



The facts about Listeria in Enoki mushrooms

What is Listeria

Listeria monocytogenes is a pathogenic microorganism that can cause Listeriosis. Listeriosis is a rare infectious disease that people can get from the listeria bacteria found in Enoki mushrooms, among others (but can also be found in animals, in soil, in water or in ready-to-eat foods and on vegetables).

Symptoms

Humans can be infected orally, vertically. The infectious period after illness and after asymptomatic infection: up to several months via faeces. Mothers 7-10 days after delivery via urine and vaginal discharge. Symptoms are generally asymptomatic or mild with flu-like symptoms (fever, muscle pain, gastrointestinal symptoms such as nausea and diarrhoea). In immunocompromised individuals, more often invasive and more severe.

Legal obligation

Food producers must have a rationale for the (microbiological) shelf life of the products they sell. This applies to any relevant (pathogenic) micro-organism, such as Listeria monocytogenes.

Research

Mitrofresh had extensive source and contact research carried out by laboratories, expertise and consultancy, inspection and training organisation Normec Foodcare on the listeria bacteria in Enoki mushrooms.

Survey methods, parameters Listeria monocytogenes count Q and Listeria monocytogenes Q: ISO 11290-2 (A526, equal to ISO 11290-2), ISO 11290-1 (A536, equal to ISO 11290-1, AFNOR BRD 07/10-04/05). Via the data analysis method called whole genome sequencing (WGS).

Conclusion

Listeria is resistant to an acidic environment (growth > 4.4 pH) or an environment with a high salt content ($A_w > 0.920$).

The bacterium can survive and grow in an oxygen-deficient and refrigerated environment (>3 to 42 °C, at high salt concentrations (up to 10%) and at a pH of 6-9.6.) and survives for a long time in foodstuffs, even if these foods are salted or dried.

Listeria also grows with ease in food production environments and in your fridge.

Solution and advice to prevent Listeria infection

Product:

- ALWAYS heat dishes containing Enoki thoroughly (at least 3 minutes). Listeria does not survive high temperatures above 70 °C. Boiling, baking and frying therefore kills the bacteria.
- NEVER eat Enoki mushrooms raw.
- State on product and in recipes that Enoki should NOT be consumed raw..



Fridge hygiene

- Set the fridge to 4 °C. This is because the Listeria bacterium's growth rate is three times slower than at 7°C. This is how you set the temperature.

Other fridge hygiene tips

- Put food that has been used, for example during breakfast or lunch, back in the fridge immediately. Especially perishable products such as fish and meat or meat products.
- Some meat products for bread have a very long shelf life. After opening the packaging, it is best to eat them within 4 days. In any case, before the expiry date.
- Make sure the fridge is well organised. Put everything that needs to be eaten first at the front and check regularly to see if there are any products that no longer have a shelf life.
- Cover your food well when you put it back. For example, put a packet of ham that has been opened in a well-sealed container or in the special charcuterie tray in the fridge.