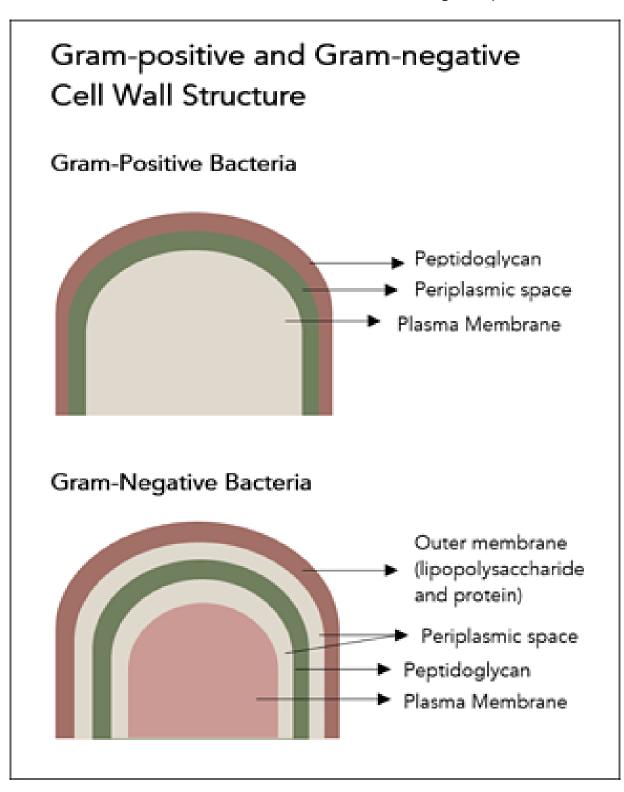
## Manuka Oil - 99.9% Microbial Kill Rate Is Manuka Better than Tea Tree Oil?

## A review of bacterial types

Bacteria can be classified based on the chemical and physical properties of their cell wall structure. Their reaction to a gram stain identifies them as either a gram-positive (+ve) or a gram-negative (-ve) type.

Interestingly, various Essential Oils have varying efficacy against each types of bacteria. Our friend, Manuka Oil, is a clear winner for gram positive bacteria.



## Up to 1500x greater than Tea Tree Oil for gram positive bacteria

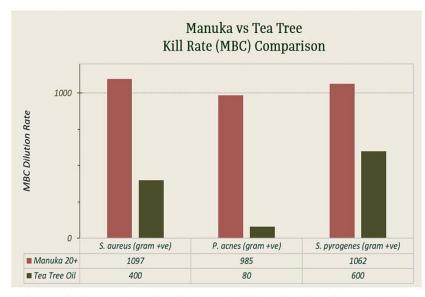
The power of Manuka Oil has been scientifically demonstrated and published in numerous peer-reviewed and published studies. Scientists have related Manuka Oil's efficacy to its  $\beta$ -Triketone components. These unique compounds occur naturally in Manuka Oil.

The natural compound with the greatest abundance of  $\beta$ -Triketones, by far, is Manuka Oil. The specific  $\beta$ -Triketones found in Manuka include flavesone, leptospermone, iso-leptospermone and grandiflorone.

## **Common Gram-Positive Bacteria**

- Staphylococcus aureus
- Staphylococcus fecalis
- Streptococcus Pyogenes
- Bacillus subtilis
- Propionibacterium acnes
- Listeria monocytogenes

Manuka Oil has shown to be more effective than Tea Tree Oil when comparing its Bactericidal (MBC) data against a wide range of gram-positive bacteria.



This graph demonstrates the dilution rate of Manuka Oil and Tea Tree Oil to completely kill these three gram-positive bacteria. Manuka Oil is more effective as a bactericidal against these organisms than Tea Tree Oil.

We have compiled a compendium of scientific, peer-reviewed papers and book references that support the 99% kill rate claim.

This compendium also contains studies evaluating Manuka Oil's efficacy when combined with Australian Tea Tree Oil.