


here, there, everywhere!

Adelene Song Ai Lian
Raha Abdul Rahim



What's found everywhere yet can't be seen? Bacteria! Bacteria are small single-celled organisms, typically a few microns in size. They are so small that you can't see them with your naked eye and would need a microscope to enlarge them about 10,000 times before you can see them properly. However, they are ubiquitous organisms, meaning that they are found just about anywhere! In fact, do you know that there are ten times more bacterial cells in your body than human cells? The only reason humans look more human than bacteria is because bacteria cells are much smaller than human cells, despite its vast number.

Bacteria are typically counted via "Colony-Forming Units" (CFU). This is when bacteria are grown on a nutritious gel-like medium, conventionally in a petri dish. The bacteria multiply and grow so much in numbers (could reach billions of cells in just one night!) that they form colonies which are able to be observed with the naked eye and can therefore be counted as each colony originates from a single cell. Interestingly, since there are many types of bacteria, different bacteria may form colonies with different morphology displaying various shapes and colours. These distinct colony morphologies are one of the first steps used to identify different bacteria. If you look at a single bacteria cell under a microscope, you will also see different shapes and sizes. For example, some are round-shaped, called cocci, while others are rod-shaped, called bacilli. They can be found in clumps, in chains or by themselves. These characteristics are also unique for different bacteria species.