

Table S1. General information about samples.

Sample	Species on label	Genetic identity	Fishing area	Included in the study?	Reason
1	<i>Thunnus albacares</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
2	<i>Thunnus albacares</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
3	<i>Thunnus albacares</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
4	<i>Thunnus albacares</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
5	<i>Thunnus albacares</i>	<i>Auxis thazard</i>	N.A.	NO	FAO area absent
6	<i>Thunnus albacares</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
7	<i>Thunnus albacares</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
8	<i>Atún Claro</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
9	<i>Atún Claro</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
10	<i>Atún Claro</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
11	<i>Atún Claro</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
12	<i>Atún Claro</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
13	<i>Atún Claro</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
14	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	FAO 71	YES	All info required
15	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	FAO 71	YES	All info required
16	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	FAO 34-47	NO	Multiple FAO areas
17	<i>Atún Claro</i>	<i>Thunnus albacares</i>	FAO 71	YES	All info required
18	<i>Atún Claro</i>	<i>Thunnus albacares</i>	FAO 51-71-77-87	NO	Multiple FAO areas
19	<i>Atún Claro</i>	<i>Thunnus albacares</i>	FAO 71	YES	All info required
20	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	FAO 71	YES	All info required
21	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	FAO 51	YES	All info required
22	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	FAO 71	YES	All info required
23	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	FAO 71	YES	All info required
24	<i>Atún Claro</i>	<i>Thunnus albacares</i>	FAO 71	YES	All info required
25	<i>Atún Claro</i>	<i>Thunnus albacares</i>	FAO 51	YES	All info required
26	<i>Atún Claro</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
27	<i>Atún Claro</i>	<i>Thunnus albacares</i>	N.A.	NO	FAO area absent
28	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	FAO 34-47-51-57-71-77-87	NO	Multiple FAO areas on label
29	<i>Thunnus albacares</i>	<i>Thunnus albacares</i>	FAO 77	YES	All info required
30	<i>Thunnus albacares</i>	<i>Thunnus albacares</i>	FAO 51	YES	All info required
31	<i>Thunnus obesus</i>	<i>Thunnus albacares</i>	FAO 77	YES	All info required
32	<i>Thunnus albacares</i>	<i>Thunnus albacares</i>	FAO 71	YES	All info required
33	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	PAC E-East Pacific	NO	Multiple FAO areas
34	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	PAC E-West Pacific	NO	Multiple FAO areas
35	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	PAC E-East Pacific	NO	Multiple FAO areas
36	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	PAC E-East Pacific	NO	Multiple FAO areas
37	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	PAC E-East Pacific	NO	Multiple FAO areas
38	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	PAC E-East Pacific	NO	Multiple FAO areas
39	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	PAC E-East Pacific	NO	Multiple FAO areas
40	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	PAC E-West Pacific	NO	Multiple FAO areas
41	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	PAC W- West Central Pacific	NO	Multiple FAO areas
42	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	PAC W- West Central Pacific	NO	Multiple FAO areas
43	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	PAC W- West Central Pacific	NO	Multiple FAO areas

