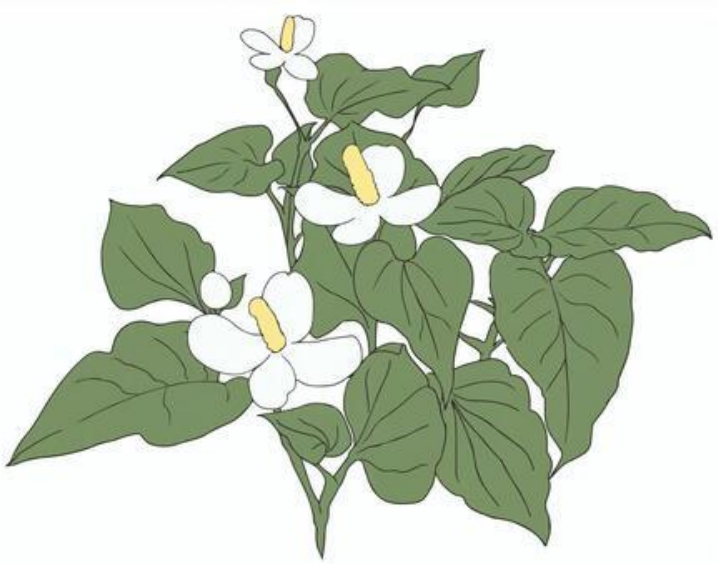
Differences in Antibacterial Components and Effects Between Japan and Australia

Research Motivation

Many pharmaceutical components are harmful to humans. I want to create drugs that do not negatively impact the human body.

Research Question



Hypothesis

Dokudami's antibacterial properties may prevent bacterial growth.

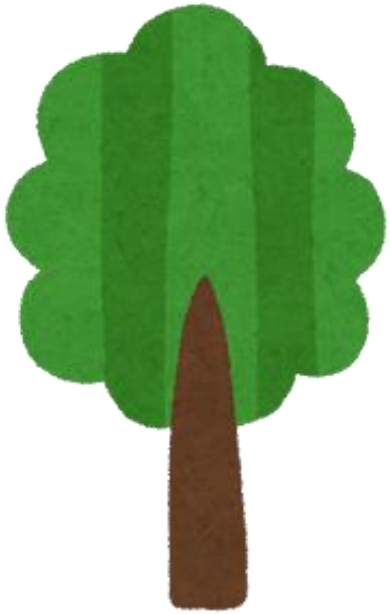
Tea tree may show similar effects.

Research Method

Dokudami

Tea Tree

Experiment Procedure



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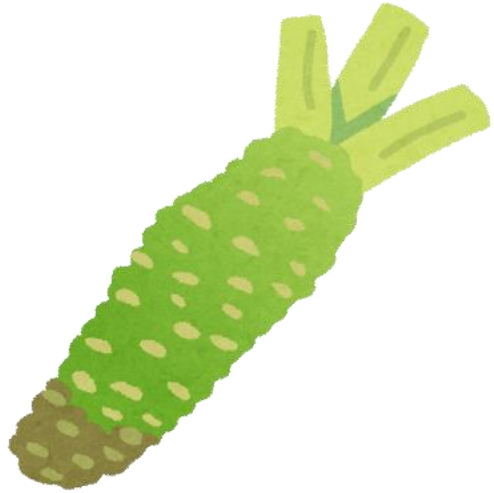

Experiment

Before experiment

Wasabi

Lemon

alkaline electrolyzed water

Experiment

vinegar

Dokudami

Nothing

Australia Experiment

I actually wanted to conduct the experiment, but due to lost baggage, the necessary materials did not arrive, so I had to give up on it. The experiment was supposed to involve extracting essential oil using the distillation method and proceeding in the same manner as in Slide 6.

Experiment Limitations

- Financial constraints may limit further experimentation.
- Time limitations could affect the completion of experiments.
- Using decomposed leaf litter as a source introduces potential variability in results.

Next Steps

Conduct long-term experiments.

Ensure all bacterial cultures are the same for more precise comparisons.

Revised Hypothesis

If antibacterial properties prevent bacterial growth, the difference between treated and untreated samples should be more pronounced.

history

After researching the book, I found that eucalyptus and tea tree essential oils were used as medicine.

It seems that they were effective.

References

Daisuke Takahashi, Takashi Suzuki, Ryoichi Kato(2010) "Teaching materials of antimicrobial active of food“

National Agriculture and Food Research Organization

https://www.naro.go.jp/laboratory/nire/mail_magazine/files/26-06-01.pdf