⟨Review Article⟩

# Biotin content table of select foods and biotin intake in Japanese

Toshiaki Watanabe<sup>1, 2</sup>, Mio Kioka<sup>1</sup>, Atsushi Fukushima<sup>1</sup>, Masako Morimoto<sup>1</sup> and Hiromi Sawamura<sup>3</sup>

Summary The biotin content of 500 select foods was determined by a microbiological assay in this study "Himeji study" and the biotin content of 955 foods was listed in the food composition table for biotin "Biotin content table", based on the combination of published data in Japan and foreign countries. Of these, the biotin contents of some foods such as peanuts, red peppers, liver (cattle, swine, and chicken), kidney (cattle), eggs (yolk), instant coffee, baker's yeast (dried), and royaljelly were over  $50 \mu g/100g$  per food. The average content of biotin in 98 food group was high in Meats (offals), Nuts and seeds, Spices and others, Whole soybeans and its products, and Eggs. However biotin was not contained in Animal fats, Edible salts and *Sake*. When the dietary intake of biotin was calculated using the average content of biotin determined in Himeji study and the food intake in the National Health and Nutrition Survey in Japan (2012), the biotin intake was estimated to be  $50 \mu g/day$  for adults in Japan. This biotin content table covers most common foods in Japan and might be useful as a database for the estimation of the dietary intake of biotin from meals.

**Key words:** Biotin content table, Standard Tables of Food Composition in Japan, Biotin intake, Biotin requirement, Japanese

### 1. Introduction

Biotin is a water-soluble vitamin that is classified as a B-group vitamin. In mammals, biotin serves as an essential cofactor for four carboxylases in fatty acid synthesis, branched-chain amino acid metabolism and gluconeogenesis<sup>1,2</sup>. It is known that biotin deficiency causes the dysfunction of these metabolic pathways, and the resulting biochemical and physiological impairments induce skin disorders such as dermatitis, hair loss, neuritis and susceptibility to infections. Biotin deficiency is also severely teratogenic in

<sup>1</sup>Department of Dietary Environment Analysis, School of Human Science and Environment, Himeji Institute of Technology, University of Hyogo, Himeji 670-0092, Japan

<sup>2</sup>Reserch Institute for Food and Nutritional Sciences, University of Hyogo, Himeji 670-0092, Japan

<sup>3</sup>Department of Molecular Nutrition, School of Human Science and Environment, University of Hyogo, Himeji 670-0092, Japan Received for Publication August 19, 2014 Accepted for Publication August 26, 2014

Correspondence: Toshiaki Watanabe, PhD, DSc, Department of Dietary Environment Analysis, School of Human Science and Environment, University of Hyogo, Himeji 670-0092, Japan

TEL/FAX: +81-79-292-9325

E-mail: watanabe@shse.u-hyogo.ac.jp

rodents<sup>3,4</sup>. Biotin is essential for maintaining pregnancy and fetal development. However, the decrease in urinary biotin is found even in normal gestation in mice and humans<sup>5</sup>. The nutritional state of biotin in pregnancy may be suspected to be marginal<sup>6</sup>. On the other hand, more recently, excessive amount of biotin intake has been reported to induce the inhibited maturation of spermatogenesis<sup>7,8</sup>.

As biotin is widely contained in various foods, biotin deficiency is rare in humans. For these reasons, there are not many data on the intake and requirement of biotin, the absorption and bioavailability of biotin, and the biomarker to evaluate nutritional state of biotin. The authors determined many kinds of foods including infant formulas and baby foods<sup>9-11</sup>. Because biotin was not permitted as a food additive in Japan, with the exception of food with nutrient function claims, biotin could not be supplemented in infant formulas. Biotin deficiency was induced in many cases by feeding infant formulas, especially therapeutic infant formulas made in Japan. So, it was not until this June that biotin could be added to only the infant formulas by the notification of the Ministry of Health and Welfare.

In Japan, the recommended dietary intake of biotin has recently been set at 30  $\mu$ g/day for adults by the "Recommended Dietary Allowances for Japanese, 6th Revision - Dietary Reference Intakes -" (DRIs 2000), based on evidence in foreign countries¹². The adequate intake (AI) of biotin has been revised to 4 and 10  $\mu$ g/day for infants ages 0-5 and 6-11 months, respectively, 20  $\mu$ g for infants ages 1-2 years old and 50  $\mu$ g/day for adults in the "Dietary Reference Intakes for Japanese, 2010 version" (DRIs 2010)¹³. However there is not much evidence concerning the dietary intake of biotin in Japan yet. It is necessary to determine the exact biotin content of foods to estimate the dietary intake of biotin for Japanese.

The contents of nutrients in 1,878 foods are listed and dived into 18 food groups in the "Standard Tables of Food Composition in Japan, 5th revised and enlarged edition (Japanese Food Composition Table)" published in 2005, but the biotin contents in these foods have not been included<sup>14</sup>. We determined the biotin contents of 500 foods and many kinds of meals

by a microbiological assay in severals of our studies in Japan (assay data)<sup>15-17</sup>. In addition, the biotin contents of 498 of the foods were added to the Japanese Food Composition Table in 2010 for the first time<sup>18</sup>. A "biotin content table" was made by combining our assay data and published data such as the biotin contents of foods listed in the Japanese Food Composition Table and analyzed in foreign countries (Table 1). Also the biotin intake was calculated using this biotin content table by a 98 food group calculation method.

### 2. Biotin determination

Of the foods listed in the Japanese Food Composition Table, 500 were selected in Himeji study. All foods purchased from the grocery stores in Himeji, Japan. Most foods are produced in various districts of Japan and some are imported from America, China and Australia.

The moisture of the foods was determined by the heating dryness method at the normal pressures. Foods were processed by the "analytical manual" recommended in the Japanese Food Composition Table. As for the determination of the biotin contents, solid foods such as meats and vegetables were adequately added in distilled water after being cut with a knife as finely as possible and homogenized for a set amount of time. The liquid foods were provided as a sample after adding distilled water and being diluted as needed. These samples were stored in a freezer at  $-40^{\circ}\mathrm{C}$  until analyzed. Each food sample was hydrolyzed with 2.25 M H<sub>2</sub>SO<sub>4</sub> by autoclaving at 121°C for 1 hour and then neutralized with 4.5 M NaOH. The biotin contents were microbiologically measured using Lactobacillus plantarum ATCC 8014<sup>19</sup>. The biotin in the foods is partially bound to some peptides and proteins. Therefore, it is generally necessary to hydrolyse to release free biotin in foods before a biological assay. The content of free biotin in some foods was presented as a percentage of free biotin to total biotin as well.

In the Japanese Food composition Table<sup>14</sup>, 1,878 foods were divided into 18 food group. The nutrient contents of these foods such as vitamins and minerals in addition to major nutrients are shown. Foods

analyzed in Himeji study were divided into 98 food group depending on the table of food groups in the National Health and Nutrition Survey, and the average of the food group was calculated for estimating the dietary biotin intake.

#### 3. Biotin contents in foods

The biotin contents of foods in Denmark<sup>20</sup> and Germany<sup>21, 22</sup> are shown in the food composition tables. The biotin contents of foods in Canada are described in five articles published by Hoppner et al.<sup>23-27</sup>. The biotin contents in American foods and processed foods were reported by Hardings and Crooks<sup>28</sup> and Staggs et al.<sup>29</sup>. The biotin contents of 498 foods in Japan were added to the Japanese Food Composition Table in 2010<sup>13</sup>. Of these studies the biotin contents were determined by the microbiological assay<sup>20-28</sup> and the HPLC/avidin-binding assay<sup>29</sup>.

In Biotin content table, the biotin contents were over 50 µg/100g per food in peanuts, red peppers, liver (cattle, swine, and chicken), kidney (cattle), eggs (yolk), instant coffee, baker's yeast (dried) and royaljelly (Table 1). As shown in Table 2, the average content of biotin in 98 food group in Himeji study (100 g per food) were highest at 26.1 µg in Meats (offals), relatively high 22.5 µg in Nuts and seeds, 20.9 μg in Spices and others, 19.3 μg in Whole soybeans and its products, and 17.9 µg in Eggs. Moreover, the average contents of biotin were over 10 µg in Hirakiboshi and Tsukudani in Fishes and Shellfishes products and Syoyu and Natto in Japanese fermenting products, which are popular in Japan. On the other hand, the average biotin contents were low at 0.0 µg in Animal fats and Vegetable fats and oils in Fats and oils, Edible salts in Seasonings, and Sake in Alcoholic beverages.

The kinds of analyzed foods are different in every study, which depends on the food culture and dietary habits of each country. In Himeji study, soy foods, seasoning, and spices popular in Japan, as well as many kinds of fishes and shellfishes, algae, and mushrooms were analyzed. On the other hand, the standard tables of food composition in Denmark and Germany include many offal and milk products<sup>20-22</sup>.

Furthermore, the biotin contents of foods listed in the biotin content table are slightly different depending on the study. It was mainly for this reason that there is a difference in the origin of foods or the assay method of biotin. The value of the biotin contents by HPLC/avidin-binding assay tends to be lower compared with that by a microbiological assay<sup>29</sup>. This may be due to the high specificity to biotin in the HPLC/avidin-binding assay. In contrast, as the microbiological assay has a low specificity for biotin, this may measure with confounding factors such as biotin analogs and catabolites and thereby overestimate biotin containing foods. Also some biotin in foods may be destroyed and lost by a strong acid hydrolysis.

### 4. Dietary intake of biotin

The biotin intake was estimated by the 98 food group calculation method developed in our study<sup>30,31</sup>. Although the biotin content of all foods has not been determined yet, the daily intake of biotin can be easily calculated by the average contents of biotin in the 98 food group and the amounts of food intake of the 98 food group shown in the National Health and Nutrition Survey (2012)<sup>32</sup>.

The dietary intake in infants ages 1-2 years old was estimated at 25.0 µg/day for males and 24.4 µg/day for females. In adults ages 18-29 years old, daily intake of biotin was estimated at 50.1 µg/day for men and 41.8 µg/day for women (Table 2). The sex difference in biotin intake was detected in adolescence and adults 10-years-of-age and above. These biotin intakes for adults were consistent with 50.7 µg/day in TDS and 54.3 µg/day (arithmetic mean) in duplicate meals in Japan<sup>30, 33</sup>. Also the estimated intake of biotin was 39.9 µg/day from a 24-hour dietary recall according to data collected in NHANES II in the USA34. The foods contributing to biotin intake were primarily eggs, rices and milk for all ages. The percentage of this contribution was about 35% in adults ages 18-29 years old, which was as the same as infants ages 1-2 years

The AI of biotin has been set at 50 µg in DRIs 2010 for Japanese<sup>13</sup> and 30 µg for Americans<sup>35</sup>. However, the Estimated Average Requirement (EAR)

Table 1 Biotin contents of select foods

Food	Item	T.	and and discription		Assay v Water <sup>1</sup>	alue			Publishe Biotin co				Notes
oup	No.	F	ood and discription			studv <sup>3</sup>	Denmark <sup>4</sup>	Germmany <sup>5</sup>		USA <sup>7</sup>	USA <sup>8</sup>	Japan <sup>9</sup>	140168
REALS		Amaranth	Whole	grain, raw		_ cau	ai K	any				16.3	
	1004		Oatme		9	16.8		20.0**	20.0	24.0	0.2	21.7	[1]
		Barley		d grain, raw						31.0		2.6	
	1007			grain, raw	62	3.6				31.0		3.5	
	1008	3371 . (3371 1	Noodles	Dry form, raw			7.0	6.0		16.0		0.6	
	1013	Wheat [Whole grain]	Imported	Soft, raw Hard, raw			7.0	6.0		16.0		9.6 10.7	
	1014	[Wheat flour]	Soft flour	First grade	13	2.4	1.9			9.0		1.2	
	1016	[wheat hour]	Soft flour	Second grade	13	2.4	1.,			7.0		2.5	
	1018	1	Medium flour	First grade	12	0.9						1.5	
	1019	1		Second grade								2.6	
	1020		Hard flour	First grade	13	2.5						1.7	
	1021			Second grade								2.6	
	1023			Whole								10.8	
	1024	_	Premixed flour	For hot cake	10	1.2						1.5	
	1025 1026	[Breads]	White	For Tenpura	11 40	2.1					1.2	2.4	
	1028	[Bicaus]		table bread type rolls	40	1.0	2.2				1.2	2.4	
	1030	-	Hardta		7	1.1	2.2						
	1031	1	French		29	1.0						1.9	
	1032	-	Rye br		41	0.8	5.5		6.0		0.1		
	1034	]	Soft ro	lls	25	4.8	1.9	1.0	2.0		0.1		
	1035	1	Croissa		16	7.4	1.9						
	1036	1		h muffins	45	1.5							
	1037	[]ononoso ng - 411	Nan	INV C	39	1.1						0.0	
		[Japanese noodles]	Udon	Wet form, raw	29 13	1.1 1.0 <sup>a</sup>						0.8	
	1039	-	Hosi-udon	Wet form, boiled	13	0.5						1.3	
	1041	1	Hosi-udon Somen & Hiyamugi	Dry form, raw Dry form, raw	11	2.0						1.3	
	1043	1	Somen & riyamugi	Dry form, raw Dry form, boiled	- 11	2.0						0.4	
	1047	[Chinese noodles]	Chinese noodles	Wet form, raw	<del>                                     </del>							1.0	
	1048	1	l	Wer form, boiled								0.5	
	1056	[Precooked noodles]	Chinese noodles	Dried by frying, seasoned	4	2.4							
	1057	]		Dried by frying								1.8	
	1058			Dried by hot air								2.2	
	1059		Chinese style	Dried by frying	7	1.0							
	1060		instant cup noodles	Dried by frying,	8	0.7							
	1052	D		chow mein type	- 42	2.53	4.0	4.0				1.0	
	1063	[Macaroni and spaghetti]	Macaroni and spaghetti	Dry form, raw	12	2.7ª	1.0	1.0				4.0	
	1064	[Fu : alutan products]	Dalrad true	Dry form, boiled	11	4.9	0.2					1.4	
	1066 1074		Baked type	Kanze-fu zu pastry	11 32	0.6							
	1074	[Outers]	Bread crumbs	Dry form	10	4.1	6.2						
		Rice [Paddy rice grain]		rice, raw	-10	7.1	3.0	12.0				6.0	
	1081	() g,		nilled rice, raw			5.0	12.0				3.5	
	1082			milled rice, raw								2.9	
	1083			nilled rice, raw	15	2.0◎	3.0	3.0	6.0	5.0		1.4	[2]
	1084		Well-n	nilled rice with embryo, raw								3.3	
	1085	[Cooked paddy rice]	Brown		65	3.2	3.0			12.0		2.5	
	1086			nilled rice								1.2	
	1087			milled rice	64	0.68				1.2		0.9	
	1088	-		nilled rice niled rice with embryo	64	0.6ª				1.3 58.0		0.5	
	1089	[Paddy rice gruels]		nilled rice with embryo						36.0		0.3	
	1093			nilled rice								0.3	
	1101			nilled rice								0.1	
	1112	[Nonglutinous rice	Yaki-o									1.1	
	1114	products]	Flour	~	11	0.8	1.0					1.1	
	1115	]	Noodle		14	0.4						0.6	
	1116		Rice-k		10	6.0						4.2	
		[Glutinous rice products]	Rice ca		45	0.9						0.6	
	1118		Sekiha		1.	0.0						0.8	
	1120	Buckwheat	Shirate	amako Straight	11	0.6						1.0	
		Duckwiieat	Buckwheat flour	Straight Inner layer	-							4.7	
	1123 1124	-		Middle layer	13	5.3						18.4	
	1124	-		Outer layer	13	ر.ر						38.2	
	1127	†	Buckwheat noodles	Wer form, raw								5.5	
	1128	1		Wet form, boiled	72	2.3						2.7	
	1129	1	Dried buckwheat noodles	Dry form, raw	13	0.0							
	1131		Whole	grain, raw				6.6*		21.0		8.3	[3]
	1132		Corn n						6.0				
	1133		Corn g									3.1	
	1136	_		rn, oil-popped and salted	6	4.3	6.1		1.0				
	1137	Tononia 1 2 22	Cornfl		5	0.7			1.8			1.6	
	1139			grain, raw								3.6	
		Sorghum	Whole Whole	grain, raw	-		6.0	5.0				15.4	
	1142	Rye [Others]	Whole	Bran	<u> </u>		0.0	5.0 44.0		14.0		9.5	
		[Outers]	** IICat	Germ Bran				17.0	22.3	14.0			
				Flour, Type 405	<del>                                     </del>			1.5	22.3				
				Flour, Type 550	<b>-</b>			1.3					
				Flour, Type 630	<del>                                     </del>			2.0					
	1			Flour, Type 812	<u> </u>			2.9					
				Flour, Type 1050				2.9					
				Flour, Type 1700				8.3					
	1			Flour, enriched				3.5	5.0				
	1		Bread						2.0	1.9			
			Dieau	Whole wheat	1								

