



Update on Monitoring of Radionuclides in Meat from Subsistence Species on the North Slope and Bering Strait



Top: Dave Ramey preparing a sample to be tested. **Bottom:** Placing sample in Food Guard Screening System.

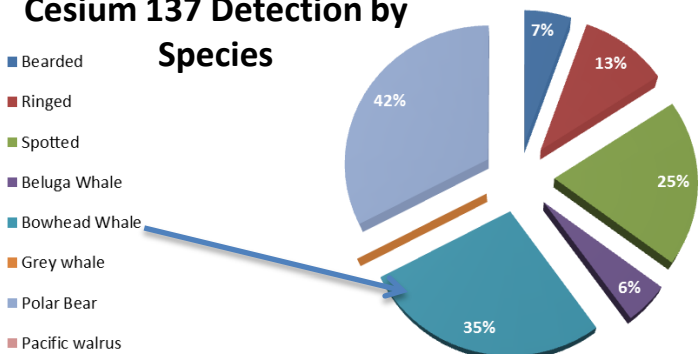


Species	Collection period	# of muscle samples
Bearded Seal	2008-2016	57
Beluga	2013-2016	16
Bowhead	2011-2016	74
Grey Whale	2012/2014	2
Polar Bear	2002-2016	19
Ringed Seal	2009-2016	15
Spotted Seal	2015-2016	4
Walrus	2007-2015	11
Grand Total	2002-2016	198

In response to NSB residents' concerns after Japan's Fukushima disaster in 2011, we have been collecting muscle (meat) from subsistence-harvested and stranded marine mammals, and have been testing them for man-made radionuclides.

The common long-lived, man-made radioactive element found worldwide is Cesium 137 (30 years half-life), as compared to the short-lived Cesium 134 (2.5 years half-life). Both radionuclides were released during the Fukushima nuclear plant accident; however, a detection of Cesium 134 is an indicator for Fukushima contamination. We tested for both forms of Cesium in subsistence meats as well as store-bought ground beef.

Cesium 137 Detection by Species



Cesium 137
 US FDA Safety Levels = 1200 Bq/kg
 Japan Food Safety Levels = 100 Bq/kg

Bq = Becquerel or the unit of radioactivity.

Results

- Cesium 134 was NOT detected in any of the meat from marine mammals.
- Cesium 137 was detected at very low levels, ranging from 2.9 - 5.5 Bq/kg wet weight. For comparison, Cesium 137 in store-bought ground beef ranged from 7.28 - 8.67 Bq/kg wet weight.

Conclusions

- Contamination of marine mammal meat with the common, long-lived radioactive Cesium 137 is present but very low.
- There has been NO DETECTION of any contamination by Cesium 134 from the Fukushima disaster.
- **Food Safety** : Meat consumption is safe according to USDA and Japan Food Safety levels, and you may follow your customary and traditional practices.

For more information, please contact NSB-DWM research biologist Raphaela Stimmelmayer at raphaela.stimmelmayer@north-slope.org or call 852-0350.