44	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	PAC W- West Central Pacific	NO	Multiple FAO areas
45	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	PAC W- West Central Pacific	NO	Multiple FAO areas
46	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	PAC W- West Central Pacific	NO	Multiple FAO areas
47	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	PAC W- West Central Pacific	NO	Multiple FAO areas
48	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	PAC W- West Central Pacific	NO	Multiple FAO areas
49	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	PAC W- West Central Pacific	NO	Multiple FAO areas
50	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	PAC W- West Central Pacific	NO	Multiple FAO areas
51	<i>Katsuwonus pelamis</i> / <i>Thunnus obesus</i> / <i>Thunnus albacares</i>	<i>Katsuwonus pelamis</i>	FAO 71	YES	All info required
52	<i>Katsuwonus pelamis</i> / <i>Thunnus obesus</i> / <i>Thunnus albacares</i>	<i>Katsuwonus pelamis</i>	FAO 71	YES	All info required
53	<i>Katsuwonus pelamis</i> / <i>Thunnus obesus</i> / <i>Thunnus albacares</i>	<i>Katsuwonus pelamis</i>	FAO 71	YES	All info required
54	<i>Katsuwonus pelamis</i> / <i>Thunnus obesus</i> / <i>Thunnus albacares</i>	<i>Katsuwonus pelamis</i>	FAO 34	YES	All info required
55	<i>Katsuwonus pelamis</i> / <i>Thunnus obesus</i> / <i>Thunnus albacares</i>	<i>Katsuwonus pelamis</i>	FAO 71	YES	All info required
56	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	N.A.	NO	FAO area absent
57	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	FAO 34	YES	All info required
58	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	FAO 34	YES	All info required
59	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	FAO 34	YES	All info required
60	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	FAO 34	YES	All info required
61	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	FAO 77	YES	All info required
62	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	N.A.	NO	FAO area absent
63	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	N.A.	NO	FAO area absent
64	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	N.A.	NO	FAO area absent
65	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	FAO 67, 71, 77, 81	NO	Multiple FAO areas
66	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	N.A.	NO	FAO area absent
67	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	N.A.	NO	FAO area absent
68	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	N.A.	NO	FAO area absent
69	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	N.A.	NO	FAO area absent
70	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	N.A.	NO	FAO area absent
71	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	N.A.	NO	FAO area absent
72	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	N.A.	NO	FAO area absent
73	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	N.A.	NO	FAO area absent
74	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	PAC-ME	NO	Multiple FAO areas
75	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	N.A.	NO	FAO area absent
76	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	FAO 47	YES	All info required
77	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	FAO 47	YES	All info required

78	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	FAO 47	YES	All info required
79	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	FAO 47	YES	All info required
80	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	FAO 47	YES	All info required

Table S2. BLAST algorithm output for species identification. The sample in bold corresponds to a supposedly mislabeled can. Samples in shaded only had the common name on the label, and not the scientific name.

Sample	Species on label	Genetic identity	e-value	Identity %
14	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	2.00E-39	96.26
15	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	7.00E-43	98.11
17	<i>Atún Claro</i>	<i>Thunnus albacares</i>	7.00E-43	98.11
19	<i>Atún Claro</i>	<i>Thunnus albacares</i>	7.00E-43	98.11
20	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	2.00E-44	99.06
21	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	1.00E-40	98.99
22	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	7.00E-43	98.11
23	<i>Thunnus albacares/obesus</i>	<i>Thunnus albacares</i>	3.00E-42	98.11
24	<i>Atún Claro</i>	<i>Thunnus albacares</i>	7.00E-43	98.11
25	<i>Atún Claro</i>	<i>Thunnus albacares</i>	2.00E-44	99.06
29	<i>Thunnus albacares</i>	<i>Thunnus albacares</i>	1.00E-41	97.22
30	<i>Thunnus albacares</i>	<i>Thunnus albacares</i>	3.00E-41	97.17
31	<i>Thunnus obesus</i>	<i>Thunnus albacares</i>	2.00E-44	99.06
32	<i>Thunnus albacares</i>	<i>Thunnus albacares</i>	2.00E-44	99.06
51	<i>Katsuwonus pelamis/ Thunnus obesus/ Thunnus albacares</i>	<i>Katsuwonus pelamis</i>	2.00E-38	95.41
52	<i>Katsuwonus pelamis/ Thunnus obesus/ Thunnus albacares</i>	<i>Katsuwonus pelamis</i>	1.00E-41	97.22
53	<i>Katsuwonus pelamis/ Thunnus obesus/ Thunnus albacares</i>	<i>Katsuwonus pelamis</i>	4.00E-41	97.20
54	<i>Katsuwonus pelamis/ Thunnus obesus/ Thunnus albacares</i>	<i>Katsuwonus pelamis</i>	8.00E-43	98.13
55	<i>Katsuwonus pelamis/ Thunnus obesus/ Thunnus albacares</i>	<i>Katsuwonus pelamis</i>	7.00E-43	98.11
57	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	8.00E-43	98.13
58	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	3.00E-41	97.17
59	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	2.00E-44	99.06
60	<i>Katsuwonus pelamis</i>	<i>Katsuwonus pelamis</i>	3.00E-37	94.59
61	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	2.00E-33	93.46
76	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	4.00E-41	97.20
77	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	1.00E-41	97.17
78	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	2.00E-44	99.06
79	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	7.00E-43	98.11
80	<i>Thunnus alalunga</i>	<i>Thunnus alalunga</i>	7.00E-43	98.11

Table S3. Mean concentration of heavy metals for each sample. Each sample was measured three times. Results are given as mean metal content in µg/kg (SD in brackets). Arsenic value given here is prior to the 26% correction.