(Continued on page 113)

				Wheat whole-meal bread				3.5	3.0				
				Wheat (flour) bread			6.0	2.9					
				Wholemeal Graham			0.0	1.7					
				Crispbread				7.0					
			Oats	Rolled			19.0	7.0					
			Rice	Converted			17.0			8.0			
			race	Parboiled						10.0			
			Cereals, refined, cooked	Cornmeal, White						6.6			
			Cereal concentrates, raw	Rice, Bran						60.0			
			,	Rice, Polishings						57.0			
POTATOS	2001	<potatoes></potatoes>	Tuber,									3.7	
AND		Jerusalem-artichoke											
TARCHES	2002	Konjac	Fine p	owder								4.5	
	2004	, , , , , , , , , , , , , , , , , , ,	Block	Made from corm	97	0.1						0.1	
	2005		Noodl		96	0.4							
	2006	Sweet potatoes	Tuber	ous root, raw	67	3.5*		4.3		4.3		4.0	(4)
	2007	_	Tubero	ous root, steamed							1.5	4.8	
	2010	(Taros)	Satoimo	Corm, raw	79	2.1						3.1	
	2011			Corn, boiled								2.8	
	2012			Corm, frozen	81	2.9							
	2013		Mizuimo	Corn, raw								2.4	
	2014			Corn, boiled								2.1	
	2015		Yatsugashira	Corn, raw								3.1	
	2016			Corn, boiled								2.6	
	2017	Potatoes	Tuber,		73	1.8	0.5	0.4				0.4	
	2019			boiled					0.1			0.3	
	2020		Fried 1		64	0.6			0.1				
	2022	(Yams)	Chinese yam Ichoimo	Tuberous root, raw								2.6	<u> </u>
	2023		Chinese yam Nagaimo	Tuberous root, raw	84	2.2						2.2	
	2024			Tuberous root, boiled								1.6	
	2025		Chinese yam Yamatoimo									4.0	
	2026		Japanese yam	Tuberous root, raw								2.4	
	2027	-OTA DOLLEG 1375	White yam	Tuberous root, raw		2.				<b>.</b>		3.0	
	2034	<starches and<="" td=""><td></td><td>starch</td><td>17</td><td>2.9</td><td></td><td></td><td>0.1</td><td>ļ</td><td></td><td>C 1</td><td></td></starches>		starch	17	2.9			0.1	ļ		C 1	
	2035	STARCH PRODUCTS>	Corn s	tarch	13	0.0		6.6	-	<u> </u>		0.1	
	2020	(Starches)	II	Deschara I	10	0.5							
	2039	(Starch products)	Harusame:	Ryokuto-harusame, Dried, raw	12	0.5				<b> </b>		<b>—</b>	
	2040	(01)	starch noodles	Harusame, Dried, raw	14	0.1							
TICEDO	2001	(Others)	Potatoes	Baked	2	147			0.1			22.6	
SUGERS	3001	(Sugars)		sugar Iump	3	14.7 0.1						33.6	
AND	3003		Soft sugars	White Yellow	0								
SWEET-	3004		Hand on com	Granulated sugar	0	3.7 0.7						0.1	
ENERS	3016	(Starch sweeteners)	Hard sugars		18	0.7						0.1	
	3021	(Starch sweeteners)		ructose syrup	10	0.0						0.0	
	3022	(Others)	Honey		11	2.2				9.0		0.0	
	3022	(Others)	Maple		37	0.5				9.0		0.3	
PULSES	4001	Adzuki beans		e, dried, raw	14	10.1	_					9.6	
rULSES	4002	Adzuki ocalis		, dried, boiled	17	10.1						3.5	
	4003			, canned in syrup	45	1.4						3.5	
	4004		An : bean paste	Koshi-an	33	1.0							
	4005		The country public	Sarashi-an	- 55							7.4	
	4007	Kidney beans	Whole	, dried, raw	13	8.1						9.4	
	4008	1		, dried, boiled								3.8	
	4012	Peas		, dried, raw			34.0	19.0				16.0	
	4013		Whole	, dried, boiled					9.0			5.7	
	4014		Oil-ro	asted and salted			114.0		7.0				
	4017	Cowpeas	Whole	, dried, raw	9	10.0		7.5		21.0		11.1	
	4018	•		, dried, boiled								4.8	
	4019	Broad beans	Whole	, dried, raw								12.5	
	4020			asted and salted	4	7.3							
	4023		Whole beans	Domestic, dried, raw	13	21.9	60.0	60.0	3.0	61.0		28.5	
	4024	and its products]		Domestic, dried, boiled								11.1	
	4025			U.S.A., dried, raw								33.6	
	4026			China, dried, raw								32.6	
	4027			Brazil, dried, raw								32.9	
	4028			d in water	69	3.7				70.0			
	4029	FF-6141	Kinako	Whole bean type	10	32.4				70.0			
	4032	[Tofu and Abura-age]	Mome		85	5.0a			<b></b>			3.8	
	4033			oshi-tofu	89	5.0°				<u> </u>			
	4038		Yaki-te		85 39	2.5 4.2							
	4039		Nama-		43	2.4						-	
	4040		Abura Ganm		64	5.1			<b>!</b>	-		7.6	<del></del>
	4041		Kori-a		8	17.5			-			7.0	
	4042	-	Tofu-y		- 0	17.3	$\vdash$		-			4.2	
	4043	1	Tofu-chikuwa	Steamed type		1	$\vdash$		<b>.</b>			4.2	<del>                                     </del>
	4044	[Natto]	Itohiki		61	13.1			<b>.</b>			18.2	<del>                                     </del>
	4047	[		ari-natto	62	10.3						10.2	
	4048		Goto-i		32	10.5						14.7	
	4049		Tera-n						<del>                                     </del>			19.1	
	4051	[Others]	Okara	Modern product	78	2.9ª	$\vdash$					4.1	
	4052	,	Soy milk	Regular type	87	0.5ª	$\vdash$			1.4		3.9	
	4053	1		Reconstituted type	89	4.8				1.5			
	4059		Yuba	Wet type	75	3.5	$\vdash$		<del>                                     </del>			14.3	
	4060		- *****	Dried type	7	29.6			<b> </b>			17.5	
	4061		Kinza	ıji-miso		27.0						8.1	
	4061	1	Hishio		<b>—</b>	<b>—</b>			<b>—</b>			7.1	<del>                                     </del>
	4063		Tempe									19.9	
			, rempe							_	_		
	4064	Rice beans	Whole	, dried, raw					1	'		9.7	

[4] ; free biotin: 42.9%

(Continued on page 114)

	4066	I		Whole	dried, boiled	1	1			1	Ι	l	8.9	
	4068	Scarlet runner beans			dried, raw								8.4	
	4069				dried, boiled								3.0	
	4070				dried, raw						7.5		9.2	
	4071	Mung beans			dried, raw dried, boiled						7.5		11.2 3.3	
		Lentils			dried, raw	+					13.2		22.9	
	1075	Others	Beans	,, noic	White, dried			0.5			10.2		22.7	
					Brown, dried			0.5						
			Legumes		Split peas						18.4			
	5001	A 1 d -			Lima beans	1	22.0	0.4		3.0	9.8			
NATS AND SEEDS	5002	Almonds		Dried	sted and salted	2	32.9	0.4		48.1	18.0	4.4	61.6	
SEEDS	5003	Hemp seeds		Oried	sted and saited								27.3	
	5004			Dried					1.5				34.6	
	5005		(	Oil-roa	sted and salted	4	15.4			14.3			19.0	
	5006				d and salted								12.9	
	5008	Ginkgo nuts		Raw		58	6.0						2.5	
	5009	(Chestnuts)	Japanese chestn	Boiled	Raw	3	15.5			-			2.7 3.9	
	5010		Japanese chestii	iuts	Kanroni	56	0.9						3.9	
	5013	-	Chinese chestnu	ıts	Roasted	51	5.6						6.0	
	5014	Walnuts		Roaste		3	15.5	19.0		17.3	37.0	2.6		
	5015			Dried									47.1	
	5016				ıt powder	3	13.8	0.5**		0.7				[5]
	5017	Sesame seeds		Dried	1	4	5.3			10.7			11.7	
	5018 5019	-		Roaste Hulled		2	11.4			10.7	_		10.6	
	5019	Watermelon seeds			d and salted								9.1	
	5024				, dried	1							26.9	
	5025			Raw									11.3	
	5026		F	Roaste	d and salted	8	27.4			32.0				
	5027				sted and salted					68.7		7.8	80.1	
	5028				sted and salted	-		2.0		9.2			01.0	
	5029				sted and salted sted and salted	+		2.0		<b>├</b>	27.0	2.0	81.8	
	5030	Macadamia nuts			d and salted	5	3.8		34.0		27.0	2.0	6.5	
	5034			Dried	d und suited		3.0		51.0				92.3	
	5035	1		Roaste	d	2	81.0			82.0	34.0	17.5	7 - 10	
	5036		(	Oil-roa	sted and salted	4	81.0			91.1	39.0		95.6	
	5037				butter					39				
		Others			ut, raw			1.3						
VEGETA-	6003	Asatsuki		Leave		93	2.6	0.4	2.0	0.8	1.7		1.8	
BLES	6007	Asparagus		Shoots	, raw , boiled	93	3.6 2.0	0.2	2.0	0.8	1./		1.8	
	6009	-			l in brine	73	2.0	0.2	1.7					
	6010	Kidney beans	Sayaingen	cumic	Immature pods, raw	92	4.9	0.7	7.0		1.3		3.9	
	6011	1			Immature pods, boiled	91	4.6	0.5*						[6]
	6012		Udo		Stem, raw								0.5	
	6015	Edamame		Raw		76	6.0						11.1	
	6017	(D)		rozen		69	4.2						9.2	
	6020	(Peas)	Sayaendo Spop poos		Immature pods, raw Immature pods, raw	91	5.3						5.1	
	6023	-	Snap peas Green peas		Raw	71	3.3	3.0	5.3	0.5	9.4		6.3	
	6025		Green peas		Frozen	74	2.5	0.7					6.0	
	6026	1			Canned in brine				1.5		2.1			
	6032	Okra		Pods, 1		91	1.3					0.0	6.0	
	6034	Turnip		Leaves		94	1.9	0.1	2.0				2.7	
	6035	-			, boiled vith skin, raw	94	1.0	0.1	0.1		-			
	6037	1			vith skin, raw vith skin, boiled	93	1.1	0.1	0.1	0.1				
	6038	1			vith skin, bolicu vithout skin, raw								1.0	
	6043	]	Pickles Nukamisa		Leaves	90	0.9							
	6044		1		Root with skin	89	1.0							
	6046	(Pumpkins and squashes			Fruit, raw	77	0.9	0.4	0.1	1			1.7	
	6048	-	European pump	K1n	Fruit, raw	78	1.1	0.4 0.4*	0.4	1.7			1.7	[7]
	6054	Cauliflower	Т.	nflore	Fruit, boiled scence, raw	92	10.0	1.5	1.5	7.5	17.0	-	8.5	[7]
	6056			Raw		25	2.2	1	1.0	1.5	17.0	0.2	8.0	
	6061		Cabbage		Head, raw	93	2.2	1.2	3.1	0.8	2.4	U.2	1.6	
	6062	]			Head, boiled	96	1.6			0.2			1.2	
	6064		Red cabbage		Head, raw	94	1.7	0.1	2.0	0.9				
	6065	Cucumber		ruit, r		95	1.9ª	0.4	0.9	0.2			1.4	
	6066	Cucumber Pickles			pickles iso-zuke	94	0.4					-	1.2	
1	6069	1	Pickles	чикит	Sweet type	94	1.5	0.4					1.2	
		1	1 ickies		Sour type	79	0.3	0.4						
	6070		1	Leaves		1							3.1	
		Kyona	1			94	3.5	0.4					4.0	
	6070 6072 6077	Watercress	S		and leaves, raw			_						
	6070 6072 6077 6078	Watercress Arrowhead	S	Гuber,	raw	66	10.9	26.6					7.2	
	6070 6072 6077 6078 6080	Watercress Arrowhead Kale	S T I	Fuber, Leaves	raw , raw	66		36.0	0.5				4.0	
	6070 6072 6077 6078 6080 6084	Watercress Arrowhead Kale	S T I	Fuber, Leaves Root, r	raw , raw aw	81	2.2	36.0	0.5					
	6070 6072 6077 6078 6080 6084 6085	Watercress Arrowhead Kale Edible burdock	S T L F	Fuber, Leaves Root, r Root, l	raw , raw aw ooiled	66 81 90	2.2	36.0	0.5				4.0 1.3	
	6070 6072 6077 6078 6080 6084 6085 6086	Watercress Arrowhead Kale Edible burdock	S T I F F	Fuber, Leaves Root, r Root, t Leaves	raw , raw aw poiled , raw	81	2.2 0.9 1.1	36.0	0.5				4.0	
	6070 6072 6077 6078 6080 6084 6085	Watercress Arrowhead Kale Edible burdock  Komatsuna	S S T I I I I I I I I I I I I I I I I I	Fuber, Leaves Root, r Root, t Leaves	raw , raw aw ooiled , raw , boiled	81 90 95	2.2	36.0	0.5				4.0 1.3	
	6070 6072 6077 6078 6080 6084 6085 6086 6087 6093	Watercress Arrowhead Kale Edible burdock  Komatsuna Sweet peppers	S S T T I I I I I I I I I I I I I I I I	Fuber, Leaves Root, 1 Root, b Leaves	raw , raw aw boiled , raw , boiled aw	81 90 95 96 92	2.2 0.9 1.1 0.6 2.7	36.0	0.5				4.0 1.3 2.9 4.2 3.7	
	6070 6072 6077 6078 6080 6084 6085 6086 6087 6093 6094 6095	Watercress Arrowhead Kale Edible burdock  Komatsuna Sweet peppers Perilla	S S T T L L L L L L L L L L L L L L L L	Tuber, Leaves Root, r Root, t Leaves Fruit, r Fruit, s Leaves	raw , raw aw soiled , raw , boiled aw aw auted , raw	81 90 95 96 92	2.2 0.9 1.1 0.6 2.7	36.0	0.5				4.0 1.3 2.9 4.2 3.7 5.1	
	6070 6072 6077 6078 6080 6084 6085 6086 6087 6093	Watercress Arrowhead Kale Edible burdock  Komatsuna  Sweet peppers  Perilla	S S T T I I I I I I I I I I I I I I I I	Tuber, Leaves Root, I Root, I Root, I Leaves Fruit, I Fruit, s Leaves Leaves	raw , raw aw soiled , raw , boiled aw aw auted , raw	81 90 95 96 92	2.2 0.9 1.1 0.6 2.7	36.0	0.5				4.0 1.3 2.9 4.2 3.7	

