

"Hidden Functions" of Familiar Products

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Background

We thought that finding new functions beyond the original purposes might be useful for our daily lives and the environment. Therefore, we carried out **two** scientific experiments to see **if familiar daily goods and foods have effects other than their original uses**.



Cough drops

1. Motivation

When I caught a cold, I took a cough drop, and my throat felt a little better. That made me curious, and I decided to look into **whether cough drops have antibacterial effects**.

2. Experiment

Method

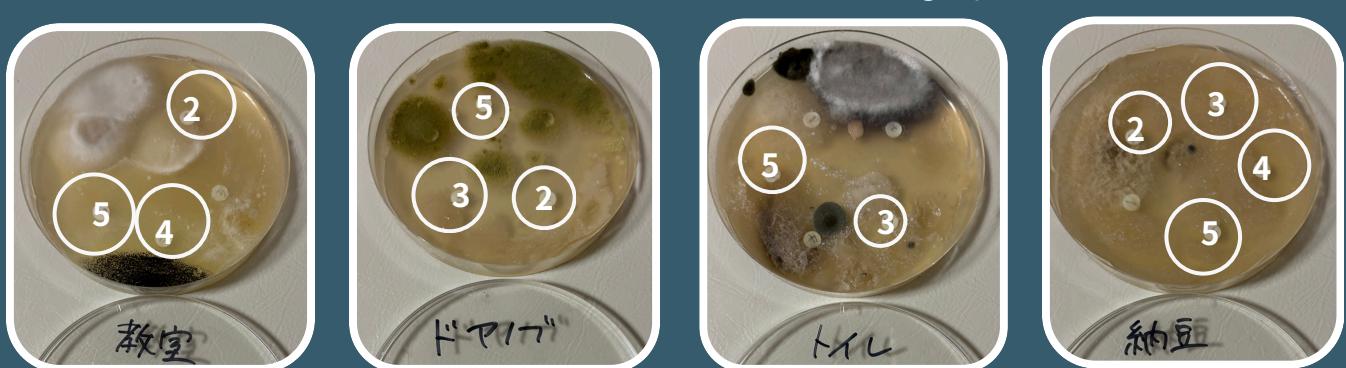
- (1) Prepare agar plates.
- (2) Use cotton swabs to collect bacteria from the **classroom**, **doorknob**, **toilet**, and **natto**, then spread them onto the agar plates.
- (3) Dissolve **four types of candies** in water, soak filter papers in the solutions, and place them on the agar plates.



- (5) Leave them **for a week**.

Result

※These are the clearer photo of the two agar plates for each bacteria.



classroom	doorknob	toilet	natto
② ④ ⑤	② ③ ⑤	③ ⑤	② ③ ④ ⑤

▲ the numbers are that don't have any bacteria around them

Discussion

No.1(4)⑤
No.2(3)②,③
No.3(2)④

Isodine is the most effective against bacteria, followed by **Vicks(Orange)** and **Throat Troche**.

Cough drops may have antibacterial properties!

3. Summary

Cough drops help **protect throat health** and prevent mild infections, especially in places without access to **medical supplies**.



4. Summary

Ammonia is found in toilet and pet odors. We can **put warmers in places where bad smells are a problem to help reduce the odor**. This idea could be easily practiced in homes or school restrooms.



Conclusion

It was found that **cough drops**, which are foods to relieve coughs and sore throats, can have **antibacterial effects**, and that **chemical hand warmers**, which are products used to keep warm, can have **deodorizing effects**.

Cough drops can be used as preventive or antibacterial food, and used hand warmers could be recycled as deodorants.



Future Work

By utilizing products with established safety, we can develop **low-cost and accessible** methods. These approaches are especially useful in developing countries and during disasters. Furthermore, such discoveries contribute to **reducing waste** and creating a more sustainable society. We propose a new research perspective called "the study of hidden functions."