

# Press Release

## FOR IMMEDIATE RELEASE

### USDA approves LISTEX™ as processing aid against Listeria

**WAGENINGEN, The Netherlands, May 24, 2011 - The USDA has approved LISTEX™ as an antimicrobial processing aid to combat *Listeria monocytogenes*. Listeria is considered one of the most important food safety threats, due to its high mortality rate of over 20% and its risk to pregnant women.**

Today's USDA's decision will enable food processing companies to deliver safer clean label products to the marketplace, without the need for reformulation or compromise on quality. The approval is in line with Health Canada's decision last September to approve LISTEX™ as a processing aid.

LISTEX™ *eliminates* Listeria, rather than merely inhibiting its outgrowth. As such it can be used as an Alternative-2 or as part of an Alternative-1 compliance under the USDA 2003 final rule for post-lethality exposed RTE meat products. It is OMRI listed (Organic Material Review Institute) and does not affect the taste, texture or other organoleptic properties of treated food products. It can therefore be used for natural as well as organic foods. LISTEX™ is highly consistent in eliminating Listeria and easy to apply by topical spraying.

Microeos' CEO Mark Offerhaus: "Consumers and food processors alike will benefit from the USDA's decision. Phages are abundant in our environment and foods, but thanks to today's technology we can harness their power and help prevent unnecessary suffering, economic losses and environmental strain".

The threat from Listeria is real and not to be ignored, Centers for Disease Control and Prevention (CDC) and USDA emphasize. "About one of five patients with listeriosis dies," says Benjamin Silk, with CDC's Enteric Diseases Epidemiology Branch. Listeriosis and cold cuts were ranked as the third worst combination of a food and a pathogen in terms of the burden they place on public health, costing \$1.1 billion a year in medical costs and lost work days, according to a study published last April by the University of Florida's Emerging Pathogen Institute.

Despite the increased legal and sanitary measures, the trend in Listeriosis cases has not seen a downturn. In the United States, the CDC estimates that 2,500 people become seriously ill with Listeriosis each year, with several hundred deaths each year. Latest information by the CDC reports an increase of 19%. This is consistent with the trend in the EU as reported by EFSA (European Food Safety Authority), confirming Listeria as a major public health threat.

MICREOS ([www.micreos.com](http://www.micreos.com)) formerly: EBI Food Safety, located in Wageningen ("Food Valley"), The Netherlands, develops and markets phage products against dangerous pathogens and is viewed as product leader in this field. The company collaborates with many independent partners and institutes, including Mississippi State University, the Federal

Technology Institute (ETH) Zurich, Danish Meat Research Institute, NIZO Food Research of The Netherlands, Nofima of Norway and Ghent University in Belgium. Micros Food Safety recently launched a new product against Salmonella, SALMONELEX™.

**Contact:**

**Micros Food Safety**

Nieuwe Kanaal 7P  
6709 PA, Wageningen  
The Netherlands  
+31 317 421 414

[Info@microsfoodsafety.com](mailto:Info@microsfoodsafety.com)  
[www.microsfoodsafety.com](http://www.microsfoodsafety.com)

Dirk de Meester  
Direct: +31 646 048 503  
[d.demeester@micros.com](mailto:d.demeester@micros.com)

Wim Nuboer  
Direct: +31 653 322 700  
[w.nuboer@micros.com](mailto:w.nuboer@micros.com)

## Quick guide to phages

- Phages are essential for life on earth, killing roughly half of all bacteria every two days
- They are the most common micro-organisms on our planet, present in abundance on our food, skin, in our gut, etc.
- Phages are harmless to plants and animals (and humans)
- They are bacteria-specific, enabling targeted bacterial control
- Phages are approximately 100 times smaller than bacteria and outnumber them 10:1
- Phages are specific for their target bacterial host, and will not affect:
  - (a) desired bacteria in foods (e.g., starter cultures)
  - (b) commensals ('good bacteria') in our gastro-intestinal tract
  - (c) accompanying bacterial flora in the environment
- Phages are generally composed entirely of proteins and nucleic acids, and their eventual breakdown products consist exclusively of amino acids and nucleic acids. Thus, they are not xenobiotics and do not leave an ecological footprint

## Quick guide to LISTEX™

- LISTEX™ is winner of FI Europe's "Best Innovation in Food" Gold Award, viewed by many as the Oscar of the food industry, awarded every two years
- Many research institutes have demonstrated the efficacy of LISTEX™ against Listeria
- The phages in LISTEX™ do not affect "good" bacteria – but are lethal to only Listeria, which - despite rigorous cleaning controls - can hide in the nooks and crannies of processing equipment, and can be present on skin of cattle, in gills of fish, on people, etc.
- Harmless to humans, high numbers of phages are routinely consumed with our food, without any impact on human health or taste or enjoyment of the food product
- Applied during processing, phages can kill the susceptible bacterial hosts rapidly without interruption of production
- LISTEX™ is an innovative processing aid that does not affect the organoleptic properties of the food in any way nor provide any other function – indeed the food product's integrity is fully protected and - best of all - LISTEX™ is natural and approved for use in organic production.