	(Gingers)	Ginger	Rhizome, raw	93	1.6						0.7	L
6105	0: 11:11: 1	Ginger Pickles	Pickles, sweetened								0.2	
	Oriental pickling melon	Fruit,			2.0						1.3	
	Oriental pickling melon pickles	Nara-		64	2.0						_	1
	Zucchini	Fruit,		0.6		0.4	0.4	0.5			2.7	_
	Celery	Petiole		96	1.7	0.1	0.1	0.5			1.2	_
	Royal fern	Nama-zenmai	Young shoots, boiled	94	2.2	L		$\sqcup$				_
6124	Broad beans		ure beans, raw								6.9	1
6128	(Daikon: Japanese radishes)	Kaiware-daikon	Young stems and leaves, raw	94	5.7						5.6	
6132		Daikon	Root with skin, raw	94	0.3						0.3	
6133			Root with skin, boiled	98	0.0							
6134			Root without skin, raw								0.3	
6135			Root without skin, boiled								0.3	
6136			shi-daikon	30	1.7						5.4	
6137			s Nukamisoo-zuke	90	0.3							
6138		Pickles Takuan-zuke		90	0.1						0.4	
6143			in-zuke								1.1	
6147	Takana: broad leaf mustard	Leave	s, raw								2.1	
6149	Bamboo shoots	Shoots	s, raw								0.8	
6151		Canne	d in water	91	0.6						0.8	
6153	(Onions)	Onions	Bulb, raw	90	1.7	0.9	3.5	0.8	3.5		0.6	
6154			Bulb, leached in water	93	1.6							
6155			Bulb, boiled	95	0.9			0.9			0.5	П
6156	<u> </u>	Red onions	Bulb, raw	88	0.6							
	Japanese angelica-tree	Spears									6.7	Т
	Chicory	Spears				0.7	4.8				1.1	
	Qing gin cai	Leave		95	1.0						1.3	
6161	1		s, boiled	97	0.4							$\top$
	Red peppers	Fruit,		8	84.0							
	Wax gourd	Fruit,		97	1.3						0.2	t
	(Corns)	Sweet corn	Immature kernels, raw	- '	1			6.0	6.0		5.4	$\vdash$
6176	1		Immature kernels, boiled						2.2		5.7	$\vdash$
6177	1		Immature kernels on cob. frozen		<b>_</b>	0.5			2.2			+
6178	1		Immature kernels, frozen	76	2.3	0.5						+
6179	1	Sweet corn canned	Cream style	,,,	2.3	<del>                                     </del>		$\vdash$	0.7			+
6180	1	products	Whole kernel style	74	1.0	0.5		$\vdash$	0.7	0.1		+
6181	1	Young sweet corn	Young ear, raw	/+	1.0	0.5		$\vdash$	$\vdash$	J.1		$\vdash$
	(Tomatoes)	Tomatoes	Fruit, raw	95	1.7*	1.5	4.0	1.3	4.0	0.7	2.3	16
6183	(1011111003)	Cherry tomatoes	Fruit, raw Fruit, raw	93	1.7	1.3	4.0	1.3	4.0	0.7		[8
6184	-	Canned products	Whole	92	1./	<del>                                     </del>		1.8	1.8		3.6	$\vdash$
	-	Callied products		05	2.4	1.5	2.5	1.0	1.0		4.0	⊢
6185	(Eggnlants)	Egoplant	Juice Ervit row	95 93	2.4	1.5	2.5	2.0			4.2	$\vdash$
	(Eggplants)	Eggplant	Fruit, raw		2.2	-		2.8			2.3	1
6192	1	Dialdas	Fruit, boiled	95	1.8	<b>_</b>						$\vdash$
6196	(Popos)	Pickles	Nukamisoo-zuke	90	0.8	<b> </b>					10 -	_
	(Rapes) Bitter gourd	Turnip rape	Flower buds and stems, raw	0.4	0.5	<b>-</b>					12.2	$\vdash$
		Fruit,		94 93	0.5	-		$\vdash$			0.5	$\vdash$
	(Chinese chives)	Chinese chive	Leaves, raw		0.8	2.4	5.0	27	2.5		2.1	10
	(Carrots)	Carrot, regular	Root with skin, raw	89 94	2.6*	3.4	5.0	2.7	2.5	0.6		[9
6213			Root with skin, boiled	94	1.2			1.5	1.5	0.6		1
6214			Root without skin, raw								2.8	1
			Root without skin, boiled		1						2.8	
6215			T 1	0.2	2.0						2.0	
6217	-	W: . I:	Juice, canned	93	3.0						2.0	
6217 6218		Kintoki	Root with skin, raw	87	4.3						2.0	
6217	Othor		Root with skin, raw Root with skin, boiled				1.5				2.0	
6217 6218 6219	Other (Carline)	Carrots	Root with skin, raw Root with skin, boiled Canned	87 88	4.3 3.1		1.5	10				
6217 6218 6219 6223	(Garlics)	Carrots Garlic	Root with skin, raw Root with skin, boiled Canned Bulb, raw	87 88 59	4.3 3.1		1.5	1.8			1.9	
6217 6218 6219 6223 6226		Carrots Garlic Nebuka-negi	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw	87 88 59 91	4.3 3.1 1.2 0.6		1.5	1.8			1.9	
6217 6218 6219 6223 6226 6227	(Garlics) (Welsh onions)	Carrots Garlic Nebuka-negi Ha-negi	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw	87 88 59	4.3 3.1		1.5	1.8			1.9 0.8 1.7	
6217 6218 6219 6223 6226 6227 6229	(Garlics) (Welsh onions) Nozawana	Carrots Garlic Nebuka-negi Ha-negi Leave	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw	87 88 59 91 91	4.3 3.1 1.2 0.6 2.3		1.5	1.8			1.9 0.8 1.7 1.4	
6217 6218 6219 6223 6226 6227 6229 6233	(Garlics) (Welsh onions)	Carrots Garlic Nebuka-negi Ha-negi Leave Head,	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw raw	87 88 59 91 91	4.3 3.1 1.2 0.6 2.3		1.5	1.8			1.9 0.8 1.7	
6217 6218 6219 6223 6226 6227 6229 6233 6234	(Garlics) (Welsh onions)  Nozawana Chinese cabbage	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head,	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw so, raw boiled	87 88 59 91 91 96 96	4.3 3.1 1.2 0.6 2.3 2.7 1.4		1.5	1.8			1.9 0.8 1.7 1.4	
6217 6218 6219 6223 6226 6227 6229 6233 6234 6235	(Garlics) (Welsh onions) Nozawana	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles	87 88 59 91 91 96 96 94	4.3 3.1 1.2 0.6 2.3 2.7 1.4 0.0		1.5	1.8			1.9 0.8 1.7 1.4	
6217 6218 6219 6223 6226 6227 6229 6233 6234 6235 6236	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw solid pickles hee	87 88 59 91 91 96 96	4.3 3.1 1.2 0.6 2.3 2.7 1.4		1.5	1.8			1.9 0.8 1.7 1.4	
6217 6218 6219 6223 6226 6227 6229 6233 6234 6235 6236 6237	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw sraw boiled pickles hee s, raw	87 88 59 91 91 96 96 94 83	1.2 0.6 2.3 2.7 1.4 0.0 0.4			1.8			1.9 0.8 1.7 1.4	
6217 6218 6219 6223 6226 6227 6229 6233 6234 6235 6236 6237 6238	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Salted Kim c Leave Leave	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw	87 88 59 91 91 96 96 94 83	1.2 0.6 2.3 2.7 1.4 0.0 0.4	0.4	0.4				1.9 0.8 1.7 1.4 1.4	
6217 6218 6219 6223 6226 6227 6229 6233 6234 6235 6236 6237 6238 6239	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw poiled pickles hee s, raw s, raw s, raw s, raw	87 88 59 91 91 96 96 94 83	4.3 3.1 1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0	0.4		3.7			1.9 0.8 1.7 1.4	
6217 6218 6219 6223 6226 6227 6229 6233 6234 6235 6236 6237 6238 6239 6240	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root,	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw raw boiled piickles hee s, raw s, raw s, raw s, raw s, raw s, raw	87 88 59 91 91 96 96 94 83	1.2 0.6 2.3 2.7 1.4 0.0 0.4	0.4			1.9		1.9 0.8 1.7 1.4 1.4	
6217 6218 6219 6223 6226 6227 6229 6233 6234 6235 6236 6237 6238 6239 6240 6243	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Root,	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw raw boiled pickles hee s, raw s, raw s, raw s, raw s, raw raw	87 88 59 91 91 96 96 94 83	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2	0.4			1.9		1.9 0.8 1.7 1.4 1.4	
6217 6218 6219 6223 6226 6227 6229 6233 6234 6235 6236 6237 6238 6239 6240 6243	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Root,	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw s, raw s, raw s, raw fraw s, raw s, raw s, raw	87 88 59 91 91 96 96 94 83	4.3 3.1 1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0	0.4			1.9		1.9 0.8 1.7 1.4 1.4 2.6 4.1	
6217 6218 6219 6223 6226 6227 6229 6233 6234 6235 6236 6237 6238 6239 6240 6243 6245	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Root, Green sweet pepper	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw s, raw Fruit, raw Fruit, sauted	87 88 59 91 91 96 96 94 83 90 88 96	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2	0.4			1.9		1.9 0.8 1.7 1.4 1.4	
6217 6218 6219 6223 6226 6227 6229 6233 6234 6235 6236 6237 6238 6240 6240 6245 6246 6247	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Green sweet pepper	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw raw boiled pickles hee s, raw s, raw s, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw	87 88 59 91 91 96 96 94 83 90 88 96	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a	0.4			1.9		1.9 0.8 1.7 1.4 1.4 2.6 4.1	
6217 6218 6219 6223 6226 6227 6229 6233 6234 6235 6236 6236 6237 6248 6240 6243 6245 6246 6247 6249	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Salted Kim c Leave Leave Leave Root, Green sweet pepper Yellow sweet pepper	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw s, raw Fruit, raw	87 88 59 91 91 96 96 94 83 90 88 96	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2	0.4			1.9		1.9 0.8 1.7 1.4 1.4 2.6 4.1	
6217 6218 6219 6223 6226 6227 6229 6234 6235 6236 6237 6238 6239 6240 6243 6245 6245	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw s, raw raw Fruit, raw Fruit, sauted Fruit, raw Fruit, raw Fruit, raw Fruit, raw s, raw s, raw	87 88 59 91 91 96 96 94 83 90 88 96 95	2.7 1.4 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a	0.4			1.9		1.9 0.8 1.7 1.4 1.4 2.6 4.1	
6217 6218 6219 6223 6226 6227 6229 6233 6236 6234 6235 6236 6240 6243 6245 6244 6245 6245 6249 6249	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Salted Kim c Leave Leave Leave Root, Green sweet pepper Yellow sweet pepper	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw raw boiled piickles hee s, raw s, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Petiole, raw	87 88 59 91 91 96 96 94 83 90 88 96 95 92	2.7 1.4 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.5		0.4		1.9		1.9 0.8 1.7 1.4 1.4 2.6 4.1	
6217 6218 6219 6223 6226 6227 6223 6234 6235 6236 6237 6238 6239 6240 6243 6245 6247 6249 6255 6256	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Agoot, Green sweet pepper Yellow sweet pepper Leave Japanese butterbur	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw s, raw s, raw Fruit, raw	87 88 59 91 91 96 96 94 83 90 88 96 92 93	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.5 1.3	0.4		3.7	1.9	0.9	1.9 0.8 1.7 1.4 1.4 2.6 4.1 2.6 1.9	
6217 6218 6219 6223 6226 6227 6233 6234 6235 6236 6237 6238 6240 6245 6246 6247 6249 6254 6254 6254 6255 6256	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Leave Japanese butterbur	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw s, raw raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw s, raw s, raw s, raw Petiole, raw Petiole, boiled sscence, raw	87 88 59 91 91 96 96 94 83 90 88 96 95 92 93	4.3 3.1 1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.5 1.3	0.5	0.4			0.9	1.9 0.8 1.7 1.4 1.4 2.6 4.1	
6217 6218 6219 6223 6226 6227 6233 6234 6235 6236 6237 6238 6239 6240 6243 6245 6245 6246 6247 6254 6254 6254 6254 6256 6256	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Yellow sweet pepper Leave Leave Leave Root, Inflore Inflore	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, saw s, raw boiled pickles hee s, raw s, raw s, raw Fruit, raw	87 88 59 91 91 96 96 94 83 90 88 95 92 93	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.5 1.3 0.7 0.5 0.5 1.3		0.4	3.7	6.9	0.9	1.9 0.8 1.7 1.4 1.4 2.6 4.1 2.6 1.9	
6217 6218 6229 6226 6226 6227 6229 6233 6234 6235 6236 6237 6238 6240 6243 6245 6246 6247 6249 6254 6254 6254 6254 6254 6254 6254 6254	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Green sweet pepper Yellow sweet pepper Leave Japanese butterbur Inflore Leave Leave	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, saw s, raw s, raw boiled pickles hee s, raw s, raw s, raw Fruit, raw	87 88 59 91 91 96 96 94 83 90 92 93 92 93 88 92 93 87	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.5 1.3 1.7 0.7 6.5 4.0	0.5	0.4	3.7			1.9 0.8 1.7 1.4 1.4 2.6 4.1 2.6 1.9	
6217 6218 6219 6223 6226 6227 6233 6234 6235 6236 6237 6238 6239 6240 6243 6245 6245 6246 6247 6254 6254 6254 6254 6256 6256	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Green sweet pepper Yellow sweet pepper Leave Japanese butterbur Inflore Leave Leave	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, saw s, raw boiled pickles hee s, raw s, raw s, raw Fruit, raw	87 88 59 91 91 96 96 94 83 90 88 95 92 93	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.5 1.3 0.7 0.5 0.5 1.3	0.5	0.4	3.7	6.9	0.9	1.9 0.8 1.7 1.4 1.4 2.6 4.1 1.6 1.9 9.3	
