NEW JAPANESE STANDARD LIMITS FOR RADIONUCLIDE IN FOOD

When the Great East Japan Earthquake hit the country in March 2011 there were no legally binding limits for acceptable levels of radioactivity in food. However, some days after the event the Japanese government found radiation contamination in milk and spinach resulting from the disaster at Fukushima Daiichi nuclear power plant. After setting provisional standard values of acceptable radiation levels in food, based on the Food Sanitation Law the Ministry of Health, Labor and Welfare (MHLW) established new permissible radiation levels in various foods which became effective on April 1, 2012, with some exceptions.

Many people in the world have been worried about the effect of radioactive contamination on the environment and food chain after the nuclear accident in Japan. Iodine-131 (I-131) and caesium-137 (Cs-137) are the main fission byproducts which have been released and can cause cancer as a long term effect in humans. I-131 is transported through the air more easily than Cs-137, but it has a half-life of only eight days. The half-life of Cs-137 is about 30 years. Cs-137 attaches itself directly to long lasting airborne particles and deposits onto soil. Both radionuclide can accumulate in plants, fruits, vegetables, and crops. When they are ingested by animals or humans this can lead to an unsafe food supply chain.

The provisional standard limits for radioactive food contaminants were released on March 17th, 2011 (Food Safety Department Notice No.0317-3: March 17th, 2011) with reference to Article 6-2 of Japan Food Sanitation Law, just after the nuclear accident in Fukushima. MHLW revised the ministerial ordinance for the provisional standard limits (MHLW notification No. 129, MHLW notification No.130, Food Safety Department Notice No.0315-1) on March 15th, 2012 (table 1) and the new standard limits became effective on April 1st, 2012. On 29 March 2012 these new regulations were adopted in the EU Regulation No 284/2012.

SGS provides analytical testing for radionuclide in food and other food-related services through our global network of laboratories. We are also committed to keeping interested parties informed of regulatory developments and new test methodology development. Please contact us for further information.

1 SGS Safeguards NO. 062/11 March 2011
2 MHLW: Handling of food contaminated by radioactivity
3 MHLW established new permissible radiation levels in various foods
TABLE 1 (ADOPTED FROM EU REGULATION NO 284/2012): MAXIMUM LEVELS FOR FOOD1 (BQ/KG) AS PROVIDED IN THE JAPANESE LEGISLATION

<table>
<thead>
<tr>
<th></th>
<th>Foods for infants and young children</th>
<th>Milk and dairy products</th>
<th>Other food, with the exception of - mineral water and similar drinks - tea brewed from unfermented leaves - soybean and soybean products 4</th>
<th>Mineral water and similar drinks and tea brewed from unfermented leaves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of caesium-134 and caesium-137</td>
<td>50 2</td>
<td>50 2</td>
<td>100 2, 3</td>
<td>10 2</td>
</tr>
</tbody>
</table>

1 For dried products that are intended to be consumed in a reconstituted state, the maximum level applies to the reconstituted product as ready for consumption. For dried mushrooms a reconstitution factor of 5 is of application. For tea, the maximum level applies to the infusion brewed from tea leaves. The processing factor for dried tea is 50, and therefore a maximum level of 500 Bq/kg on dried tea leaves ensures that the level in the brewed tea does not exceed the maximum level of 10 Bq/kg.

2 In order to ensure consistency with maximum levels currently applied in Japan, these values replace on a provisional basis the values laid down in Council Regulation (Euratom) No 3954/87.

3 For rice and rice products, the maximum level applies as from 1 October 2012. Before that date, the maximum level of 500 Bq/kg applies.

4 For soybean and soybean products, the maximum level of 500 Bq/kg applies.