

Online Supporting Material

Supplemental Table. Stable carbon and nitrogen isotope ratios of traditional and non-traditional, market foods, by isotopic food group¹.

Food Name	Food Group	<i>n</i>	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$
<u>Traditional foods</u>				
Akutaq ²	Mixed	3	2.0 ± 1.8	-24.2 ± 4.8
Blackfish ³	Aquatic	1	8.5	-27.8
Dolly varden ³	Aquatic	3	16.1 ± 0.4	-19.4 ± 0.2
Flounder	Aquatic	2	14.5 ± 1.0	-20.3 ± 1.3
Halibut	Aquatic	4	17.0 ± 1.3	-17.2 ± 0.3
Herring	Aquatic	12	14.5 ± 2.1	-20.0 ± 1.0
Herring eggs	Aquatic	5	16.0 ± 2.3	-20.0 ± 0.8
King salmon	Aquatic	8	13.2 ± 0.6	-22.2 ± 1.4
Burbot ³	Aquatic	2	16.9 ± 0.1	-21.6 ± 1.3
Needle fish ³	Aquatic	1	10.2	-25.9
Pike ³	Aquatic	8	10.6 ± 2.1	-25.3 ± 2.9
Salmon ⁴	Aquatic	15	11.3 ± 1.0	-21.3 ± 1.1
Seal	Aquatic	9	15.7 ± 2.6	-20.0 ± 2.2
Seal oil ⁵	Aquatic	3	-	-24.5 ± 0.6
Seaweed	Aquatic	1	11.5	-16.0
Smelt	Aquatic	4	17.1 ± 0.4	-19.7 ± 0.8
Stink fish ⁶	Aquatic	1	13.1	-23.2
Tomcod	Aquatic	4	18.2 ± 1.0	-18.7 ± 0.6
Trout ³	Aquatic	1	16.5	-18.7
Whitefish ³	Aquatic	2	8.7 ± 1.4	-23.9 ± 3.4
Bear	Terrestrial Animals	1	10.8	-21.6
Caribou ⁴	Terrestrial Animals	11	3.2 ± 1.0	-23.4 ± 1.3
Moose ⁴	Terrestrial Animals	6	2.6 ± 1.7	-25.9 ± 0.9

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Moose fat	Terrestrial Animals	1	-1.7	-31.9
Muskox	Terrestrial Animals	2	2.5 ± 0.4	-24.5 ± 0.3
Ptarmigan	Terrestrial Animals	2	4.6 ± 3.8	-19.8 ± 5.3
Beach greens	Terrestrial Plants	4	2.6 ± 3.5	-27.5 ± 0.7
Blackberries	Terrestrial Plants	3	-1.5 ± 2.4	-24.8 ± 1.2
Buttercup	Terrestrial Plants	4	1.8 ± 1.0	-26.2 ± 0.9
Crowberry ⁵	Terrestrial Plants	1	-	-26.2
Mouse food ⁷	Terrestrial Plants	2	-1.6 ± 1.2	-27.2 ± 0.4
Pond plant	Terrestrial Plants	1	-0.6	-31.0
Salmonberries	Terrestrial Plants	5	1.1 ± 1.0	-25.3 ± 0.9
Sourdock	Terrestrial Plants	1	2.8	-28.9
Stinkweed	Terrestrial Plants	1	-2.7	-29.3
Tundra tea	Terrestrial Plants	3	-3.6 ± 2.5	-27.1 ± 1.0
Unknown fruits	Terrestrial Plants	1	-0.8	-28.1
Crane	Waterfowl	1	6.8	-22.9
Duck	Waterfowl	1	11.1	-20.5
Goose	Waterfowl	8	7.0 ± 4.2	-25.8 ± 2.5
Goose gizzard	Waterfowl	2	4.7 ± 3.1	-24.2 ± 1.7
Swan	Waterfowl	3	7.1 ± 0.4	-19.9 ± 0.2
Waterfowl (unknown)	Waterfowl	1	7.3	-29.5
<u>Market foods</u>				
Corn chips	Corn and Cane Sugar	3	3.4 ± 1.4	-14.6 ± 1.2
Diet Soda ⁵	Corn and Cane Sugar	1	-	-11.4
Ketchup	Corn and Cane Sugar	3	4.0	-14.3 ± 1.0
Pancake syrup ⁵	Corn and Cane Sugar	1	-	-11.2
Preserves ⁵	Corn and Cane Sugar	1	-	-12.8