6217 6218 6229 6223 6226 6227 6229 6233 6234 6235 6236 6237 6246 6247 6249 6245 6246 6247 6254 6254 6256 6257 6256 6257 6258 6258	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)  Broccoli Spinach	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Leave Japanese butterbur Inflore Leave Leave	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, saw s, raw s, raw boiled pickles hee s, raw s, raw s, raw Fruit, raw	87 88 59 91 91 96 96 94 83 90 92 93 92 93 88 92 93 87	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.5 1.3 1.7 0.7 6.5 4.0	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 1.4 2.6 4.1 2.6 1.9 9.3 2.9	
6217 6218 6229 6223 6226 6227 6229 6233 6234 6235 6236 6237 6246 6247 6249 6245 6246 6247 6254 6254 6256 6257 6256 6257 6258 6258	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Yellow sweet pepper Leave Japanese butterbur Inflore Leave Leave Leave Leave Leave Leave Leave Leave Leave	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw s, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw s, raw petiole, boiled secence, raw secence, boiled s, raw s, raw	87 88 59 91 91 96 96 94 83 90 88 96 92 92 97 86 92 87 91	1.2 0.6 2.3 2.7 1.4 0.0 0.0 0.0 0.4 2.5 6.0 4.2 1.1a 1.7 0.7 6.5 3.2 2.6	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 2.6 4.1 1.6 1.9 2.2 0.2 9.3 2.9 3.2	
6217 6218 6229 6223 6226 6227 6229 6233 6234 6235 6236 6237 6246 6247 6249 6245 6246 6247 6254 6254 6256 6257 6256 6257 6258 6258	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)  Broccoli Spinach	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Yellow sweet pepper Leave Japanese butterbur Inflore Leave Leave Leave Leave Leave Leave Leave Leave Leave	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw s, raw Fruit, raw Fruit, sauted Fruit, raw Fruit, raw Fruit, raw Fruit, raw s, raw s, raw s, raw secence, raw secence, soiled s, frozen	87 88 59 91 91 96 96 94 83 90 88 96 92 92 97 86 92 87 91	1.2 0.6 2.3 2.7 1.4 0.0 0.0 0.4 2.5 6.0 4.2 1.1a 1.7 0.7 6.5 3.2 2.6	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 1.4 2.6 4.1 2.6 1.9 9.3 2.9	
6217 6218 6229 6223 6226 6237 6234 6235 6236 6237 6243 6245 6247 6249 6254 6256 6266 6267 6268 6268 6269 6269	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)  Broccoli Spinach  Horseradish	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Yellow sweet pepper Leave Japanese butterbur Inflore Leave Leave Leave Leave Leave Rhizoi	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw Fruit, raw s, raw Petiole, poiled escence, raw seence, coiled s, raw s, s, raw Leaves, raw	87 88 59 91 91 96 94 83 90 88 99 92 93 92 97 86 92 92 97 99 91	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.7 0.7 6.5 3.2 2.6 3.3	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 1.6 1.9 2.2 0.2 2.9 3.2 5.5	
6217 6218 6229 6227 6229 6227 6229 6233 6234 6235 6236 6237 6240 6240 6244 6246 6254 6256 6257 6268 6269 6274 6268 6269 6274 6275	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)  Broccoli Spinach  Horseradish	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Leave Japanese butterbur Inflore Leave	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw raw boiled pickles hee s, raw s, raw s, raw raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw s, raw s, raw s, raw s, raw s, raw fruit, souted Fruit, raw s, raw s, raw s, raw Fruit, raw Fruit, raw s, raw s, raw s, raw s, raw s, raw Fruit, raw Fruit, raw s, raw Leaves, boiled Leaves, taw Leaves, boiled	87 88 59 91 91 96 96 94 83 90 88 96 92 92 97 86 92 92 97 87 91	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.5 1.3 2.7 0.7 6.5 2.3 3.3	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 1.4 2.6 4.1 2.2 0.2 9.3 2.9 3.2 5.5 1.9	
6217 6218 6229 6229 6235 6236 6237 6236 6237 6238 6239 6240 6243 6245 6246 6247 6246 6257 6266 6269 6270 6267 6274 6274 6274 6274 6274 6274 6274	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)  Broccoli Spinach  Horseradish (Mitsuba) (Japanese gingers)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Yellow sweet pepper Inflore Leave Leave Leave Leave Kiri-mitsuba Myoga	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw s, raw boiled pickles hee s, raw s, raw raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Fruit, en w Fruit, raw	87 88 59 91 91 96 96 94 83 99 92 93 97 86 92 92 97 99 99 99 99 99 99 99 99 99 99 99 99	1.2 0.6 2.3 2.7 1.4 0.0 0.0 0.4 2.5 6.0 4.2 1.1a 1.5 1.3 3.2 4.0 0.7 6.5 3.2 4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 1.6 1.9 2.2 0.2 2.9 3.2 5.5	
6217 6218 6229 6226 6227 6229 6234 6235 6236 6237 6248 6247 6249 6256 6267 6268 6269 6269 6270 6270 6270 6270 6272 6272 6273	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)  Broccoli Spinach  Horseradish (Mitsuba)  Uapanese gingers) Brussels sprouts	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Leave Japanese butterbur Inflore Leave Leave Leave Moot, Kiri-mitsuba Myoga Head,	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw Fruit, raw Leaves, boiled Spike, raw Faw	87 88 59 91 91 96 96 94 83 99 92 93 97 86 92 92 97 99 99 99 99 99 99 99 99 99 99 99 99	1.2 0.6 2.3 2.7 1.4 0.0 0.0 0.4 2.5 6.0 4.2 1.1a 1.5 1.3 3.2 4.0 0.7 6.5 3.2 4.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 1.6 1.9 2.2 0.2 2.9 3.2 5.5 1.9	
6217 6218 6229 6227 6229 6227 6229 6233 6234 6235 6236 6237 6238 6240 6240 6246 6254 6256 6257 6266 6269 6274 6268 6269 6274 6268 6275 6288 6288 6288 6288	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)  Broccoli Spinach  Horseradish (Mitsuba) (Japanese gingers)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Leave Japanese butterbur Inflore Leave Leave Leave Alfalfa sprouts	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw s, raw boiled pickles hee s, raw s, raw s, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw s, raw s, raw s, raw s, raw s, raw s, raw Fruit, raw Fruit, raw s, raw petiole, raw Petiole, poiled scence, boiled scence, boiled s, frozen me, raw Leaves, raw Leaves, raw Leaves, raw Raw	87 88 59 91 96 96 96 98 88 96 92 92 87 97 99 99 99 99 99 99 99 99 99	1.2 0.6 2.3 2.7 1.4 0.0 0.0 0.4 2.5 6.0 4.2 1.1a 1.5 1.7 6.5 3.2 4.0 0.0 0.0 0.0 1.1 1.1 1.1 1.1 1	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 1.4 2.6 4.1 2.2 0.2 9.3 2.9 3.2 5.5 1.9	
6217 6218 6229 6229 6234 6235 6236 6237 6238 6239 6239 6230 6237 6238 6239 6240 6243 6245 6246 6247 6254 6256 6267 6268 6269 6270 6270 6270 6270 6288 6288 6288 6288 6288 6288 6288	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)  Broccoli Spinach  Horseradish (Mitsuba)  Uapanese gingers) Brussels sprouts	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Yellow sweet pepper Leave Leave Leave Leave Kim c Leave Root, Kim c Leave Root, Root, Green sweet pepper Yellow sweet pepper Yellow sweet pepper Ked sweet pepper Leave Leave Leave Leave Leave Rhizot Kiri-mitsuba Myoga Head, Alfalfa sprouts	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw s, raw boiled pickles hee s, raw s, raw s, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Fruit, raw Fruit, eaw Fruit, raw Fruit,	87 88 59 91 96 96 94 83 90 88 99 95 92 93 97 96 99 99 99 99 99 99 99 99 99 99 99 99	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.5 1.3 1.7 0.7 6.5 2.6 2.3 1.4 0.0 0.4 1.5 1.5 1.3 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 1.4 2.6 4.1 2.2 0.2 2.9 3.2 2.9 3.2 1.9	
6217 6218 6229 6226 6227 6229 6233 6236 6236 6237 6238 6239 6240 6247 6256 6257 6266 6267 6268 6269 6270 6270 6270 6270 6274 6274 6275 6276 6278 6278 6278 6278 6278 6278 6278	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)  Broccoli Spinach  Horseradish (Mitsuba)  Uapanese gingers) Brussels sprouts (Bean sprouts)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Yellow sweet pepper Leave Leave Leave Leave Leave Roit, Green sweet pepper Leave Japanese butterbur Inflore Leave Leave Leave Leave Leave Leave Alfalfa sprouts Soybean sprouts	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw s, raw Fruit, raw Leaves, boiled s, raw s, raw Leaves, raw Leaves, boiled Spike, raw Leaves, boiled Spike, raw Leaves, boiled Spike, raw R	87 88 59 91 91 96 96 98 88 96 99 92 93 97 86 99 99 99 99 99 99 99 99 99 99 99 99 99	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.7 0.7 6.5 3.2 1.9 0.6 1.9 0.0 1.10	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 1.6 1.9 2.2 0.2 2.9 3.2 5.5 1.9 1.1	
6217 6218 6229 6227 6229 6223 6234 6235 6236 6237 6238 6234 6235 6240 6240 6244 6246 6254 6256 6257 6268 6269 6274 6268 6274 6275 6288 6288 6289 6288 6288 6288 6288 6288	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)  Broccoli Spinach  Horseradish (Mitsuba) (Japanese gingers) Brussels sprouts (Bean sprouts)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Leave Japanese butterbur Inflore Leave Leave Airoid Myoga Head, Alfalfa sprouts Mung bean sprouts Stems	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw Fruit, raw s, raw s, raw Leaves, raw Leaves, raw R	87 88 59 91 96 96 94 83 90 88 99 95 92 93 97 96 99 99 99 99 99 99 99 99 99 99 99 99	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.5 1.3 1.7 0.7 6.5 2.6 2.3 1.4 0.0 0.4 1.5 1.5 1.3 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 1.4 2.6 4.1 2.2 0.2 9.3 3.2 5.5 1.9 1.1 4.4	
6217 6218 6229 6229 6235 6236 6237 6236 6237 6238 6239 6240 6243 6245 6246 6247 6246 6256 6267 6266 6269 6270 6270 6270 6288 6289 6280 6280 6280 6280 6280 6280 6280 6280	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs) Broccoli Spinach  Horseradish (Mitsuba) (Japanese gingers) Brussels sprouts (Bean sprouts)  Tossa jute Lily bulb	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Yellow sweet pepper Leave Leave Leave Leave Japanese butterbur Inflore Leave Leave Leave Soti, Myoga Head, Alfalfa sprouts Soybean sprouts Mung bean sprouts Bulb,	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw s, raw boiled pickles hee s, raw s, raw s, raw Fruit, sauted Fruit, raw Petiole, boiled scence, raw scence, boiled s, raw Leaves, boiled s, frozen me, raw Leaves, raw Leaves, raw Leaves, raw R	87 88 59 91 91 96 96 98 88 96 99 92 93 97 86 99 99 99 99 99 99 99 99 99 99 99 99 99	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.7 0.7 6.5 3.2 1.9 0.6 1.9 0.0 1.10	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 1.4 4.1 2.6 4.1 1.9 9.3 2.9 3.2 5.5 1.9 1.1 4.4 4.1	
6217 6218 6229 6226 6227 6229 6233 6236 6237 6238 6239 6240 6241 6247 6249 6254 6256 6266 6267 6266 6270 6270 6274 6274 6274 6274 6274 6274 6274 6274	(Garlics) (Welsh onions)  Nozawana Chinese cabbage Chinese cabbage Pickles Bai cai Basil Parsley Radish Table beet (Sweet peppers)  Hiroshimana (Japanese butterburs)  Broccoli Spinach  Horseradish (Mitsuba) (Japanese gingers) Brussels sprouts (Bean sprouts)	Carrots Garlic Nebuka-negi Ha-negi Leave Head, Head, Salted Kim c Leave Leave Root, Root, Green sweet pepper Yellow sweet pepper Yellow sweet pepper Leave Leave Leave Leave Japanese butterbur Inflore Leave Leave Leave Soti, Myoga Head, Alfalfa sprouts Soybean sprouts Mung bean sprouts Bulb,	Root with skin, raw Root with skin, boiled Canned Bulb, raw Leaves, blanched, raw Leaves, raw s, raw boiled pickles hee s, raw s, raw Fruit, raw s, raw s, raw Leaves, raw Leaves, raw R	87 88 59 91 91 96 96 98 88 96 99 92 93 97 86 99 99 99 99 99 99 99 99 99 99 99 99 99	1.2 0.6 2.3 2.7 1.4 0.0 0.4 2.5 6.0 4.2 1.1a 1.7 0.7 6.5 3.2 1.9 0.6 1.9 0.0 1.10	0.5	0.4	3.7	6.9		1.9 0.8 1.7 1.4 1.4 1.4 2.6 4.1 2.2 0.2 9.3 3.2 5.5 1.9 1.1 4.4	