Sample	Species	Capture zone	As	Cd	Cr	Cu	Hg	Ni	Pb	Zn
14	<i>Thunnus albacares</i>	FAO 71	193.00 (3.30)	32.61 (2.40)	19.95 (1.80)	356.71 (2.80)	181.00 (2.80)	188.28 (2.90)	9.27 (1.50)	6522.81 (2.10)
15	<i>Thunnus albacares</i>	FAO 71	183.17 (2.60)	15.04 (2.80)	154.54 (1.40)	303.84 (1.50)	71.16 (2.20)	236.25 (1.40)	4.10 (3.80)	5410.76 (0.90)
17	<i>Thunnus albacares</i>	FAO 71	95.68 (2.70)	8.13 (3.30)	20.38 (4.90)	376.83 (2.30)	68.95 (2.60)	160.96 (3.30)	3.90 (2.60)	6048.63 (3.90)
19	<i>Thunnus albacares</i>	FAO 71	83.75 (0.80)	13.30 (1.50)	20.62 (1.40)	161.23 (3.10)	174.43 (1.50)	184.26 (1.40)	3.08 (5.90)	6781.22 (0.20)
20	<i>Thunnus albacares</i>	FAO 71	189.18 (0.10)	7.41 (2.20)	26.38 (1.50)	284.94 (0.10)	41.60 (3.20)	198.94 (0.80)	3.12 (0.40)	4343.52 (1.20)
21	<i>Thunnus albacares</i>	FAO 51	121.21 (2.30)	9.24 (6.20)	16.69 (2.40)	252.49 (3.70)	114.87 (2.20)	150.86 (4.80)	4.14 (2.10)	5241.25 (1.20)
22	<i>Thunnus albacares</i>	FAO 71	79.41 (3.10)	12.03 (7.50)	14.48 (9.70)	180.42 (7.50)	122.84 (1.30)	104.24 (5.50)	5.35 (0.30)	4504.00 (4.90)
23	<i>Thunnus albacares</i>	FAO 71	213.06 (3.00)	10.91 (2.60)	186.92 (1.80)	354.78 (1.50)	44.72 (3.90)	154.91 (4.70)	5.16 (2.70)	5483.66 (1.70)
24	<i>Thunnus albacares</i>	FAO 71	108.04 (3.10)	4.42 (3.60)	25.31 (6.00)	281.93 (4.20)	42.18 (0.10)	91.98 (0.10)	2.46 (3.70)	3956.39 (1.70)
25	<i>Thunnus albacares</i>	FAO 51	254.04 (0.90)	11.60 (3.40)	11.14 (1.30)	226.40 (2.30)	107.18 (1.90)	63.69 (4.70)	1.09 (3.60)	5102.44 (1.60)
29	<i>Thunnus albacares</i>	FAO 77	168.85 (1.80)	11.07 (1.20)	19.26 (2.70)	190.07 (2.30)	116.60 (3.60)	160.66 (2.00)	1.85 (5.40)	6412.23 (2.50)
30	<i>Thunnus albacares</i>	FAO 51	183.33 (1.20)	11.84 (0.90)	29.54 (7.40)	326.81 (1.00)	581.99 (1.20)	104.68 (1.80)	1.17 (4.40)	5136.20 (1.60)
31	<i>Thunnus albacares</i>	FAO 77	87.08 (3.30)	15.95 (1.00)	12.46 (3.30)	385.89 (1.80)	232.21 (1.20)	97.68 (3.70)	1.34 (11.80)	5577.68 (0.70)
32	<i>Thunnus albacares</i>	FAO 71	301.51 (1.50)	35.89 (1.40)	14.85 (8.20)	561.26 (2.90)	237.78 (2.20)	82.46 (6.60)	1.7 (15.50)	6084.24 (2.00)
51	<i>Katsuwonus pelamis</i>	FAO 71	437.77 (1.40)	12.49 (1.30)	12.25 (2.10)	350.79 (1.50)	22.95 (3.00)	118.57 (0.20)	2.16 (2.80)	5728.08 (1.20)
52	<i>Katsuwonus pelamis</i>	FAO 71	318.27 (0.70)	8.87 (3.60)	14.09 (1.00)	397.05 (3.00)	22.57 (3.50)	72.00 (0.60)	1.30 (6.10)	6804.90 (1.80)
53	<i>Katsuwonus pelamis</i>	FAO 71	339.98 (2.10)	18.17 (2.60)	17.43 (3.30)	347.85 (1.40)	22.21 (0.60)	116.06 (2.50)	2.44 (3.80)	6766.64 (0.90)
54	<i>Katsuwonus pelamis</i>	FAO 34	91.08 (1.50)	13.34 (3.70)	7.95 (10.00)	492.87 (3.70)	230.55 (1.60)	44.97 (1.70)	2.98 (2.60)	6860.23 (2.40)
55	<i>Katsuwonus pelamis</i>	FAO 71	406.97 (1.30)	14.80 (1.60)	10.89 (3.90)	403.72 (1.70)	34.92 (3.60)	71.88 (0.90)	5.12 (1.20)	6412.64 (0.90)
57	<i>Katsuwonus pelamis</i>	FAO 34	73.97 (1.90)	45.81 (2.90)	17.99 (1.80)	311.53 (2.00)	181.76 (1.50)	154.38 (3.70)	2.26 (0.30)	10330.25 (1.50)
58	<i>Katsuwonus pelamis</i>	FAO 34	266.80 (3.10)	116.67 (2.90)	18.40 (2.50)	429.05 (1.50)	56.61 (3.60)	91.51 (0.90)	3.80 (5.50)	7724.84 (1.30)
59	<i>Katsuwonus pelamis</i>	FAO 34	212.61 (1.50)	29.26 (3.20)	30.69 (2.70)	234.82 (1.00)	157.91 (1.60)	50.89 (2.40)	4.86 (4.00)	6122.73 (2.20)
60	<i>Katsuwonus pelamis</i>	FAO 34	128.02 (1.50)	24.92 (2.60)	13.89 (2.50)	263.20 (1.80)	688.26 (0.30)	137.94 (2.40)	1.99 (4.70)	5552.20 (0.90)
61	<i>Thunnus alalunga</i>	FAO 77	517.28 (2.00)	14.85 (1.90)	10.41 (4.20)	111.44 (1.50)	478.72 (1.00)	81.36 (3.20)	2.99 (8.70)	4217.03 (0.60)