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Soda ^{4,5}	Corn and Cane Sugar	9	-	-11.1 ± 0.5
Sugar	Corn and Cane Sugar	3	4.6	-11.8 ± 0.1
Sugar-based candy ⁵	Corn and Cane Sugar	1	-	-12.1
Tang ^{4,5}	Corn and Cane Sugar	4	-	-12.0 ± 0.4
Cheese	Dairy	1	4.9	-22.3
Milk	Dairy	6	4.1 ± 0.3	-20.5 ± 1.2
Bread	Grains and Vegetables	2	1.5 ± 1.9	-24.3 ± 0.4
Cakes and cookies	Grains and Vegetables	2	2.9 ± 1.4	-26.0 ± 1.7
Cereals	Grains and Vegetables	3	1.4 ± 2.6	-25.3 ± 0.5
Condiments ⁸	Grains and Vegetables	3	2.9 ± 2.7	-27.5 ± 2.5
Honey	Grains and Vegetables	1	5.0	-25.8
Margarine	Grains and Vegetables	1	1.6	-30.8
Fruits	Grains and Vegetables	4	3.5 ± 0.6	-23.8 ± 2.9
Vegetables	Grains and Vegetables	4	0.4 ± 2.5	-25.1 ± 0.9
Nuts	Grains and Vegetables	1	-0.5	-27.7
Oils	Grains and Vegetables	3	-2.6	-28.8 ± 1.4
Pasta ⁴	Grains and Vegetables	3	1.8 ± 0.2	-24.6 ± 0.5
Pilot cracker ⁴	Grains and Vegetables	3	3.4 ± 0.3	-27.3 ± 0.6
Potato chips	Grains and Vegetables	3	3.7 ± 1.7	-26.9 ± 1.3
Rice ⁴	Grains and Vegetables	6	2.9 ± 2.1	-26.8 ± 0.4
Vegetable shortening ^{4,5}	Grains and Vegetables	3	-	-30.1 ± 0.1
Beef ⁴	Meats	4	5.2 ± 1.2	-17.0 ± 4.4
Chicken ⁴	Meats	2	1.9 ± 0.9	-17.2 ± 0.8
Eggs	Meats	1	5.0	-18.5
Pork	Meats	3	3.2 ± 1.2	-15.3 ± 0.5
Turkey ⁴	Meats	2	3.0 ± 0.3	-17.9 ± 0.7
Candy	Mixed	2	-1.8 ± 8.0	-21.6 ± 2.6

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Canned fruits	Mixed	1	3.9	-22.8
Creamer ⁵	Mixed	3	-	-19.7 ± 2.0
Ice cream	Mixed	1	4.6	-20.9
Kool aid	Mixed	1	3.4	-24.7
Mixed dish	Mixed	2	2.0 ± 0.4	-21.7 ± 2.8
Sweetened/corn cereals	Mixed	3	0.6 ± 3.0	-17.3 ± 2.5

¹Values are mean ± SD

² “Akutaq”, or Eskimo ice cream, is a traditional food, which is now commonly made with a mixture of market and traditional ingredients (vegetable shortening, sugar, and traditional or market fruits), and has therefore been classed as a “mixed” food item. It was traditionally made with seal oil or blubber.

³These fish species are known to live and feed completely, or partly in freshwater habitats.

⁴Isotope ratios for 42 of these food samples have been previously reported (24).

⁵ Samples did not contain nitrogen, or contained too little nitrogen for accurate measurement.

⁶ “Stink fish” is fermented fish.

⁷ “Mouse food” are rodent caches of edible seeds and roots that are harvested from the tundra.

⁸ “Condiments” includes items such as mayonnaise, mustard and soy sauce that do not contain large amounts of corn or cane sugar