[8] ; free biotin: 70.0%,  $\;$  [9] ; free biotin: 40.5%

## International Journal of Analytical Bio-Science

Cold   Color		Leeks		and leaves, raw			1.4						
Still	6309	<i>a</i>			0.5		0.5	1.6	0.0	2.4			
State   Stat		(Lettuces)			95	2.3ª	0.7	1.9	0.3	3.1		1.2	
G637   Turke one locks												2.9	
Col.   Direct	6315		Red-tip leaf lettuce	Leaves, raw	94	5.7							
Color   Colo	6317	East Indian lotus root	Rhizor	me, raw	78							2.9	
Chicago													
Others												2.5	-
Savoy cabbage	0322				80	1.3	0.4					3.5	
White cabbugs		Others	Cabbage				0.1						
Paramip.raw				Savoy cabbage				0.1					
Paramip.raw				White cabbage			1.2						
No.   Principle   Principle			Parsni	p. raw			0.1	0.1*					[10
Fined   Lewes, raw								0.1					[11
Cheroil							0.4	2.5%					
No.   Accretas   Raw								2.5**					[12
Total   Accordas   Raw							1.6**						[13
1096   1096			Onion	Dried				28.0≋					[14
1000   1000	7003	Acerolas	Raw					2.5					
Topicon   Property		1	10% f	ruit iuice beverage	90	0.3							
Topic		Avocados					3.2	10.0		5.5	1.0	5.3	_
Total   Tota					- ' '	4.5	3.2	10.0		5.5	1.0	0.5	-
Policy   Strawkerries   Name   Strawkerries   Name   Strawkerries   Name   Strawkerries   Name   Strawkerries   Name		Apricois				<u> </u>	1.0			_		0.5	-
Fig.   Figs													ļ
Total   Figs					87	2.2	1.1	4.0	4.0*	4.0	1.5	0.8	[15]
Post	7013	Strawberries Jam	Heavil	ly sweetened								0.4	
Post	7014	1			51	0.7							
Post		Figs		,					$\vdash$			0.4	1
					- 5-	0.0	1.0		-			0.7	+
Total   Mume: Japanese apricosts   Total   Salled pickles   So   So   So   So   So   So   So   S		Luchan			07	0.0	1.0		$\vdash$			<b>—</b>	-
Topic   Satsuma mandarins   Satsuma mandarins   Segments   Normal ripering type, raw				sacs	87	0.8							_
Total   Statima mandarins   Segments   Normal riporing type, raw		Mume: Japanese apricots			_	⊥_ ¯			╙			0.5	_
Total	7022		Umeboshi	Salted pickles	80	2.0						0.7	
Top   First place   Straight fruit pince   First place   Straight fruit pince   First place   Straight fruit pla	7027	Satsuma mandarins			87							0.5	
Protect   prot		1		Normal rinening type, raw		1			$\vdash$			0.4	1
		1			<del></del>	+			$\vdash$			0.4	1
Navel   Valencia   Juice sees, raw   88   0.6		-			0.7	1			$\vdash$			0.5	1
Valencia   Valencia   Valencia   Suice sacs, raw   87   0.7   0.9   2.3   1.0   1.9   0.1		(0)											1
		(Oranges)	Navel	Juice sacs, raw		0.6						0.6	
Valencia Fruit Juice   Reconstituted fruit juice   Recon	7041	1	Valencia	Juice sacs, raw	87		0.9	2.3	1.0	1.9	0.1	0.9	
		1				1							
Today   Valencia Marmalade   Lightly sweetend   40   0.3		1			90	1.4	0.0		0.8		0.4	<b>—</b>	+
Nonastringent, raw   Nonastr		1	Volencie M 1				0.9	0.0	0.0	0.5	0.4	<b>—</b>	1
Astringency removed, raw		77.1.1											_
Dried		Kaki: Japanese persimmon			80	1.4			╙			2.0	_
Dried	7050	1	Astrin	gency removed, raw								1.1	
Total   Cleasters		1			24	3.4							
Total   Comparison   Comparis		Kiwifruit										1.4	1
Description					6.5	1.4		2.2	$\vdash$			1.4	1
Protit juices						-							-
Reconstituted fruit juice		Grapetruit			89	0.9	1.0					0.5	
Reconstituted fruit juice			Fruit juices	Straight fruit juice						0.8			
Domestic, sweet type, raw	7064	1			91	0.5	1.0*	0.5	0.7	0.7			[16]
U.S.A., sweet type, raw		Cherries	Dome			1						0.7	1
Natermelon		1			20	0.7	0.4	0.4					1
Peel, raw		Watermelon		., sweet type, raw	50	0.7	0.+	0.4	<b></b>	2.0		0.0	1
Tools   Plans   Japanese plums   Raw					0.	6.				5.0		0.9	1
Tokst					91	0.4							1
Toron   European plums   Raw   Dried   37   0.2		(Plums)			L	<u> </u>			7			0.2	L
Dried   37   0.2	7081	]		Raw				0.1					
Tangors   Juice sacs, raw		1	1		37	0.2							
Total   Part		Tangors	Inica			1			-			0.4	
Tobs   Pears   Japanese pears   Raw   88   0.9				,	<del></del>	+			$\vdash$			5.9	1
European pears   Raw   86   0.3   0.1   0.1			_	Daw	00	0.0			$\vdash$				1
Raw		(rears)							$\Box$			0.5	1
Canned in heavy syrup				Raw			0.1	0.1				0.3	_
Canned in heavy syrup	7097	Pineapple	Raw		85	0.2						0.2	1
Title   Loquats   Raw   Raw		1		ed in heavy syrup									
Title   Papayas   Ripe, raw   Raw		Bananas		yyr			5.5	5.5	4.0	4.4	0.1	1.4	1
Tilidow   Fruit juice   Raw   Raw				POW!	/1	4.3	5.5	٠.٥	7.0	7.7	0.1	0.2	1
Raw				.aw	⊢—	1							-
Raisins					<u> </u>							0.1	_
Raisins	7116	Grapes	Raw		83	0.8	0.3	1.5	1.6	1.6		0.7	
Tili	7117	]	Raisin	ıs	12		2.5			4.5	0.4		
Tile		1						1.2					
Tiling		Blueberries					2.4					1.1	
Tiling							2.7	1.1	$\vdash$			1.1	+
Ti33   Mangosten   Raw   Greenhouse culture, raw   Greenhouse cultur		Managas										0.0	+
Tild					82	1.8						0.8	_
Open culture, raw   Open												0.6	
Peaches	7134	Melon	Green	house culture, raw								0.9	
Peaches	7135		Open	culture, raw						3.1		0.9	
Peaches Canned in heavy syrup   Peel, raw   Peel, ra		(Peaches)					0.2	1.9	2.0			0.3	
Peel, raw		1			Q2	0.6			2.0				1
Title	/130			Jonus	0.5	0.0	0.2	0.2	$\vdash$	0.2	-	27	+
Title		V			⊢—	-						3.6	-
Title		Yuzu											_
Title					93	0.5			7				⊥ ¯
Title	7145	Limes	Juice.	fresh	93								
Raw							1.9		1.9*		0.2		[17]
Fruit juices					81	1 6ª,®		4.5		0.9		0.6	[18]
Reconstituted fruit juice		· .ppres		Studiolet favit ::	01	1.0	0.5	т.Э	0.7	0.7	0.0		1(10.
T154		1	rruit juices		- 00	1		1.0	$\vdash$	0.1	0.1	0.5	1
Title				Reconstituted fruit juice	89	0.6				0.4	0.1		1
Title	7154		Jam					0.3*	0.9			0.3	[19]
Title		Lemons		e, raw			0.5					1.2	1
Others         Strawberrys         Canned         1.0           Apple         Dried         0.9           Blackberry         Raw         0.4           Raspberry         Marmalade         1.8           Elderberry         Black         1.8           Juice         0.7°           Gooseberry         Raw         0.5           O.5         0.5		1			91	0.2		0.3				<del>-</del> -	1
Apple         Dried         0.9           Blackberry         Raw         0.4           Raspberry         Marmalade         1.8           Elderberry         Black         1.8           Juice         0.7**           Gooseberry         Raw         0.5	/130	Others			- 71	0.2	0.5						+
Blackberry   Raw   0.4	1	OHICIS			<del></del>	-	0.0	1.0	$\vdash$				1
Raspberry         Marmalade         1.8           Elderberry         Black         1.8           Juice         0.7°           Gooseberry         Raw         0.5	1												1
Raspberry         Marmalade         1.8           Elderberry         Black         1.8           Juice         0.7°           Gooseberry         Raw         0.5           0.5         0.5	1		Blackberry	Raw			0.4						
Elderberry         Black         1.8         1.8           Juice         0.7*         0.5           Gooseberry         Raw         0.5         0.5							1.8						
Juice         0.7*           Gooseberry         Raw         0.5         0.5	1					t		1.8					1
Gooseberry Raw 0.5 0.5					<del></del>	+	1.0		$\vdash$			<b>-</b>	[20
			Coool		⊢—	-	0.7		$\vdash$				[20]
Cashew fruit Raw				LKaw		1	0.5						_
Black-currant Raw 2.4 2.4			Cashew fruit	Raw				1.5					L

[10]; herb (umbelliferae), [11]; herb (umbelliferae), [12]; herb (umbelliferae), [13]; herb (umbelliferae), [14]; species of cabbage, [15]; frozen, [16]; sugarless, [17]; frozen, [18]; free biotin: 42.6%, [19]; puree, [20]; Original type

(Continued on page 117)

	_	-	Red-currant	Raw	1	1		2.6		1			
			Mandarin	Raw				0.5*					[21]
			Tangerine	Raw			0.8						(-1)
				Canned			0.8						
MUSH-	8001		Raw		87	8.9						10.6	
ROOMS	8002		Boiled Arage-kikurage	Dried	93	1.5					-	20.7	
	8004 8006		Kikurage	Dried	15	2.4						20.6	
	8011		Nama-shiitake	Raw	92	5.9					-	6.7	
	8012		Traine Similare	Boiled	94	1.0						0.7	
	8013		Hoshi-shiitake	Dried	12	41.4						36.6	
	8014			Boiled								10.4	
	8016		Bunashimeji	Raw	91	8.9						9.9	
	8017		77 7	Boiled	89	4.3							
	8018	Nameko	Honshimeji Raw	Raw	93 94	5.6 5.6						7.2	
	8025		Eringii	Raw	88	8.3						8.8	
	8026		Oyster mushroom	Raw								12.0	
		Maitake	Raw		92	22.5						25.2	
		Common mushrooms	Raw		91	13.5	16.0	16.0	8.4	16.0		10.6	
	8033			d in brine, solids	91	0.1	16.0			7.3	2.2		
ALGAE		Green laver	Dried									73.6	
		Purple laver	Dried Toaste	.d	-	ļ					$\overline{}$	41.4	
	9004			ned and toasted	5	18.7					$\rightarrow$	40.9	
		Green caviar	Raw	ica ana toasica	-	10.7						0.1	
		(Kombu)	Naga-kombu	Dried								15.7	
	9017	Ī` í	Ma-konbu	Dried	11	2.1						9.6	
	9020	1	Kizam	i-kombu								12.1	
	9021			-kombu	22	7.8							
	9023		Tsuku		50	4.0						4.7	
		Tengusa	Tokore		99	0.1						Tr	
	9027		Agar-a Agar j		17	0.0				$\vdash$		0.0	
		Tosaka-nori	Red	Salted, desalted	+						-	0.6	
		Hijiki		and dried	16	16.1				$\Box$	-	16.4	
		(Mozuku)	Okinawa-mozuku	Salted, desalted								0.4	
	9038		Mozuku	Salted, desalted	98	1.3							
		Wakame	Raw		0.1	0.5						4.2	
	9041		Dried products	Dried, soaked in water	94	0.6						3.6	
	9044			d dried Desalted	<u> </u>							28.0	
	9043		Fruit-bearing leaves	Raw	95	0.4						2.2	
FISHES	10003		Horse mackerel	Raw	78	2.1						3.4	
AND	10004			Boiled								5.2	
SHELL-	10005			Baked								5.2	
FISHES	10006			Hirakiboshi, raw	73	2.0						4.5	
		Common Japanese conger										3.3	
		Tile fish	Raw Wild,	movv.	1							1.7	
	10021	Ayu sweetfish		ed, raw	73	4.1					$\longrightarrow$	5.6	
		Anglerfish	Liver,		75	7.1						13.4	
		Japanese sand lance	Tsukue		29	12.8							
	10044	(Sardines)	Japanese anchovy	Raw								18.3	
	10047		Japanese pilchard	Raw	75	7.2						17.1	
	10052		CI : 1 1 :	Maruboshi	12	13.3							
	10055		Shirasuboshi	Mild dried Semi-dried	75 51	7.1							
	10030		Canned products	In brine	31	13.7			9.1	24.0*			[22]
	10062		Camea products	In tomato sauce			4.0		7.1	24.0			(22)
	10063			In oil	61	20.3	4.0	9.1	24.0				
	10067	Eel		ed, raw								6.1	
	10070		Kabay		49	8.3						10.4	
		(Marlins and swordfishes)		Raw	<del>                                     </del>	ļ						13.1	
	10085		Swordfish Skipjack	Raw Caught in autumn, raw	+	<b> </b>				$\vdash$	$\longrightarrow$	2.5	
		(Skipjacks and frigate mackerels)	Processed products	Katsuo-bushi	16	6.5				$\vdash$	-+	5.7 14.9	
		Barracuda	Raw	ALCONOMO DIGITA	10	0.5	$\vdash$		1.9	$\vdash$		17.7	
		(Righteye flounders)	Brown sole	Raw	78	44.4	1.2		3.1	8.0≋		23.9	[23]
	10103		Marbled sole	Raw	80	18.5	1.2	1.2					
	10108	Amberjack	Raw	·	55	2.5						2.4	
		Blue sprat	Raw	· ·	1		4.0*						(24)
	10111		Raw		76	1.2						·	
	10111 10116	Alfonsino				1					5.9	7.4	
	10111 10116 10124	Gizzard shad	Raw	Canned in bring	70	0.0							i .
	10111 10116 10124 10129	Gizzard shad (Salmons and trouts)	Raw Pink salmon	Canned in brine	70	9.0					3.5	4.6	
	10111 10116 10124 10129 10130	Gizzard shad (Salmons and trouts)	Raw	Canned in brine Cultured, raw Raw					4.3		3.9	4.6	
	10111 10116 10124 10129	Gizzard shad (Salmons and trouts)	Raw Pink salmon Coho salmon	Cultured, raw	70	9.0			4.3		3.7	4.6 9.0 10.3	
	10111 10116 10124 10129 10130 10134	Gizzard shad (Salmons and trouts)	Raw Pink salmon Coho salmon	Cultured, raw Raw					4.3		3.7	9.0	
	10111 10116 10124 10129 10130 10134 10135 10136	Gizzard shad (Salmons and trouts)	Raw Pink salmon Coho salmon	Cultured, raw Raw Boiled Baked Ikura					4.2		5.9	9.0 10.3	
	10111 10116 10124 10129 10130 10134 10135 10140 10143	Gizzard shad (Salmons and trouts)	Raw Pink salmon Coho salmon Chum salmon	Cultured, raw Raw Boiled Baked Ikura Canned in brine	74 55	9.3	5.0	9.4	4.2 9.4	15.0	3.9	9.0 10.3	
	10111 10116 10124 10129 10130 10134 10135 10140 10143 10143	Gizzard shad (Salmons and trouts)	Raw Pink salmon Coho salmon	Cultured, raw Raw Boiled Baked Ikura Canned in brine Cultured in sea, raw	74	9.3	5.0	9.4 4.5	4.2 9.4 4.5	15.0	3.9	9.0 10.3	
	10111 10116 10124 10129 10130 10134 10135 10140 10143 10146 10147	Gizzard shad (Salmons and trouts)	Raw Pink salmon Coho salmon Chum salmon Rainbow trout	Cultured, raw Raw Boiled Baked Ikura Canned in brine Cultured in sea, raw Cultured in sea, baked	74 55 69	9.3 7.5 5.2		4.5	4.2 9.4	15.0	3.9	9.0 10.3	
	10111 10116 10124 10129 10130 10134 10135 10140 10143 10146 10147 10149	Gizzard shad (Salmons and trouts)	Raw Pink salmon Coho salmon Chum salmon	Cultured, raw Raw Boiled Baked Ikura Canned in brine Cultured in sea, raw Cultured in sea, baked Raw	74 55	9.3	5.0		9.4 4.5 3.1	15.0	3.9	9.0 10.3	
	10111 10116 10124 10129 10130 10134 10135 10136 10140 10143 10146 10147 10149 10151	Gizzard shad (Salmons and trouts)	Raw Pink salmon Coho salmon Chum salmon Rainbow trout	Cultured, raw Raw Boiled Baked Ikura Canned in brine Cultured in sea, raw Cultured in sea, baked	74 55 69	9.3 7.5 5.2		4.5	4.2 9.4 4.5	15.0	3.7	9.0 10.3 12.3	
	10111 10116 10124 10129 10130 10134 10135 10136 10140 10143 10146 10147 10149 10151 10154	Gizzard shad (Salmons and trouts)	Raw Pink salmon Coho salmon Chum salmon Rainbow trout Sockeye salmon	Cultured, raw Raw Boiled Baked Ikura Canned in brine Cultured in sea, raw Cultured in sea, baked Raw Smoked	74 55 69 66	9.3 7.5 5.2 10.2	5.0	7.4	9.4 4.5 3.1	15.0	3.7	9.0 10.3 12.3	
	10111 10116 10124 10129 10130 10134 10135 10136 10140 10143 10146 10147 10149 10151	Gizzard shad (Salmons and trouts)	Raw Pink salmon Coho salmon Chum salmon Rainbow trout Sockeye salmon	Cultured, raw Raw Boiled Baked Ikura Canned in brine Cultured in sea, raw Cultured in sea, baked Raw Smoked Raw	74 55 69 66	9.3 7.5 5.2 10.2	5.0 5.0 7.0	7.4	9.4 4.5 3.1	15.0	3.7	9.0 10.3 12.3	
	10111 10116 10124 10129 10130 10134 10135 10146 10147 10149 10151 10155 10156 10162	Gizzard shad (Salmons and trouts)	Raw Pink salmon Coho salmon Chum salmon Rainbow trout Sockeye salmon Mackerel Processed products	Cultured, raw Raw Boiled Baked Ikura Canned in brine Cultured in sea, raw Cultured in sea, baked Raw Smoked Raw Boiled Baked Hirakiboshi	74 55 69 66	9.3 7.5 5.2 10.2	5.0 5.0 7.0	7.4	9.4 4.5 3.1		3.7	9.0 10.3 12.3 4.4 8.1	
	10111 10116 10124 10129 10130 10134 10135 10146 10147 10149 10151 10154 10155 10156 10162	Gizzard shad ((Salmons and trouts)	Raw Pink salmon Coho salmon Chum salmon Rainbow trout Sockeye salmon Mackerel	Cultured, raw Raw Boiled Baked Ikura Canned in brine Cultured in sea, raw Cultured in sea, baked Raw Smoked Raw Boiled Baked Hirakiboshi In brine	74 55 69 66	9.3 7.5 5.2 10.2	5.0 5.0 7.0 7.0 7.0	7.4	9.4 4.5 3.1	15.0	3.7	9.0 10.3 12.3 4.4 8.1	
	10111 10116 10124 10129 10130 10134 10135 10140 10147 10149 10151 10154 10155 10156 10162 10164	Gizzard shad ((Salmons and trouts)	Raw Pink salmon Coho salmon Chum salmon Rainbow trout Sockeye salmon Mackerel Processed products	Cultured, raw Raw Boiled Baked Ikura Canned in brine Cultured in sea, raw Cultured in sea, baked Raw Smoked Raw Boiled Baked Hirakiboshi	74 55 69 66	9.3 7.5 5.2 10.2	5.0 5.0 7.0	7.4	9.4 4.5 3.1			9.0 10.3 12.3 4.4 8.1	[25]

