

Summary of the dossier: Mealworm (*Tenebrio molitor*) flour

Applicant: Nutri'Earth 4 rue du MIN, Batiment B2, Cellule 14, Lomme, 59160, France

This is an application for authorisation to place on the market Mealworm (*Tenebrio molitor*) flour as a novel food. Mealworm flour is produced from larvae of *Tenebrio molitor*, which form the unique component of the flour. The proposed conditions of use of grinded mealworm in the EU market as ingredient in a range of food products (Bakery wares, Pasta, Processed fruit and vegetables) are reported in this Novel Food dossier.

Nutri'Earth wishes to breed this species in France and transform it into flour in compliance with European standards. To do this, Nutri'Earth has developed a sustainable breeding system with good farming practices and a quality system (Health Management Plan including HACCP) to guarantee the quality and safety of mealworm flour. Recurrent analyses are carried out on microbiology, pesticides, mycotoxins and heavy metals. The results of these analyses meet the requirements of EC Regulation 2073/2005 amended for microbiology, EC Regulation 1881/2006 for mycotoxins and heavy metals and are under limit of quantification for pesticides.

Several studies have clearly demonstrated the allergenic potential of *Tenebrio molitor* for people with an allergy to crustacean. Foods containing mealworm flour must mention "contains allergens similar to crustacean". In 2014, the authorities of the Netherlands (NVWA) concluded that a daily consumption of 45 g of dried insects will not be a cause for concern in terms of public health. From data obtained using the EFSA comprehensive European Food consumption database of the Food Ex2 classification and our proposed uses and use levels, the consumption will remain inferior to the level judged inoffensive (45 g / day/ person). According to the analyses and the target population, the level of exposure for cadmium in mealworm flour (between 40 and 50 ppb) contributes to less than 4% of the tolerable weekly intake (TWI). Mealworm larvae are fed, raised, processed and used according to the procedures mentioned in this dossier. Under the conditions of production described in this dossier, mealworm flour constitutes a healthy food, safe for human consumption.

The application has been compiled in line with the administrative and scientific requirements of Commission Implementing Regulation (EU) 2017/2469 laying down for applications referred to in Article 10 of Regulation (EU) 2015/2283 of the European Parliament and of the Council on novel foods. It is also in line with the European Food Safety Authority (EFSA) guidance on the preparation and presentation of an application for authorisation of a Novel Food in the Context of Regulation (EU) 2015/2283.