

Summary of the application: Krill protein hydrolysate

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The novel food, krill protein hydrolysate is a partially hydrolysed protein isolate derived from whole *Euphausia superba* (common name: Antarctic krill). Krill protein hydrolysate is obtained by partial hydrolysis of Antarctic krill meal using food-grade protease(s). Krill protein hydrolysate contains not less than 85 g/100 g of protein on an “as-is” basis along with low levels of residual fat (not more than 1 g/100 g), ash (not more than 7 g/100 g) and moisture (not more than 10 g/100 g).

Krill protein hydrolysate is intended for use as a source of protein in a range of foods and beverages, with the exception of infant formula and follow-on formula. The ingredient will provide an alternative to plant- and animal-based proteins currently used for the same purpose in a variety of beverages and conventional foods. Krill protein hydrolysate is also intended for use in food supplements at a maximum of 25 g/day.

The novel ingredient is produced utilising processes that are common in the food industry and strict production controls are in place, in compliance with current Good Manufacturing Practice and applicable food safety regulations. Analytical data demonstrate that the final krill protein hydrolysate is consistent and complies with the proposed product specifications. Batch analyses also demonstrate that krill protein hydrolysate is not a concern for undesirable substances including manufacturing impurities, total volatile nitrogen, trimethylamine, trimethylamine oxide, biogenic amines, microorganisms, heavy metals, dioxins and dioxin-like polychlorinated biphenyls, or polycyclic aromatic hydrocarbons.

The safety of krill protein hydrolysate as an alternative source of supplemental dietary protein was substantiated using a modification of the International Life Sciences Institute’s tiered weight of evidence approach for the safety assessment of protein agricultural products. The criteria considered part of the evaluation included (i) the extensive history of use of Antarctic krill, particularly the long and established history of use of krill as a traditional food in South Asian countries; (ii) the history of safe use of protein concentrates, isolates, and hydrolysates; (iii) compositional analyses of krill protein hydrolysate demonstrating the consistency and quality of the ingredient; (iv) studies in laboratory animals using related krill products; and (v) human studies using krill powder.

Overall, the primary evidence of safety is demonstrated by the protein quality and amino acid composition together with the detailed compositional and impurity data on other components of krill protein hydrolysate. Safety for the intended use is corroborated by information on the history of dietary consumption of Antarctic krill and the results of studies in animals and humans on test articles related to krill protein hydrolysate including the Antarctic krill meal used in the manufacture of the novel ingredient.