	10174	1	Baked									8.7	Т
	10174	(Shishamo)	Shishamo smelt	Semi-dried, raw	66	15.3				_		17.9	
	10180	(Snisnamo)			- 00	13.3		_					
			Atlantic capelin	Semi-dried, raw								17.1	
	10184		Raw				1.2						
	10185	Striped jack	Cultur	ed, raw	66	1.1							
		Japanese seaperch	Raw		79	2.0							
		(Sea breams)	Red sea bream	Wild, raw	64	4.4							
		(Sea breams)	red sea oream	Cultured, raw	75				-			7.0	-
	10193		1		13	6.5						7.9	
	10194		1	Cultured, boiled								8.4	
	10195		1	Cultured, baked								9.2	
ı	10198	Hairtail	Raw		82	1.2							
		(Cod fishes)	Walleye pollack	Raw			1.1		2.2	-		2.7	-
		(Cod fishes)	waneye ponack			12.5			2.2				-
	10202	]	1	Tarako, raw	69	13.5	13.0					17.6	
	10204		1	Karashi-mentaiko	66	14.5							
- 1	10205	1	Pacific cod	Raw	82	1.7		2.2				2.5	
		Flying fish	Raw		76	3.4	1.2						
					70	3.4	1.2				0.7*		(0.0)
L	10216	Catfish	Raw								0.7*		[26]
	10218	Pacific herring	Raw				10.0	4.5					
	10220		Hiraki	iboshi			4.5*						[27]
	10221	1	Smoke	ed			5.1	5.1					1
	10222	1	Ovary	Raw	62	4.8	J.1	J.1					
				Raw	02	4.0							
	10228	Sandfish	Raw									3.3	
	10235	Bastard halibut	Cultur	ed, raw	79	2.1	5.0					10.2	
		Yellow tail	Mature	Raw	66	1.1						7.7	
	10243		Young	Cultured, raw	53	2.0						6.2	
Γ	10248	Atka mackerel	Hiraki	iboshi	81	2.7						3.0	
		(Tunas)	Yellowfish tuna	Raw								1.4	
		( - unas)	Bluefin tuna	Lean meat, raw	68	2.6	1.5		-	<b>—</b>			<b>—</b>
	10253	1			06	∠.0	1.3		-			1.9	-
	10255	]	Albacore	Raw								1.2	<u></u>
ı	10259	1	Big-eye tuna	Raw					1			1.3	1
	10260	1	Canned products	Flaked light meat in brine	80	0.7	3.0		2.1	3.0	0.7		
		1	Camea products		- 50	0.7			4.1	5.0	J./		[20]
	10262	1	1	Flaked meat with seasoning			3.0*						[28]
	10263	<u> </u>	<u></u>	Flaked light meat in oil	L		3.0	2.1	<u></u>	L			L_
-	10276	Pond smelt	Raw									4.0	
	10281		Raw		84	16.3		2.3		i		22.7	
					37	10.5		2.3	1	-			-
		Abalone	Raw							L		1.1	
	10292	Oysters	Cultur	ed, raw	76	14.0	41.0	10.0		8.7		4.5	
- 1	10293	1 1	Cultur	ed, boiled								7.2	
		Turban shell	Raw		76	5.1						1.9	
												1.9	-
L	10297	Freshwater clams	Raw		81	12.9							
Γ	10306	(Hard clams)	Hard clams	Raw	84	7.8							
		Scallops	Raw		80	2.8		1.1	1.1				
					00	2.0		1.1					
	10312		Boiled						1.5				
	10313		Adductor muscle	Raw								1.9	
	10319	<prawns, shrimps,<="" td=""><td>Northern shrimp</td><td>Raw</td><td>96</td><td>1.7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></prawns,>	Northern shrimp	Raw	96	1.7							
			Kuruma prawn	Cultured, raw						-		2.6	
		AND CRABS>	Kuruma prawn				4.00	0.5				2.0	(
	10322	(Prawns and shrimps)	1	Cultured, boiled			1.0*	0.5	0.8				[29]
Г	10325	1	Sakura shrimps	Dried	15	20.7							
	10326	1		Niboshi	19	18.7							
		-	G:						0.5			4.0	
	10329		Giant tiger prawn	Cultured, raw	80	2.5			0.5			1.9	
	10335	(Crabs)	Tanner crab	Raw								3.0	
	10337	``		Canned in brine	82	1.9							
	10340	1	King crab	Canned in brine				4.6					
								4.0			_		
		<cephalopods></cephalopods>	Neon flying squid	Raw								4.0	
	10344	(Squids and cuttlefishes)	Cuttlefish	Raw	89	2.9	5.0					1.6	
- 1	10345	1	Japanese common squid	Raw	80	5.0						4.7	
	10346	1	supunese common squid	Boiled	- 00	0.0			_			5.2	_
	10347		1	Baked								5.8	
	10354	I	Processed products	Saki-ika	22	8.5							1
	10358	1	1 * "	Shiokara	71	6.9							1
		(Oatamus:-)	Common octopus	Boiled	82	3.9			<del>                                     </del>			5.	_
		(Octopuses)									-	5.6	-
	10365	Sea urchin	Raw g	onads	69	4.6	I						
	10366	I	Tsubu	-uni	64	9.3							
		Mantis shrimp	Boiled		81	3.9							
			Raw		92		$\vdash$		1	<b>-</b>	_	2.0	_
		Sea cucumber				1.5						2.6	-
	10376	<fish paste="" products=""></fish>		ımi-kamaboko	77	0.2							
		I	Mushi	-kamaboko	76	0.3							
	10379		Yaki-c	hikuwa	73	0.2							1
		1							<b> </b>				<del>                                     </del>
	10381		T:	ro	62	1/2			-		-		-
	10381 10383		Tsumi	·	62	4.3			1				
	10381 10383 10385	]	Hanpe	en	75	0.8			<u> </u>		1		
-	10381 10383 10385 10386		Hanpe Satsur	en na-age	75 65	0.8				L			
-	10381 10383 10385		Hanpe Satsur	en	75	0.8							
-	10381 10383 10385 10386		Hanpe Satsur Fish s	en na-age ausage	75 65	0.8	13.0						
-	10381 10383 10385 10386		Hanpe Satsun Fish s Cod, r	en na-age ausage oe	75 65	0.8	13.0	2.5	2.5				(20)
-	10381 10383 10385 10386		Hanpe Satsur Fish s: Cod, r Haddock	na-age ausage oe   Raw	75 65	0.8	13.0	2.5	2.5**				(30)
-	10381 10383 10385 10386		Hanpe Satsun Fish s Cod, r	en na-age ausage oe	75 65	0.8		2.5 30.0	2.5**				(30)
-	10381 10383 10385 10386		Hanpe Satsur Fish s: Cod, r Haddock Smelt	nna-age ausage oe   Raw   Raw	75 65	0.8							(30)
-	10381 10383 10385 10386		Hanpe Satsun Fish s: Cod, r Haddock Smelt Fish	nna-age ausage oe Raw Raw Frozen	75 65	0.8	5.0	30.0	10.0				(30)
-	10381 10383 10385 10386		Hanpe Satsur Fish s: Cod, r Haddock Smelt	ma-age na-age oe Raw Raw Frozen Raw	75 65	0.8	5.0		10.0				
-	10381 10383 10385 10386 10388	Others	Hanpe Satsur Fish s: Cod, r Haddock Smelt Fish Lobster	ma-age ausage oe Raw Raw Frozen Raw Cooked	75 65	0.8	5.0	30.0	10.0				(30)
-	10381 10383 10385 10386 10388	Others	Hanpe Satsur Fish s: Cod, r Haddock Smelt Fish Lobster	ma-age na-age oe Raw Raw Frozen Raw	75 65	0.8	5.0	30.0	10.0			5.0	
ΓS	10381 10383 10385 10386 10388	Others <a href="#"><animal meats="">Wild boar</animal></a>	Hanpe Satsun Fishs Cod, r Haddock Smelt Fish Lobster Meat,	ma-age na-age oe Raw Raw Frozen Raw Cooked	75 65	0.8	5.0 5.0 5.0	30.0	10.0			5.0	
TTS	10381 10383 10385 10386 10388 111001 11003	Others <a href="#">ANIMAL MEATS&gt;Wild boar Rabbit</a>	Hanpe Satsun Fish si Cod, r Haddock Smelt Fish Lobster Meat, Meat,	ma-age ma-age oe Raw Raw Frozen Raw Cooked lean and fat, raw lean, raw	75 65 66	0.8 1.0 1.8	5.0	30.0	10.0			5.0	
rs	10381 10383 10385 10386 10388 111001 11003 11004	Others <a href="ANIMAL MEATS"></a> -Wild boar Rabbit Cattle [Beefs, Japanese	Hanpe Satsun Fish s. Cod, r Haddock Smelt Fish Lobster Meat, Meat, Chuck	ma-age na-age oe   Raw Raw Frozen Raw Cooked lean and fat, raw   Lean and fat, raw	75 65	0.8	5.0 5.0 5.0	30.0	10.0				
rs	10381 10383 10385 10386 10388 111001 11003 11004	Others <a href="#">ANIMAL MEATS&gt;Wild boar Rabbit</a>	Hanpe Satsun Fish si Cod, r Haddock Smelt Fish Lobster Meat, Meat,	ma-age ma-age oe Raw Raw Frozen Raw Cooked lean and fat, raw lean, raw	75 65 66	0.8 1.0 1.8	5.0 5.0 5.0	30.0	10.0			5.0	
rs _	10381 10383 10385 10386 10388 11001 11001 11003 11004 11013	Others <a href="ANIMAL MEATS-Wild boar Rabbit"><a hre<="" href="&lt;a" td=""><td>Hanpe Satsun Fish s. Cod, r Haddock Smelt Fish Lobster Meat, Meat, Chuck</td><td>ma-age na-age oe   Raw Raw Frozen Raw Cooked lean and fat, raw   Lean and fat, raw</td><td>75 65 66</td><td>0.8 1.0 1.8</td><td>5.0 5.0 5.0</td><td>30.0</td><td>10.0</td><td></td><td></td><td>1.4</td><td></td></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a>	Hanpe Satsun Fish s. Cod, r Haddock Smelt Fish Lobster Meat, Meat, Chuck	ma-age na-age oe   Raw Raw Frozen Raw Cooked lean and fat, raw   Lean and fat, raw	75 65 66	0.8 1.0 1.8	5.0 5.0 5.0	30.0	10.0			1.4	
rs	10381 10383 10385 10386 10388 11001 11001 11003 11004 11013 11014	Others <a animal="" boar="" href="mailto:canilt&lt;/td&gt;&lt;td&gt;Hanpe Satsun Fish si Cod, r Haddock Smelt Fish Lobster  Meat, Meat, Chuck Rib loin&lt;/td&gt;&lt;td&gt;ma-age ma-age oe Raw Raw Frozen Raw Cooked lean and fat, raw Lean, raw Lean, raw Fat, raw&lt;/td&gt;&lt;td&gt;75&lt;br&gt;65&lt;br&gt;66&lt;/td&gt;&lt;td&gt;0.8&lt;br&gt;1.0&lt;br&gt;1.8&lt;/td&gt;&lt;td&gt;5.0&lt;br&gt;5.0&lt;br&gt;5.0&lt;/td&gt;&lt;td&gt;30.0&lt;/td&gt;&lt;td&gt;10.0&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;1.4&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;rs&lt;/td&gt;&lt;td&gt;10381&lt;br&gt;10383&lt;br&gt;10385&lt;br&gt;10386&lt;br&gt;10388&lt;br&gt;10388&lt;br&gt;11001&lt;br&gt;11003&lt;br&gt;11004&lt;br&gt;11013&lt;br&gt;11014&lt;br&gt;11037&lt;/td&gt;&lt;td&gt;Others  &lt;a href=" meats-wild="" rabbit"=""><a href="ANIMAL MEATS-Wild boar Rabbit"><a hre<="" href="&lt;a" td=""><td>Hanpe Satsun Fish s. Cod, r Haddock Smelt Fish Lobster Meat, Meat, Chuck</td><td>ma-age ausage oe Raw Frozen Raw Cooked lean and fat, raw lean, raw Lean, raw Lean, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw</td><td>75 65 66</td><td>0.8 1.0 1.8</td><td>5.0 5.0 5.0</td><td>30.0</td><td>10.0</td><td></td><td></td><td>1.4 0.9 1.1</td><td></td></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a>	Hanpe Satsun Fish s. Cod, r Haddock Smelt Fish Lobster Meat, Meat, Chuck	ma-age ausage oe Raw Frozen Raw Cooked lean and fat, raw lean, raw Lean, raw Lean, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw	75 65 66	0.8 1.0 1.8	5.0 5.0 5.0	30.0	10.0			1.4 0.9 1.1	
rs	10381 10383 10385 10386 10388 11001 11001 11003 11004 11013 11014 11037 11038	Others <a href="ANIMAL MEATS&gt;Wild boar Rabbit">Cattle [Beefs, Japanese beef cattle]</a> [Beefs, dairy fattened steer]	Hanpe Satsun Fish si Cod, r Haddock Smelt Fish Lobster  Meat, Meat, Chuck Rib loin	ma-age ausage oe Raw Raw Frozen Raw Cooked lean and fat, raw Lean, raw Lean, raw Lean, raw Lean, raw Lean, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw	75 65 66	0.8 1.0 1.8	5.0 5.0 5.0	30.0	10.0			1.4 0.9 1.1 1.7	
rs _	10381 10383 10385 10386 10388 11001 11001 11003 11004 11013 11014 11037 11038	Others <a href="ANIMAL MEATS&gt;Wild boar Rabbit">Cattle [Beefs, Japanese beef cattle]</a> [Beefs, dairy fattened steer]	Hanpe Satsun Fish si Cod, r Haddock Smelt Fish Lobster  Meat, Meat, Chuck Rib loin	ma-age ausage oe Raw Raw Frozen Raw Cooked lean and fat, raw Lean, raw Lean, raw Lean, raw Lean, raw Lean, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw	75 65 66	0.8 1.0 1.8	5.0 5.0 5.0	30.0	10.0			1.4 0.9 1.1 1.7	
rs .	10381 10383 10385 10386 10388 11001 11003 11004 11013 11014 11037 11038 11039	CANIMAL MEATS>Wild boar Rabbit Cattle [Beefs, Japanese beef cattle] [Beefs, dairy fattened steer]	Hanpe Satsun Fish si Cod, r Haddock Smelt Fish Lobster  Meat, Meat, Chuck Rib loin	ma-age ausage oe Raw Frozen Raw Cooked lean and fat, raw lean, raw Lean and fat, raw Lean, raw Lean, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw	75 65 66	0.8 1.0 1.8	5.0 5.0 5.0	30.0	10.0			1.4 0.9 1.1 1.7 1.3	
rs	10381 10383 10385 10386 10388 11001 11003 11004 11013 11014 11037 11039 11041	Others  CANIMAL MEATS>Wild boar Rabbit Cattle [Beefs, Japanese beef cattle]  [Beefs, dairy fattened steer]	Hanpe Satsun Fish si Cod, r Haddock Smelt Fish Lobster  Meat, Meat, Chuck Rib loin	ma-age ausage oe Raw Raw Frozen Raw Cooked lean and fat, raw Lean, raw Lean, raw Lean, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw	75 65 66	0.8 1.0 1.8	5.0 5.0 5.0	30.0	10.0			1.4 0.9 1.1 1.7 1.3 1.1	
ΓS	10381 10383 10385 10386 10388 11001 11003 11004 11013 11014 11037 11038 11039	Others  CANIMAL MEATS>Wild boar Rabbit Cattle [Beefs, Japanese beef cattle]  [Beefs, dairy fattened steer]	Hanpe Satsun Fish s: Cod, r Haddock Smelt Fish Lobster  Meat, Meat, Meat, Chuck Rib loin	ma-age ausage oe Raw Raw Frozen Raw Cooked lean and fat, raw Lean, raw Lean, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw Lean fat, raw Lean fat, raw Lean and fat, raw	75 65 66	0.8 1.0 1.8	5.0 5.0 5.0	30.0	10.0			1.4 0.9 1.1 1.7 1.3	
TTS	10381 10383 10385 10386 10388 11001 11003 11004 11013 11014 11037 11038 11039 11041 11042	Others <a href="ANIMAL MEATS&gt;Wild boar Rabbit">ANIMAL MEATS&gt;Wild boar Rabbit</a> Cattle [Beefs, Japanese beef cattle]  [Beefs, dairy fattened steer]	Hanpe Satsun Fish si Cod, r Haddock Smelt Fish Lobster  Meat, Meat, Chuck Rib loin	ma-age ausage oe Raw Raw Frozen Raw Cooked lean and fat, raw Lean, raw Lean, raw Lean, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw	75 65 66	0.8 1.0 1.8	5.0 5.0 5.0	30.0	10.0	3.4		1.4 0.9 1.1 1.7 1.3 1.1	
TS	10381 10383 10385 10386 10388 11001 11003 11004 11013 11014 11037 11038 11039 11041 11042	Others  CANIMAL MEATS>Wild boar Rabbit Cattle [Beefs, Japanese beef cattle]  [Beefs, dairy fattened steer]	Hanpe Satsun Fish s: Cod, r Haddock Smelt Fish Lobster  Meat, Meat, Meat, Chuck Rib loin	ma-age ausage oe Raw Raw Frozen Raw Cooked lean and fat, raw Lean, raw Lean, raw Lean and fat, raw Lean and fat, raw Lean and fat, raw Lean fat, raw Lean fat, raw Lean and fat, raw	75 65 66	0.8 1.0 1.8	5.0 5.0 5.0	30.0	10.0	3.4		1.4 0.9 1.1 1.7 1.3 1.1	