76	<i>Thunnus alalunga</i>	FAO 47	117.55 (1.00)	7.79 (1.50)	16.10 (4.70)	138.70 (3.80)	310.12 (1.40)	81.13 (4.30)	0.00 (N/A)	6915.58 (4.30)
77	<i>Thunnus alalunga</i>	FAO 47	129.31 (2.80)	4.75 (4.20)	15.80 (3.10)	129.19 (3.20)	234.85 (0.50)	52.36 (4.00)	1.99 (0.30)	6265.75 (0.40)
78	<i>Thunnus alalunga</i>	FAO 47	106.16 (3.40)	10.52 (2.60)	174.10 (1.40)	217.32 (1.70)	354.44 (1.00)	320.01 (2.10)	9.20 (1.50)	7511.59 (0.20)
79	<i>Thunnus alalunga</i>	FAO 47	168.44 (1.60)	11.57 (1.00)	34.98 (3.10)	229.06 (1.80)	322.72 (2.10)	101.06 (0.20)	3.42 (3.90)	6162.70 (1.10)
80	<i>Thunnus alalunga</i>	FAO 47	144.72 (1.90)	9.91 (1.10)	14.12 (0.80)	229.37 (2.80)	287.33 (0.50)	88.14 (0.90)	2.94 (2.10)	7571.14 (1.50)

Table S4. Mann-Whitney test results of the concentration of each heavy metal (µg/kg) for all groups studied. Numbers in bold are significantly different (significance level $\alpha=0.05$).

