

# Why does the wifi wave have the same frequency as the microwave but doesn't 'cook' anything?

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In 1947, the International Telecommunication Union announced ISM bands to identify certain radio bands that devices would be allowed to run on so that they would not interfere with other radio communications services.

If you don't know, ISM stands for Industrial, Scientific, and Medical.

The 2.4GHz band features no power to broadcast, heats food at a relatively low power level and is easy to control, designated by ISM as an unlicensed spectrum for the oven. microwave.

The original intention of the ISM was that the 2.4GHz band was only for devices without communications.

However, due to this unlicensed spectrum has a low power requirement, operability within an acceptable range and low deployment costs, it was later used on many other communications devices. such as cordless phones, radios, and wifi.



Wifi and microwave have the same frequency of 2.4 GHz.

## Why doesn't the wifi wave 'cook' us like a microwave?

Wifi and microwaves use a similar radio frequency but between them there are two major differences: concentration and energy.

A wifi router sends signals in all directions in a circle as far as possible. In contrast, microwaves only send signals in a single direction to the center of the oven.

A standard wifi router produces about 100 milliwatts (or 0.1 watts), much lower than a microwave, about 1,000 watts.

Therefore, the 'strength' of wifi is certainly not enough to cook or affect human health.

Because wifi devices and microwaves use the same frequency, they can interfere with each other. This is the reason why the wifi signal on a device near a microwave is lost when you start the microwave. To fix it, just move the device away from the microwave or buy a new wifi router that works on the 5GHz band.

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