

## **Executive Summary:**

This application, on behalf of Kemin Industries (Asia) PTE LTD., requests approval for the extension of use of propionic acid, and its calcium, potassium and sodium salts, as anti-microbial preservatives in processed meat products.

According to FSANZ food recall data since 2005, microbial contamination is the principal cause for product recall, occurring most frequently in meat products, with contamination by *Listeria monocytogenes* reported as the most common causal organism. Whilst there are currently a range of preservatives approved for use in processed meat products, microbial contamination is still a major problem for manufacturers and a serious concern for consumers, particularly for at-risk groups. Standard 1.6.1 Microbial Limits in Food was amended in 2014 in recognition of this problem to include microbiological criteria for *Listeria monocytogenes* in 'Ready-To-Eat' foods.

The preservatives currently approved in the Food Standards Code for use in processed meat products include nitrites/nitrates, nisin, natamycin, sorbates and sulphites. Lactic acid, sodium diacetate, and other organic acids may also be used because of their 'schedule 2 additive' status. However, for control of contamination by *Listeria monocytogenes*, some of these preservatives are not effective and more specific for control of yeasts and mould or more suited for use in other foods. Nitrates and nitrites are primarily used as curing ingredients to achieve the characteristic flavour, colour and stability in processed meat products and provide protection against specific pathogenic bacteria such as *botulism*-producing organisms. However, these ingredients can be toxic to humans, and much controversy has surrounded the use of nitrite in recent years due to its potential carcinogenic risk. Despite the range of preservatives available to processors, *Listeria m.* contamination of processed meat products remains a serious and frequently occurring problem.

Propionates are particularly effective in inhibiting *Listeria monocytogenes* at the pH of meat products, and can be used at low dose rates without effect on product flavour. In combination with nitrite/nitrate they can provide control against a broader range of microorganisms and potentially result in reduced nitrite/nitrate use levels. Propionates are currently approved as preservatives in the Food Standards Code for use in Bread & Bakery Products and Flour Products, and sodium propionate in Oil Emulsions (< 80% oil).

The safety of Propionate is attested by the fact that they are a normal metabolic intermediate, a normal metabolite from carbohydrate fermentation in the large intestine, and naturally occur in foods such as butter, cheese and other dairy foods. As food preservatives they have been used widely for more than 50 years. The safety of propionates has been reviewed by JECFA, EFSA and US FDA and all of these agency reviews have confirmed or reconfirmed that there are no safety concerns in respect to the use of propionates as preservatives in the currently authorized uses and use levels.

CODEX permits propionic acid and its calcium, potassium and sodium salts in processed meat, poultry, and game products in whole pieces or cuts, and processed comminuted meat, poultry, and game products, under the conditions of GMP. In USA, sodium propionate and propionic acid are permitted in ready to eat meat and poultry, where antimicrobials are permitted, up to 0.5%.

Approval of this application would provide food manufacturers with a cost effective control against *Listeria monocytogenes* contamination in processed meat products.