(Continued on page 119)

11075		Flank or short plate Inside round	Lean and fat, raw Lean and fat, raw	59 67	1.2		4.6		2.6		+	1
11073		Rump	Lean and fat, raw	07	1.0		3.8		2.0		-	
11085		Fillet	Lean, raw	64	1.4		4.6					
	[Veals]	Rib loin	Without subcutaneous fat, raw	04	1.4				2.0			
	[Ground meat]	Raw		61	0.6				2.0			
11090	[Offals]	Tongue	Raw	38	0.9	2.0	3.3					
11091		Heart	Raw			2.0	7.3					
11092		Liver	Raw	71	61.2	33.0	100.0		96.0	41.6*	76.1	[32]
11093		Kidney	Raw	80	56.4	24.0	58.0				89.6	
11096		Omasum	Raw	84	3.5							
11097		Abmasum	Boiled	66	0.5							
11098		Small intestine	Raw	31	0.7							
11099		Large intestine	Raw	81	1.0							
11101		Sinew	Boiled	53	0.6		3.0					
11103		Tail	Raw	74	0.3							
11104	[Beef products]	Roast				1.2◎		3.0				[33]
11105	-		d beef, canned	65	1.7		2.0					
11106			ed with seasonig	72	1.4							
11107		Beefje		36	0.7							
11109			lean, raw			2.6					1.1	
	Whale		lean, raw								1.6	
	Swine [Porks, large type	Boston butt	Lean and fat, raw	66	6.7							<u> </u>
11123	breeds]	Loin	Lean and fat, raw	66	1.5	2.6			5.2		3.7	
11124			Lean and fat, baked	49	0.6						5.2	<b>⊥</b>
11125			Lean and fat, boiled	55	0.3						4.3	
11126			Without subcutaneous fat, raw			2.6						_
11127			Lean, raw			2.6					3.0	
11128			Fat, raw								6.9	$\perp$
11129		Belly	Lean and fat, raw	63	2.2	2.6		4.0				
11130		Inside ham	Lean and fat, raw	67	1.7	2.6						$\Box$
11134		<u> </u>	Lean, raw			2.6						
11151	[Porks, medium type	Loin	Lean, raw								3.6	
	breeds]		Fat, raw								7.1	
	[Ground meat]	Raw		67	1.7							
11164	[Offals]	Tongue	Raw			2.0						
11165		Heart	Raw			18.2	4.0					
11166		Liver	Raw	69	54.5	44.0	27.0	100.0	100.0		79.6	
11167		Kidney	Raw			32.0					99.5	
11172		Feet	Boiled	69	1.6	2.6	5.1					
	[Hams]	Bonel	ess	74	4.1	2.6		5.0	5.0			
11176	[	Loin	-	70	2.8	2.6		- 5.0	5.0			
11180		Chopp	oed	,,,	2.0		5.5			4.5		
11181		Uncooked ham	Fresh	60	2.6							
	[Bacons]	Bacor		56	6.5	14.0		7.0	7.6			
	[Sausages]	Vienn	a	49	1.7			3.0	7.0			
11187	[Suusuges]	Semi-		23	9.0*	3.7		5.0				[34
11188		Dry		23	7.0	3.0*						[35
11189		Frank	furter	47	0.9	5.2						(
11190		Bolog		58	3.5	3.2		3.0				
11194			sausage	50	3.3	3.7		3.0				
	[Others]	Gelati		15	0.0	5.7						
	Sheep [Muttons]	Leg	Lean and fat, raw	15	0.0	1.0						
	[Lambs]	Shoulder	Lean and fat, raw			1.0						
11202	[Lamos]	Loin	Lean and fat, raw			1.0					2.0	
11203		Leg	Lean and fat, raw			1.0	6.0		5.9		2.0	
	<poultries> Aigamo</poultries>		with skin, raw			6.0			3.9			
	Duck, domesticated		with skin, raw			0.0				1	4.9	
	Turkey		without skin, raw			2.0				0.7*	7.7	[36
11213	Chicken [Fowl meats]	Breast	With skin, raw	62	0.3	2.0	2.0	10.0	11.3			(50
11218	[Broiler meats]	Wing	With skin, raw	66	2.6			10.0	11.3			
11221	La.oner meutoj	Thigh	With skin, raw	51	2.9*	2.0		l	10.1	1	2.5	[37
		g	With skin, baked	J1	2.5	2.0			10.1	<del>                                     </del>	5.1	(3)
			With skin, boiled								4.4	
11222	1		With skin, raw								3.6	H
11222 11223					1	t				1	3.0	
11222 11223 11224		Sasami	i Kaw	75	5.5					_	3.0	1
11222 11223 11224 11227	[Ground meat]	Sasami Raw	Raw	75 70	5.5					-	<del>                                     </del>	1
11222 11223 11224 11227 11230	[Ground meat]		Raw	70	0.9							
11222 11223 11224 11227 11230 11231	[Ground meat] [Offals]	Raw		70 80	0.9 3.5	210.0				187 2*	232 4	[38
11222 11223 11224 11227 11230 11231 11232		Raw Heart Liver	Raw Raw	70 80 74	0.9 3.5 227.4	210.0				187.2*	232.4	[38
11222 11223 11224 11227 11230 11231 11232 11233		Raw Heart	Raw	70 80	0.9 3.5	210.0				187.2**		[38
11222 11223 11224 11227 11230 11231 11232 11233 11235		Raw Heart Liver Gizzard	Raw Raw Raw	70 80 74 80	0.9 3.5 227.4 4.3					187.2*	232.4	[38
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone	Raw Raw Raw Thigh, raw Raw	70 80 74	0.9 3.5 227.4	1.0				187.2*		[38
11222 11223 11224 11227 11230		Raw Heart Liver Gizzard Skin	Raw Raw Thigh, raw Raw Raw	70 80 74 80	0.9 3.5 227.4 4.3			3.0		187.2*		[38
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare	Raw Raw Raw Thigh, raw Raw Raw Steak	70 80 74 80	0.9 3.5 227.4 4.3	1.0	6.1	3.0		187.2**		[38]
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef	Raw Raw Thigh, raw Raw Steak Brain	70 80 74 80	0.9 3.5 227.4 4.3	1.0	6.1	3.0		187.2**		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef	Raw Raw Raw Thigh, raw Raw Raw Raw Baw Steak Brain Lungs	70 80 74 80	0.9 3.5 227.4 4.3	1.0	5.9	3.0		187.2**		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox	Raw Raw Raw Thigh, raw Raw Steak Brain Lungs Spleen	70 80 74 80	0.9 3.5 227.4 4.3	1.0	5.9 5.7	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef	Raw Raw Raw Thigh, raw Raw Steak Brain Lungs Spleen Brain	70 80 74 80	0.9 3.5 227.4 4.3	1.0	5.9 5.7 6.1	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox	Raw Raw Raw Thigh, raw Raw Raw Raw Brain Lungs Spleen Brain Lungs	70 80 74 80	0.9 3.5 227.4 4.3	0.1	5.9 5.7 6.1 5.9	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox	Raw Raw Raw Thigh, raw Raw Raw Steak Brain Lungs Spleen Brain Lungs Tongue, raw	70 80 74 80	0.9 3.5 227.4 4.3	0.1	5.9 5.7 6.1 5.9 3.3	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox	Raw Raw Raw Thigh, raw Raw Steak Brain Lungs Spleen Brain Lungs Tongue, raw Heart, raw	70 80 74 80	0.9 3.5 227.4 4.3	0.1 3.3 7.3	5.9 5.7 6.1 5.9 3.3 7.3	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox	Raw Raw Raw Thigh, raw Raw Steak Brain Lungs Spleen Brain Lungs Tongue, raw Heart, raw Liver, raw	70 80 74 80	0.9 3.5 227.4 4.3	1.0 0.1 3.3 7.3 39.0	5.9 5.7 6.1 5.9 3.3 7.3	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox  Calf (Veal)	Raw Raw Raw Raw Raw Raw Raw Raw Steak Brain Lungs Spleen Brain Lungs Tongue, raw Heart, raw Liver, raw Kidney, raw	70 80 74 80	0.9 3.5 227.4 4.3	3.3 7.3 39.0 24.0	5.9 5.7 6.1 5.9 3.3 7.3	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox	Raw Raw Raw Thigh, raw Raw Steak Brain Lungs Spleen Brain Lungs Tongue, raw Heart, raw Liver, raw Collar with rind, raw	70 80 74 80	0.9 3.5 227.4 4.3	3.3 7.3 39.0 24.0 2.6	5.9 5.7 6.1 5.9 3.3 7.3	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox  Calf (Veal)	Raw Raw Raw Thigh, raw Raw Steak Brain Lungs Spleen Brain Lungs Tongue, raw Heart, raw Liver, raw Kidney, raw Tederloin, trimmed, raw	70 80 74 80	0.9 3.5 227.4 4.3	3.3 7.3 39.0 24.0 2.6 2.6	5.9 5.7 6.1 5.9 3.3 7.3	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox  Calf (Veal)	Raw Raw Raw Raw Thigh, raw Raw Raw Raw Steak Brain Lungs Spleen Brain Lungs Tongue, raw Heart, raw Kidney, raw Kidney, raw Collar with rind, raw Tederloin, trimmed, raw Ham, cured, canned	70 80 74 80	0.9 3.5 227.4 4.3	3.3 7.3 39.0 24.0 2.6	5.9 5.7 6.1 5.9 3.3 7.3 75.0 80.0	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox  Calf (Veal)	Raw Raw Raw Thigh, raw Raw Steak Brain Lungs Spleen Brain Lungs Tongue, raw Heart, raw Liver, raw Kidney, raw Tederloin, trimmed, raw	70 80 74 80	0.9 3.5 227.4 4.3	3.3 7.3 39.0 24.0 2.6 2.6	5.9 5.7 6.1 5.9 3.3 7.3	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox  Calf (Veal)	Raw Raw Raw Raw Thigh, raw Raw Raw Raw Steak Brain Lungs Spleen Brain Lungs Tongue, raw Heart, raw Kidney, raw Kidney, raw Collar with rind, raw Tederloin, trimmed, raw Ham, cured, canned	70 80 74 80	0.9 3.5 227.4 4.3	3.3 7.3 39.0 24.0 2.6 2.6 2.6	5.9 5.7 6.1 5.9 3.3 7.3 75.0 80.0	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox  Calf (Veal)	Raw Raw Raw Thigh, raw Raw Raw Steak Brain Lungs Spleen Brain Lungs Tongue, raw Heart, raw Liver, raw Collar with rind, raw Tederloin, trimmed, raw Ham, cured, canned Collar, defatted, raw	70 80 74 80	0.9 3.5 227.4 4.3	3.3 7.3 39.0 24.0 2.6 2.6 2.6	5.9 5.7 6.1 5.9 3.3 7.3 75.0 80.0	3.0		187.2*		
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox  Calf (Veal)	Raw Raw Raw Raw Thigh, raw Raw Steak Brain Lungs Spleen Brain Lungs Tongue, raw Heart, raw Liver, raw Collar with rind, raw Tederloin, trimmed, raw Ham, cured, canned Collar, defatted, raw Muscles only	70 80 74 80	0.9 3.5 227.4 4.3	3.3 7.3 39.0 24.0 2.6 2.6 2.6	5.9 5.7 6.1 5.9 3.3 7.3 75.0 80.0	3.0		187.2*		[38
11222 11223 11224 11227 11230 11231 11232 11233 11235	[Offals]	Raw Heart Liver Gizzard Skin Cartilage bone Hare Beef Ox Calf (Veal)	Raw	70 80 74 80	0.9 3.5 227.4 4.3	3.3 7.3 39.0 24.0 2.6 2.6 2.6	5.9 5.7 6.1 5.9 3.3 7.3 75.0 80.0	3.0		187.2*		[39

[32]; cooked, [33]; sliced, [34]; kalpas, [35]; salami, [36]; cooked, [37]; free biotin: 23.4%, [38]; cooked, [39]; Lights, [40]; Sheep's liver

