



EBI FOOD SAFETY

Press Release

Wageningen, May 9, 2007

LISTEX™ clears Listeria problem in fish processing

Natural bacteriophages - Greek for bacteria-eaters - prove an ideal solution for the biocontrol of *Listeria monocytogenes* (LM), the most dangerous food pathogen, causing increasing problems in fish products.

According to the World Health Organisation (WHO), Listeriosis, the disease caused by LM, is one of the most severe food borne infections, with a mortality rate of 30%. Annual medical costs and productivity losses from the acute illness from food borne Listeria in the US are estimated to be one, two and three times the costs caused by *Salmonella*, *Campylobacter* and *E-coli*, despite the prevalence of these diseases being over 500, 700 and 25 times higher than the number of listeriosis cases. People with a weakened immune system as well as babies and pregnant women constitute the main risk group.

Listeria is particularly renowned for its capacity to grow and reproduce even at low temperatures, at high salt- and low pH-conditions, and for its tendency to occupy niches in the infrastructure of food processing companies. The pathogen is invisible to the human eye, and cannot be detected by taste. Unpolluted water environments such as rivers and coastal sea waters have been found to carry LM at up to 90% of samples taken. The presence of LM in fish products has been studied in literally hundreds of scientific reports. Despite rigorous HACCP programs, slaughtered fish entering the processing facilities are a continuous source of LM-contamination.

Bacteriophages (phages) are the most abundant micro-organisms on the planet and the natural enemy of bacteria. They exclusively target bacteria, and do not affect the organoleptic properties (taste, structure, colour, etc.) of food. Humans are exposed to bacteriophages at high levels through food and water without any adverse effect, and high numbers of phages are routinely consumed with our food.

Dr. Steven Hagens, Chief Scientific Officer of EBI Food Safety, researched the efficacy of the application of LISTEX™P100 bacteriophages on fish fillets that were artificially contaminated with LM: "following excellent results on cheese (published in European Dairy Magazine) and during meat production (published in Fleishwirtschaft International), we are pleased to see that the use of LISTEX™ P100 also decimates LM in fish production facilities".

Every week LISTEX™ P100 is finding its way to new fish processors around the globe, as a valuable addition to existing HACCP programs. Hagens: "Depending on the specific production circumstances, either dipping or spraying of fillets can be considered. The most effective points of treatment are just after filleting, before *Listeria* can nestle below the surface in the matrix of the product. This way spreading of LM throughout the facilities is contained *early* in the process, also preventing the fish itself from becoming a source of recontamination".

Mark Offerhaus, CEO of EBI Food Safety: "Fish processing companies are keen on hygiene, given the nature of their product. And as the demand for fish products rises, so does the need for a natural solution against Listeria, which can be easily implemented in the processing environment. The huge demand from fish processing companies across the globe is driven by demand from consumers and retailers, who are willing to pay more for 'green' and sustainable production methods, and for food products which have *not* been exposed to chemicals or antibiotics. Following last year's FDA approval

for LISTEX™ as GRAS (Generally Recognised as Safe), we have invested in expansion of our production facilities in Wageningen (Food Valley) to cope with this growing international demand”.

About EBI Food Safety

EBI Food Safety is a Dutch privately held Life Sciences company focused on the development and commercialization of natural anti-bacterial products, based on its bacteriophage technology. The company's scientific network includes collaborations with universities and research centres around the world, i.e. in The Netherlands, Switzerland, Belgium, Spain, Norway, Italy, Scotland, Canada and the United States. The company is viewed as product leader in the field of applied bacteriophage technology for food products and was honoured with the 2006 Technology Innovation Award by Frost & Sullivan. For more information, visit: www.ebifoodsafety.com.

Contact:

info@ebifoodsafety.com

Nieuwe Kanaal 7P

6709 PA Wageningen

The Netherlands

Tel: +31 (0)317 421 414

Fax: +31 (0)317 410 055

Mr. Mark L. Offerhaus

Chief Executive Officer

Tel: +31-(0)654-913-176

m.offerhaus@ebifoodsafety.com

