



# Bacterial Communities in Microwave Ovens

[Source: Nature](#)

**Microorganisms** thriving in extreme environments like microwave ovens have been studied to understand their **evolutionary adaptations**.

## ▪ Key Findings:

- The **dominant** ones belonged to the ***Bacillus*, *Micrococcus*** and ***Staphylococcus genera***, which commonly live on **human skin** and surfaces that people frequently touch.
- A few bacteria types associated with **food-borne illnesses**, including ***Klebsiella*** and ***Brevundimonas***, also grew in household microwaves.
- **Laboratory** microwave ovens contained the **greatest genetic diversity** (variation in **genes** within a species) of bacteria.

- Microwave heating uses **electromagnetic waves (300 MHz to 300 GHz)** to generate **heat** and **inactivate** most microorganisms in food.

## ▪ Bacteria:

- **Bacteria** are **microscopic** living organisms that have only one cell. It has various shapes like **spheres, rods, and spirals**. They can be good or bad.
  - **Good Bacteria:** Some are **found in the intestines and help break down food** and prevent constipation and diarrhoea like ***Bifidobacteria***.
  - **Bad Bacteria:** Some of them cause diseases like **Typhoid fever** by ***Salmonella Typhi***.
- **Extremophiles** are organisms that can **survive** and even **thrive**, in the **harshest** of environments, including inside scorching **hydrothermal vents**, **sub-zero Antarctic ice** and the **crushing pressures** of Earth's crust.

Read More: [Metagenomics](#)

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