Arsenic	Thunnus 71	Katsuwonus 71	Thunnus 51	Thunnus 77	Katsuwonus 34	Thunnus 47
Thunnus 71		0	10	12	21	19
Katsuwonus 71	0.007		0	4	0	0
Thunnus 51	0.579	0.052		4	6	3
Thunnus 77	0.853	0.596	1		6	5
Katsuwonus 34	0.894	0.020	0.766	0.766		12
Thunnus 47	0.689	0.020	0.233	0.551	1	
Cadmium	Thunnus 71	Katsuwonus 71	Thunnus 51	Thunnus 77	Katsuwonus 34	Thunnus 47
Thunnus 71		15	11	10	7	13
Katsuwonus 71	0.700		3	5	2	3
Thunnus 51	0.712	0.377		2	0	3
Thunnus 77	0.579	0.860	0.383		2	1
Katsuwonus 34	0.046	0.066	0.037	0.136		0
Thunnus 47	0.230	0.111	0.233	0.074	0.012	
Chromium	Thunnus 71	Katsuwonus 71	Thunnus 51	Thunnus 77	Katsuwonus 34	Thunnus 47
Thunnus 71		2	9	2	11	19
Katsuwonus 71	0.017		4	6	6	3
Thunnus 51	0.460	0.596		3	7	6
Thunnus 77	0.042	0.860	0.663		6	3
Katsuwonus 34	0.143	0.391	1.000	0.766		9
Thunnus 47	0.689	0.111	0.766	0.233	0.531	
Copper	Thunnus 71	Katsuwonus 71	Thunnus 51	Thunnus 77	Katsuwonus 34	Thunnus 47
Thunnus 71		10	9	10	20	6
Katsuwonus 71	0.247		0	2	8	0
Thunnus 51	0.460	0.052		3	4	2
Thunnus 77	0.579	0.216	0.663		3	7
Katsuwonus 34	0.790	0.713	0.371	0.233		0
Thunnus 47	0.033	0.020	0.136	1	0.012	
Lead	Thunnus 71	Katsuwonus 71	Thunnus 51	Thunnus 77	Katsuwonus 34	Thunnus 47
Thunnus 71		8	6	3	14	15
Katsuwonus 71	0.143		3	5	8	9
Thunnus 51	0.196	0.377		3	4	6
Thunnus 77	0.064	0.860	0.663		3	5
Katsuwonus 34	0.286	0.713	0.371	0.233		11
Thunnus 47	0.351	0.903	0.766	0.551	0.835	
Mercury	Thunnus 71	Katsuwonus 71	Thunnus 51	Thunnus 77	Katsuwonus 34	Thunnus 47
Thunnus 71		0	8	5	11	1
Katsuwonus 71	0.007		0	0	0	0
Thunnus 51	0.355	0.052		3	6	5
Thunnus 77	0.139	0.052	0.663		6	5
Katsuwonus 34	0.143	0.020	0.766	0.766		5
Thunnus 47	0.005	0.020	0.551	0.551	0.144	

Nickel	Thunnus 71	Katsuwonus 71	Thunnus 51	Thunnus 77	Katsuwonus 34	Thunnus 47
Thunnus 71		6	6	6	7	12
Katsuwonus 71	0.076		6	4	10	10
Thunnus 51	0.196	0.860		4	6	6
Thunnus 77	0.196	0.596	1.000		5	6
Katsuwonus 34	0.046	0.903	0.766	0.551		11
Thunnus 47	0.182	0.903	0.766	0.766	0.835	
Zinc	Thunnus 71	Katsuwonus 71	Thunnus 51	Thunnus 77	Katsuwonus 34	Thunnus 47
Thunnus 71		7	9	13	6	4
Katsuwonus 71	0.105		0	1	7	6
Thunnus 51	0.460	0.052		3	0	0
Thunnus 77	1.000	0.112	0.663		3	2
Katsuwonus 34	0.033	0.540	0.037	0.233		12
Thunnus 47	0.016	0.391	0.037	0.136	1	