

# Microwave Equipment

# Sterilization

As the saying goes, people take food as their heaven, and food safety and quality issues have become a very serious topic. Nowadays, food quality problems are becoming more and more serious. Food may be contaminated and produce bacteria during the production process, or the food itself may grow due to deterioration. Species of bacteria, so food sterilization has become a necessary part of food processing.

The development of science and technology has also brought about great changes in food sterilization technology. In the early days of life, people began to use salt for sterilization, and then heat sterilization appeared, such as high temperature sterilization and pasteurization, which are also the most common in our daily lives. The sterilization method used.

Heat sterilization has great limitations, and it is enough for ordinary families. After all, the food made by yourself is always regarded as gourmet no matter what it looks like. For manufacturers, heat sterilization will cause a serious decline in the quality of food, and customers do not recognize the sterilized food. Therefore, the emergence of new sterilization methods is inevitable.

Nowadays, most manufacturers use microwave sterilization. The emergence of microwave sterilization has changed the problem that manufacturers have reduced the quality of food sterilization. So what is microwave sterilization?



### **The principle of microwave sterilization equipment:**

Microwave is a kind of high-frequency electromagnetic wave that heats food. Both have thermal and non-thermal effects. Bacteria are mainly composed of water and protein. Among them, water is a polar molecule. The temperature of water molecules rises violently under the action of high-frequency electromagnetic fields, making it difficult for bacteria to survive and die. Furthermore, under strong electromagnetic waves, the metabolism and genetic processes of bacteria and microorganisms are blocked, cell membranes and genetic material are destroyed, and they are killed.

[Microwave sterilization equipment](#) using microwave sterilization technology, in the food processing industry plays a very important role, so that many manufacturers get

rid of the difficult problem of sterilization, making the quality of food has improved significantly, also makes the traditional heat sterilization in industrial food production is gradually eliminated.

### **Comparison of microwave sterilization technology and traditional heat sterilization:**

Traditional heat sterilization usually uses high temperature sterilization. Under the influence of high temperature, although it can play a role in sterilization, it will also cause the food to lose its original nutrients and flavor substances. Microwave sterilization is done by microorganisms. Ions violently collide under the excitation of microwaves, directly destroying the biological structure, so that the original appearance and nutrition of the food can be retained to the greatest extent.



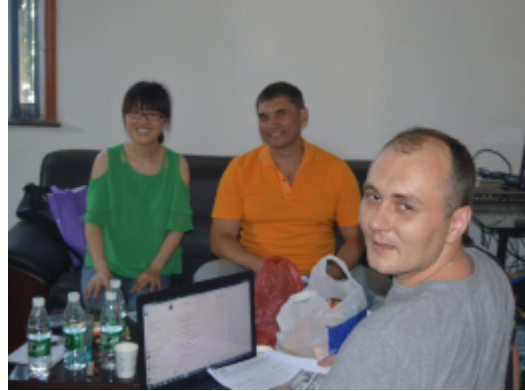
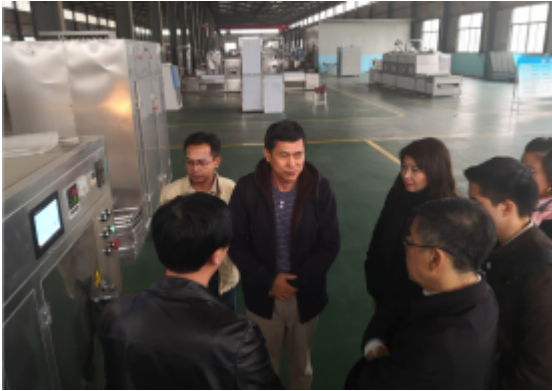
Another big difference is that microwave sterilization is much

faster. For tasks that can be completed by heat sterilization in one hour, microwave sterilization can be completed in a few minutes. This is the key to improving production efficiency. In other words, efficiency is a key factor in improving economic returns.

The above two points are the most significant advantages of microwave sterilization equipment. In fact, in addition to these two points, the company believes that microwave sterilization technology has the following advantages:

### **Advantages of microwave sterilization equipment:**

1. Traditional heat sterilization often has heat loss in the environment and equipment, while microwave directly affects food without additional heat loss and can save 30%-50% of electricity.
2. Sterilization is more uniform. Heat sterilization starts from the surface of the food. There is a temperature difference between the inside and the outside, and even the inside of the food cannot be sterilized. Microwave sterilization makes the inside and outside of the food sterilized at the same time, making the sterilization more uniform.
3. The operation is simpler, and the fully automated production method reduces manual intervention, allowing manufacturers to save more production costs.
4. The production method is simpler. Microwave equipment is used for sterilization, and only electricity and water are needed. There is no need for complicated conditions such as boilers, pipelines, coal yards, and transportation vehicles in traditional thermal sterilization.



Now manufacturers all over the world have realized the advantages of microwave sterilization, and because we are the leader in this industry, we have received customers from many countries and regions around the world, such as India, Japan, Singapore, Russia, and Bangladesh. They reached a long-term cooperative relationship. It is precisely because of this that we understand that various manufacturers have different requirements for the production capacity and specifications of microwave sterilization equipment because of the different production needs.

In order to allow more manufacturers to obtain high-efficiency and high-quality production results, our engineers have developed a variety of microwave sterilization equipment with different specifications, and there is always one suitable for you!

**Specifications of microwave sterilization equipment:**

Model	<a href="#">loyal-1</a>	loyal-2	loyal-3
Power	30kw	60KW	90KW
Frequency	915±25MHz (wavelength is longer than the commonly used 2450MHZ frequency, stronger penetrating power, 2450MHZ microwave is not suitable for thawing)		
Microwave output power	20~100kw		

Suppressor opening height	150-250mm
Conveying speed	0~5m/min
Microwave leakage	≤5mw/cm <sup>2</sup>
Thaw amount	0.5~2T/
Overall Dimensions	1100*10500*2600mm
Water loss	1%
Power consumption	15~18kW·h0018kW·h

In addition, there are many different models, please contact us to purchase, if there is no suitable for you, you can also contact our engineers to tailor your own microwave sterilization equipment for you!

As a Chinese enterprise, while facing the development trend of trade globalization, we want to promote Chinese technology to all parts of the world. China is a superpower, and it is in the forefront of the world in terms of economic and technological level. As microwave sterilization equipment manufacturer, we will use our technology to let more countries realize the power of China, and at the same time, we will also use our services to let the world experience China's friendship!

### **Our Services:**

1. Customer service is online 24 hours
2. Pick-up and accommodation arrangements
3. Free guidance for use, and at the same time we can send our engineers to the local for guidance.
4. We will solve any problems that arise in the future



China is a country of etiquette and integrity. I believe our microwave sterilization equipment will give you the biggest surprise! Any questions you have can be communicated with our professional engineers, even if there is no cooperation, we are happy to serve you!

We always welcome friends from all over the world with the most sincere heart!