EXCEEDING CADMIUM CONTAMINATION IN BROWN CRAB MEAT

On February 17th, 2011 European Commission published an information note about high cadmium content in the cephalothorax part, often referred as brown meat, in crabs and crabs like crustaceans. In some countries in EU and Asia people consume brown meat, however so far no maximum limit was established as regulation. To ensure health safety, therefore, this information note suggested a tolerable weekly intake (TWI) based on human weight for cadmium toxicity assessment. The European Food Safety Authority (EFSA) set a TWI for cadmium in all parts of crab at 2.5 μg / kg body weight.¹

Crabs are highly prized and appreciated food commodities worldwide. The muscle meat from legs and claws of crab is often called “white meat”. Another part, the cephalothorax, which contains hepatopancreas, gonads, and roe and has a brownish-greenish appearance, is named “brown meat”.

Consumers mostly consume white crab meat. Therefore, EU regulation (EC) No. 1881/2006 first set the maximum level of cadmium content only in white meat at 0.5 mg/kg of sample². However, in some countries such as France and Italy, local consumers eat both white and brown meat. Concerned about human risk imported crabs into those countries are analyzed for cadmium contamination by using the whole body of crab and the same maximum level as for white meat. This caused food authorities to reject several consignments due to excessive

¹ Information note from the European Commission: consumption of brown crab meat
² COMMISSION REGULATION (EC) No 1881/2006 of 19 December 2006 setting maximum levels for certain contaminants in foodstuffs
Cadmium content. Since 2007 until now, more than 60 notifications have recorded in the European Commission’s Rapid Alert System for food and feed about the over tolerance level of cadmium in crab. In 2009, EFSA and Joint FAO/WHO expert Committee on Food Additives (JECFA) set a TWI at 2.5 µg / kg body weight for cadmium toxicity assessment. Based on an average human body weight of 70 kg and a consumption of about 1 kg of crab per week, this results in a maximum level of about 0.175 mg/kg for each sample which is even lower than EU regulation No. 1881/2006.

Throughout SGS global network, we can support you to check cadmium content in all parts of crab to reduce rejections or recalls of products. We have the capability to determine cadmium level in food at 0.05 mg/kg by using inductive coupled plasma mass spectrometry (ICP/MS). If you need more information, please don’t hesitate to contact us.

3 Contamination levels of lead, cadmium and mercury in imported and domestic lobsters and large crab species consumed in France: Difference between white and brown meat.