Queensland Government

Queensland **Health**

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Standards Management Officer
Food Standards Australia New Zealand
PO Box 7186
Canberra BC ACT 2610

Dear Sir / Madam

Submission – Application A1045 – Bacteriophage preparation P100 as a processing aid

Thank you for the opportunity to provide a submission on the 1st Assessment Report for Application A1045.

Queensland Health has consulted with other relevant Queensland Government agencies on this proposal, including Safe Food Production Queensland and the Agriculture, Food and Tourism Group of the Department of Employment, Economic Development and Innovation. As a consequence, Queensland Health as lead agency in Queensland for coordinating policy advice relative to the national policy on food regulation, submits the following comments.

Control of *Listeria monocytogenes* is an important public health issue that has proven to be difficult for the food industry to effectively control. The introduction of new hurdle technology such as bacteriophages could potentially be an important development that may help prevent cases of listeriosis. However, there are a number of concerns we wish to raise in relation to this Application.

The use of bacteriophages in production of food will be a new technology in Australia. Since there are potential public health issues associated with its use, public health professionals such as environmental health officers, food safety auditors, and microbiologists will need to be advised of any issues this new technology may present. These include:

- mechanisms for pathogens to develop resistance to the phages and how this may be reduced
- issues related to screening and monitoring of host susceptibility, particularly in relation to food safety programs and auditing
- new control points and related corrective actions
- factors that may affect the efficacy of the treatment
- whether samples of bacteriophage treated foods need to handled differently, for example, retention time, holding temperature, sample packaging, exposure to light, etc

- any potential for contamination of bacteriophage solution during use, for example with other pathogens, thereby contaminating treated food
- testing methodology
- whether there is a need for any additional precautions to minimise cross contamination in laboratories.

It is unclear in the 1st Assessment Report whether the bacteriophage could be incorporated within non-liquid ready-to-eat foods during their production, such as cheese, as opposed to a spray or dip immediately prior to packaging. If the proposed permitted use is to be limited to a surface treatment only, this will need to be clearly described in the draft variation to the *Australia New Zealand Food Standards Code.*

Given this Application is dealing with new technology for Australia, there are a number of analytical issues which may require expert advice from an enforcement perspective. This may include: analytical methodology in relation to treated food products including different food matrices, availability (for example publication) of appropriate analytical methods, determining resistance of *Listeria monocytogenes* to the bacteriophage, testing of environmental swabs for the bacteriophage and other related analytical and sampling issues. The proposed expert analysis advisory group on analytical issues will need to consider such issues.

Further to the recommended specifications for the P100 bacteriophage preparation as shown in Section 6.5 of the 1st Assessment Report, should the specification include:

- it is free of indicator organisms such as *Escherishia coli* and common food-borne pathogens such as *Salmonella spp*. and *Staphylococcus aureus* as well as *Listeria spp*
- list the number of viable bacteriophages per mL
- other physical properties?

Before Queensland Health is willing to accept that the proposed use meets the requirements for classification as a processing aid as opposed to a food additive, we would like the 2nd Assessment Report to provide more explicit evidence that there is no ongoing technological function of the P100 bacteriophage in non-liquid ready-to-eat foods.

Should you have any queries regarding this submission, I will be pleased to assist you and can be contacted on telephone (07) 3328 9310.

Yours sincerely

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Tenille Fort
Director
Food Safety Policy and Regulation Unit