Summary of the dossier: Dried crickets (*Gryllodes sigillatus*)

Applicant: SAS EAP Group – MICRONUTRIS, 6 rue du partanais, 31650 Saint-Orens-de-Gameville, France

Food Category : Dried crickets (*Gryllodes sigillatus*)

The application as a novel food has been drafted in accordance with the requirements of the EFSA guidelines for the preparation of a European dossier for the authorization of a Novel Food. This application for authorisation falls under the transitional period mentioned in the article 35.2 of the Regulation (EU) 2015/2283.

Condition of use : Bread products 10 % whole or ground dried crickets; Baked products 10 % whole or ground dried crickets; Breakfast cereals whole or ground dried crickets; Pre-packaged whole dried crickets; Cereal bars 10 % whole or ground dried crickets; Biscuits, cookies and crackers 10 % whole or ground dried crickets; Chocolate confectionery 10 % whole or ground dried crickets; Sweeteners 10 % whole or ground dried crickets; Salad dressing 10 % whole or ground dried crickets; Ready to eat meals 10 % whole or ground dried crickets; Pasta 10 % whole or ground dried crickets.

Crickets are insects that have numerous nutritional qualities, including a high rate of protein and fat, and can therefore be considered as an interesting alternative nutritional source for the human population.

The company Micronutris, has implemented, to ensure the quality and security of its crickets destined for human foodstuff, a system of ISO 22000 quality assurance based on the safety of food products, coupled with a HACCP approach that takes into account all of the stages of production, from the breeding of the insects up until the finished, whole, dried crickets based products for the customers. More specifically follow-up of microbiological, chemical, and physical dangers has been completed. The crickets are regularly controlled for the presence of mycotoxins, (such as vomitoxins, aflatoxins, and ochratoxins), and contaminant such as heavy metals, (lead, and cadmium), and organochlorine pesticides, pyrethroids, and organophosphate pesticides: none of these species is quantifiable in accordance with the proposed standardised methods, except cadmium, that has been subject to a risk evaluation. Likewise, the microbiological parameter is regularly controlled on the crickets. The acceptability of batches of crickets against microbiological criteria is based on the (CE) Regulation No 2073/2005, updated by the (CE) Regulation No 1441/2007. Furthermore, it is noted that dry products cannot be released until they demonstrate a water activity < 0.6. The absence of the dioxin and the polychlorinated biphenyls is verified on the organics vegetal raw materials used to feed the crickets. The toxicological tests completed on many edible insects indicated there were no adverse effects either in the in vitro or in vivo genotoxicity studies or in the repeat dose feeding studies for periods of up to 18 weeks. The major toxicological effect identified is the allergen from the crickets. In effect, the allergen potential of cricket for people who are particularly sensitive to crustacean has been reported in several studies: it is characterized by symptoms such as rhinitis, asthma, and contact urticaria. The company Micronutris recommend a label like the following: « Contains allergens similar to crustacean ». The Authorities of the Netherlands have established that the consumption of insects, based on the rate of chitin of 45 g / person / day, is inoffensive for the health of consumers. The total estimated daily consumptions in Europe of recommended applications, (aperitif snack and energy bars for sportspeople), remains inferior to the consumption

judged inoffensive of 45 g / person / day, and this, even in consideration of the assumptions of average consumption and at the 95th percentile, is very conservative. Likewise, the level of cadmium measured in the dehydrated insects, (in the order of 70 ppb), leading to average levels of exposure, which ever population is considered, contributes to less than 5% of the Tolerable Daily Dose.

On the basis of the information presented in the file, the dried cricket raised and processed according to the procedures established by Micronutris are a safe and healthy foodstuff that would allow an improvement in the nutritional state of people who wished to consume an alternative foodstuff to current animal proteins.

The applicant has applied for data protection in accordance with Article 26 of the novel food regulation.