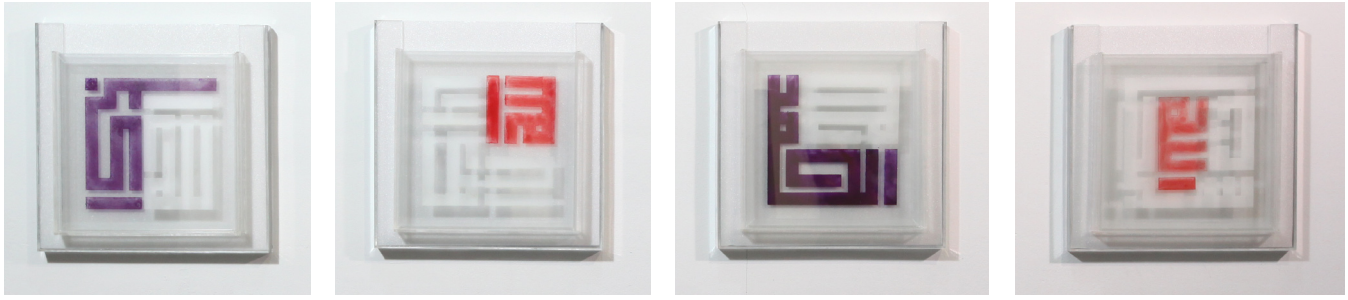
suaikena_warna bakteria

Muskhazli Mustafa
Azleen Ahmad Adli

A spoonful of dirt contains approximately 70 billion bacteria. Most bacteria colonies appear to be white, light pink or a creamy yellow in colour with a fairly circular shape. Some bacteria do have natural colours due to certain pigments such as various chlorophylls that make them naturally green, yellow, orange, or brown. Colour has been widely used to categorize bacteria. Gram staining is a method based on colour developed by Hans Christian to separate bacteria into two large groups which are Gram-positive and Gram-negative. This staining is based on the chemical and physical properties of peptidoglycan layer in bacterial cell walls. Gram-positive bacteria will be stained purple due to its thick peptidoglycan layer in their cell wall beneath the cell membrane and is able to retain the crystal violet stain after the alcohol wash. On the other hand, owing to the thin peptidoglycan layer in the cell wall of Gram-negative bacteria, the crystal violet stain used in the Gram staining method will not be retained after an alcohol wash. Therefore, a counterstain such as safranin or fuchsin is then added which recolourises the bacteria red or pink. Despite their thinner peptidoglycan, Gram-negative bacteria are more resistant to antibiotics than Gram-positive due to their relatively impermeable lipid-based bacterial outer membrane. However, not all bacteria can be definitively classified by this technique. This gives rise to Gram-variable and Gram-indeterminate groups as well.



ISBN 978-967-960-348-4