



August, 2017

(Sixth revision from first statement made in 2011)

The following question has been posed to us in the past and we would like to provide a response, which will serve to clarify Wild Planet's course of action regarding radiation:

What is Wild Planet doing to address the concern about the potential exposure of seafood to radiation as a result of the 2011 tsunami in Japan and the subsequently damaged Fukushima nuclear power plant?

After the tsunami disaster occurred in Japan in 2011, we chose to systematically test the fish we purchased and processed. We have accumulated over 400 radiation test results in the three last years. Radiation is measured in becquerels (Bq), the standard unit of measurement as designated by the International System of Units. Our test results in 2011 and 2012 have shown an average of about 3 BQ/kg and a high test of 5 BQ/kg. The FDA has a Derived Intervention Level (DIL) of 1,200 BQ/kg and as such, all the fish we have canned since March 2011 are 250 to 600 times lower than the FDA level of concern. Incidentally, the DIL set by the Japanese government is 100 BQ/kg. Tests in 2013 and early 2014 (150+ tests) have shown over 90% "non-detected" down to a detection level of 0.5BQ/kg. All tests performed in the second half of 2014 and all in 2015 show no detectable radiation. The best data we have shows there is no health concern at all for North Pacific tuna or other fish outside of the immediate coastal beach zone of Fukushima.

The coastal area near Fukushima is not the location of a "hot-spot" of radiation. The contaminated waters were released into the ocean April 2011 and ocean currents have since dispersed these waters broadly in the Pacific Ocean. A statement from the FDA specifically addressing the issue of radiation contamination in seafood is found at: <http://www.fda.gov/downloads/food/recallsoutbreaksemergencies/emergencies/ucm253896.pdf>.

In the summer of 2012 news reports disclosed detectable amounts of Cesium 137 found in Bluefin tuna caught off the coast of California. Of interest was the comment made by Robert Emery at the University of Texas Health Science Center at Houston who says you'd need to eat 2.5 to 4 tons of tuna in a year to get a dose of cesium-137 that exceeds health limits. This comment could be contested, but a valid point is made that the amount of radiation in migratory fish in the North Pacific is extremely minimal.

We would like here to provide some context for the amount of radiation in those fish. An informative chart can be found at: <http://xkcd.com/radiation/>. This chart quantifies various radiation doses we may experience in daily life. By comparison, based upon calculations made in the authoritative study found at www.pnas.org/cgi/doi/10.1073/pnas.1221834110 it would require the consumption of 58 pounds of the now famous Bluefin tuna tested in San Diego the summer of 2012 to reach 0.1 micro Sievert ($1 \mu\text{Sv} = 0.000001 \text{ Sv}$). To put this into context, here are some common daily life radiation dose comparisons, taken from the link above:

- Eating one banana = eating 176 pounds of 2012 tested Bluefin tuna (BFT)
- Dental x-ray = 2,930 pounds of BFT
- Airline flight NY/LA = 23,440 pounds of BFT
- Mammogram = 234,400 pounds of BFT
- Chest CT scan = 4.1 million pounds of BFT

Clearly, the radiation dose from a meal of Bluefin tuna tested in 2012 is miniscule compared to other doses we commonly accept as reasonable in daily life.

It is challenging to live safely in this world, which grows exponentially more complex. The best definitive course of action one can take regarding radiation in the food supply is to do precisely what Wild Planet has done: test all loads of fish coming into our cold storage. Wild Planet has approached this responsibly with the sense that we are morally accountable to do the right thing towards our fellowman. We have continued the testing protocol throughout 2012 – 2016, and now into 2017 in order to provide our customers and ourselves with the assurance that Wild Planet products are safe. Wild Planet Quality Assurance does not believe it is necessary to continue spending thousands of dollars annually on these tests as we have now had no detected amount for quite a long time; nevertheless, we continue to do so for the benefit of our customers still concerned with the issue.

We hope this has proved to be helpful and reassuring.

Kind regards,
William Carvalho
President & Founder