# International Journal of Analytical Bio-Science

			Meat and Poultry	Lamb, Liver		_				127.0			
			Chicken nuggets	Breaded, fried						127.0	1.3		
			Black pudding	Boiled			2.0						
EGGS		Japanese quail's eggs		e, raw	72	8.2						19.3	
	12003		Whole	d and canned in brine Raw	76	2.7 22.1 <sup>b</sup>	25.0	25.0	25.0	22.5		8.4	
	12004 12005	(Hen's eggs)	whole	Boiled	75 79	15.9 <sup>b</sup>	25.0	25.0	25.0	22.5	21.4		
	12003	1	Yolk	Raw	48	57.0	60.0	53.0		52.0	21.4	65.0	[41]
	12011			Boiled	48	37.2	00.0	55.0		32.0	27.2	54.9	(,
	12013	1		Dried				110.0					
	12014		White	Raw	88	7.4		7.0		7.0		7.8	
	12015			Boiled	87	6.6					5.8	12.4	
	12016		T	Dried		2.0		57.0					
	12017 12020		Pidar	go-dofu	93	3.8						15.5	
IILKS	13001		Raw milk	Jersey								2.0	
ILKS	13002		1	Holstein						4.7		2.4	
	13003			ary liquid milk	87	3.8	3.5≋		5.0*		0.1*	1.8	[42]
	13004		Milk containing	High fat	86	2.7	2.0	3.5					
	13005		recombined milk	Low fat	90	2.8ª	1.4	3.5	2.0		0.1		
	13006		Milk beverages	med milk Coffee flavored	91	3.0	16.0	1.5	2.0	3.4		1.7	
	13007 13008		Wilk beverages	Fruit flavored	89 87	0.7						1./	
	13009		Whol	e milk powder	0/	0.4	10.0	14.0					
	13010			med milk powder			2.0	1.5	5.0		0.1	18.7	
	13011		Modi	fied milk powder				24.0	5.0	4.5		4.4	
	13013		Cond	ensed whole milk, sweetened	32	4.9		3.8					
	L	condensed milk)		La em e		L							
	13014		Cream	Milk fat Vegetable fat	48	0.2						1.2	
	13016 13017		Whipping cream	Vegetable fat Milk fat		-	0.9	3.4				0.8	
	13017		Coffee whitener	Liquid, vegetable fat	74	0.5	0.9	3.4					
	13022		Jones Williams	Powder, milk fat	7	2.5		7.0			0.1		
	13025	(Fermented milk and	Yogurt	Whole milk, unsweetened	87	1.9 <sup>a</sup>	3.5	3.5				2.5	
	13026	lactic acid bacteria		Skimmed, sweetened	83	2.3						2.0	
		beverages)		Liquid type	83	1.9						1.2	(15)
	13028		Lactic acid bacteria	Oridinary milk-solids, nonfat Pasteurized after fermentation	84	0.4	3.5≋					0.6	[43]
	13029 13031		beverages Natural cheeses	Pasteurized after fermentation Edam	54	0.5		1.5	0.7				
	13031		Natural cheeses	Emmental			1.7	3.0	0.7				
	13033			Cottage	77	2.4	1.5	5.0	2.9				
	13034			Camambert	56	3.5	6.0	5.1	3.9			6.3	
	13035			Cream	58	1.6	1.5	3.4	2.0				
	13036			Gouda	44	1.0			0.8				
	13037			Cheddar	37	2.5	1.7	1.9	2.0	3.6	1.4	2.7	
	13038			Parmesan	12	2.7	1.5	3.0	2.7				
	13039 13040		Droop	Blue ess cheese	43	4.3	1.5	3.0	2.1 3.0	4.6	3.1		
	13040			se spread	43	4.3	1.3	3.2	4.0	4.0	3.1		
	13042		Ice cream	High fat	63	3.4						2.6	
	13043			Regular					3.0				
	13044		Ice m		65	1.2							
	13045		Lactic ice	Regular	64	1.7							
	13050	(Others) <others></others>		se whey powder an milk			1.5 0.7	43.0 0.6				0.5	
	13051		Goat				2.0	3.9				0.3	
	13032	Others	Milk	Buffalo milk			2.0	11.0					
				Buttermilk			1.4	1.5					
				Skimmed, with chocolate			2.0						
				Condensed skimmed milk				3.8					
			V . C.	Ewe's milk (Sheep milk)				9.0					
			Kefir Junke				3.5	3.5					
			Cheese	Cream			1.4						
			1	Gruyere			2.7	1.3	0.9				
				Limburger				8.6					
				Semihard, Esrom			1.5						
				Firm, Elbo		_	1.5						
				Quarg		-	1.5						
				Hard, Grana Fresh, 50% fat		-	1.5	5.5					
				Quark, fresh cheese				7.0					
				Hard, Gruyere			1.7	2.0					
				Gorgonzola									
				Firm, Svenbo			1.5						
				Firm, Samsoe			1.5						
				Semihard, St. Paulin		-	1.5		1.2				
				Firm, Dando Semihard, Havarti		-	1.5		1.3				
				Hard, Hingino		<b>†</b>	1.5						
				Firm, Fynbo			1.5		1.4				
				Semihard, Feta			1.5		1.7		0.1		
				Provolone									
				Semihard, Fontina			1.5						
				Firm, Maribo			1.5						
				Firm, Mynster			1.5	2.0	1.1				
				Semihard, Mozzarella  Roquefort, danish		-	1.5	2.0	1.9				
				Roquefort, danish Unripened, smoked			1.5						
				Blue and white mould			1.5						
				Brie, Cream			1.3	6.2					
	1			Brie			6.0	3.0	4.2				
				Quark with fruit			1.0	3.0					

(Continued on page 121)

E Lama	_		C	1			1.4	2.0					
	1.4001	Tar		n, cultured	0	0.0	1.4	3.0				0.0	
FASTS AND	14001 14002	(Vegetable fats and oils)	Olive Sesan		0	0.0						0.0	
OILS	14002	-		oran oil	- 0	0.0						0.0	
OILS	14005	-		an oil	0	0.0						0.0	
	14006	1		able oil, blend	0	0.1						0.0	
	14008	1		eed oil								0.0	
	14015	(Animal fats)	Beef t	allow	13	0.0							
	14016		Lard		7	0.0						0.0	
	14017	(Butters)		butter	16	0.7						0.4	
	14018			ted butter	15	0.4							
govern		(Margarines)	Soft t		25 19	0.1				3.4		0.2	
CONFEC- TIONER-	15001 15004			Adzuki beans namayatsuhashi	33	2.3						1.4	
IES	15004			namayaisunasni iwayaki	48	1.6	-						
ILS	15009	CONFECTIONERIES	Kasut		31	4.2						7.2	
	15023	1		ku-mochi	29	0.8						1.2	
	15034		Manju, Steamed bread		31	1.9						1	
	15035	1	Chinese style	Meat and vegatables	44	2.1							
	15039		Yokan	Mizu-yokan	55	0.9							
	15049		Wheat flour crackers									5.7	
	15057	CONFECTIONERIES>	Rice crackers	Age-senbei	_	0.0						0.4	
	15058			Amakara-senbei	7	0.9							
	15059	_		Arare								2.5	
	15060 15061	_	Boro	Shio-senbei Eisei-boro	7	0.9						3.0	
	15069	<japanese buns=""></japanese>		jam bun	36	2.1							
	15009	JALANESE DUNS>		rd cream bun	41	3.6							
	15070	<cakes, and<="" buns="" td=""><td></td><td>rd cream puffs</td><td>49</td><td>8.4</td><td>- +</td><td></td><td></td><td></td><td></td><td></td><td></td></cakes,>		rd cream puffs	49	8.4	- +						
	15074			ge cake								11.1	
	15079		Pies	Pie pastry								0.7	
	15083		Hot ca	ake	46	1.3							
	15086	<desserts></desserts>	Custa	rd pudding	78	1.9					1.0*	9.7	[44]
	15088		Jellies	Coffee	82	1.8							
	15092	<biscuits></biscuits>	Wafer		5	1.7						2.2	
	15093	_	Crackers	Oil-sprayed								1.7	
	15094	-	Diamit-	Soda	1	0.7	2.0				0.3		
	15097 15098	_	Biscuits	Hard Soft	1	0.7	2.8				0.2	2.2	
	15103	<snacks></snacks>	Potato chips	Regular			1.5		0.1		0.3	2.3	
		<snacks></snacks>	Caran		15	1.5	1.3		0.1		0.1	1.6 2.7	
	15113	CANDIES		imallows	23	1.1						2.1	
		<chocolates></chocolates>		chocolate	1	6.2						4.4	
	15116			chocolate	0	5.3	3.0	4.5		32.0		7.6	
		Others	Sweet						2.0				
			Marzi	pan			0.3	2.0◎					[45]
BEVER-	16001	(Fermented alcoholic	Sake	Josen								0.0	
AGES	16002	beverages)		Junmai	97	0.0							
	16006		Beer	Pale	91	0.7	0.9	0.5			0.1	0.9	
	16007			Black	96	1.3		0.5				<u> </u>	
	16009	-	Wine Happ		90 97	0.5		0.5			0.4		
	16010 16011	-	wine	White Red	95	1.3		0.5 1.4			0.1	1.9	
		(Distilled alcoholic	Shochu	Distilled through a continuous still	55	0.1		1.4				1.9	
		beverges)	Shochu	Distilled through a pot still	67	0.1							
	16022	(Compound alcoholic	Umes		85	0.3						0.1	
	16023	beverages)		etic Sake	79	0.1						0.12	
	16025		Mirin	Hon-mirin	56	0.3a							
	16035	<teas> (Green teas)</teas>	Масс	ha	6	40.3							
	16036		Sencha	Tea								51.6	
	16037			Infusion									
	16040	-		T C '	100	0.5						0.8	
			Hoji-cha	Infusion	100	0.6						0.8	
	16041	(Formont - 3 to )	Genmai-cha	Infusion	100	0.5							
	16042	(Fermented teas)	Genmai-cha Oolong tea	Infusion Infusion								0.2	
	16042 16043		Genmai-cha	Infusion Infusion Tea	100 99	0.5					0.1	0.2	
	16042		Genmai-cha Oolong tea	Infusion Infusion	100	0.5					0.1	0.2	
	16042 16043 16044	<coffees and<="" td=""><td>Genmai-cha Oolong tea Black tea</td><td>Infusion Infusion Tea Infusion</td><td>100 99 100 98 5</td><td>0.5 0.4 0.2 2.3 60.3<sup>a</sup></td><td></td><td></td><td></td><td></td><td>0.1</td><td>0.2 31.9 0.2</td><td></td></coffees>	Genmai-cha Oolong tea Black tea	Infusion Infusion Tea Infusion	100 99 100 98 5	0.5 0.4 0.2 2.3 60.3 <sup>a</sup>					0.1	0.2 31.9 0.2	
	16042 16043 16044 16045 16046 16047	<coffees and<br="">COCOAS&gt;</coffees>	Genmai-cha Oolong tea Black tea  Coffee	Infusion Infusion Tea Infusion Infusion Infusion Instant coffee Coffee drink	100 99 100 98 5 91	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9						0.2 31.9 0.2 1.7	
	16042 16043 16044 16045 16046 16047 16048	<coffees and<br="">COCOAS&gt;</coffees>	Genmai-cha Oolong tea Black tea	Infusion Infusion Tea Infusion Infusion Instant coffee Coffee drink Pure cocoa	100 99 100 98 5 91	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9 26.8		20.0			0.1	0.2 31.9 0.2 1.7 88.4	
	16042 16043 16044 16045 16046 16047 16048 16049	<coffees and<br="">COCOAS&gt;</coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa	Infusion Infusion Tea Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa	100 99 100 98 5 91 1	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9 26.8 7.8		20.0				0.2 31.9 0.2 1.7 88.4	
	16042 16043 16044 16045 16046 16047 16048 16049	<coffees and<br="">COCOAS&gt;</coffees>	Gennai-cha Oolong tea Black tea Coffee Cocoa	Infusion Infusion Tea Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa	100 99 100 98 5 91 1 5 84	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9 26.8 7.8 0.1		20.0				0.2 31.9 0.2 1.7 88.4	
	16042 16043 16044 16045 16046 16047 16048 16049 16050	<coffees and<br="">COCOAS&gt;</coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Amai- Kobu-	Infusion Infusion Tea Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa zake cha	100 99 100 98 5 91 1 5 84	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9 26.8 7.8 0.1 0.8		20.0				0.2 31.9 0.2 1.7 88.4 2.5	
	16042 16043 16044 16045 16046 16047 16048 16049 16050 16051	<coffees and="" cocoas=""> <others></others></coffees>	Genmai-cha Oolong tea Black tea Coffee Cocoa	Infusion Infusion Tea Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa aake Fruit flavored and colored drink	100 99 100 98 5 91 1 5 84 11	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9 26.8 7.8 0.1 0.8		20.0			0.4	0.2 31.9 0.2 1.7 88.4	
	16042 16043 16044 16045 16046 16047 16048 16050 16051 16052	<coffees and<br="">COCOAS&gt;</coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Amai- Kobu-	Infusion Infusion Tea Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa adke cha Fruit flavored and colored drink Cola drink	100 99 100 98 5 91 1 5 84 11 91 89	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9 26.8 7.8 0.1 0.8 0.1		20.0				0.2 31.9 0.2 1.7 88.4 2.5	
	16042 16043 16044 16045 16046 16047 16048 16050 16051 16052 16053 16054	<coffees and<br="">COCOAS&gt;</coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Amai- Kobu- (Carbonated beverages)	Infusion Infusion Tea Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa zake cha Fruit flavored and colored drink Cola drink Clear soft drink	100 99 100 98 5 91 1 5 84 11 91 89 92	0.5 0.4 0.2 2.3 60.3° 1.9 26.8 7.8 0.1 0.8 0.1 0.1		20.0			0.4	0.2 31.9 0.2 1.7 88.4 2.5	
	16042 16043 16044 16045 16046 16047 16048 16050 16051 16052	<coffees and="" cocoas=""> <others></others></coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Amai- Kobu-	Infusion Infusion Tea Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa cake cha Fruit flavored and colored drink Cola drink Infusion	100 99 100 98 5 91 1 5 84 11 91 89	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9 26.8 7.8 0.1 0.8 0.1					0.4	0.2 31.9 0.2 1.7 88.4 2.5	(46)
	16042 16043 16044 16045 16046 16047 16048 16050 16051 16052 16053 16054	<coffees and<br="">COCOAS&gt;</coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Amai- Kobu- (Carbonated beverages)	Infusion Infusion Tea Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa zake cha Fruit flavored and colored drink Cola drink Clear soft drink	100 99 100 98 5 91 1 5 84 11 91 89 92	0.5 0.4 0.2 2.3 60.3° 1.9 26.8 7.8 0.1 0.8 0.1 0.1		20.0 1.2* 0.7			0.4	0.2 31.9 0.2 1.7 88.4 2.5	(46)
	16042 16043 16044 16045 16046 16047 16048 16050 16051 16052 16053 16054	<coffees and="" cocoas=""> <others></others></coffees>	Genmai-cha Oolong tea Black tea Coffee  Cocoa  Amai- Kobu- (Carbonated beverages)  Mugi-cha Beer	Infusion Infusion Tea Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa aske cha Cola drink Cola drink Clear soft drink Infusion Pilsener lager beer	100 99 100 98 5 91 1 5 84 11 91 89 92	0.5 0.4 0.2 2.3 60.3° 1.9 26.8 7.8 0.1 0.8 0.1 0.1		1.2*			0.4	0.2 31.9 0.2 1.7 88.4 2.5	(46)
_	16042 16043 16044 16045 16046 16047 16048 16050 16051 16052 16053 16054	<coffees and="" cocoas=""> <others>  Orthers</others></coffees>	Gennai-cha Oolong tea Black tea Coffee Cocoa Ama- Kobu- (Carbonated beverages) Mugi-cha Beer Malt I Remo	Infusion Infusion Tea Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa ake cha Fruit flavored and colored drink Cola drink Clear soft drink Infusion Pilsener lager beer Alcohol free beer eveverage	100 99 100 98 5 91 1 5 84 11 91 89 92	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9 26.8 7.8 0.1 0.8 0.1 0.0 0.0	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 88.4 2.5	(46)
SEASON-	16042 16043 16044 16045 16046 16047 16049 16050 16051 16053 16054 16055	<coffees and="" cocoas=""> <others>  Orthers  <seasonings></seasonings></others></coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Amai- Kobu- (Carbonated beverages)  Mugi-cha Beer  Malt I Remo	Infusion Infusion Tea Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa cake cha Fruit flavored and colored drink Cola drink Clear soft drink Infusion Pilsener lager beer Alcohol free beer everage ulade unon type	100 99 100 98 5 91 1 5 84 11 91 89 92	0.5 0.4 0.2 2.3 60.3° 1.9 26.8 7.8 0.1 0.8 0.1 0.1	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 88.4 2.5 0.0	(46)
INGS AND	16042 16043 16044 16045 16046 16047 16050 16051 16052 16053 16055 17001	<coffees and="" cocoas=""> <others>  Orthers  <seasonings> (Worcester sauces)</seasonings></others></coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Amai- Kobu- (Carbonated beverages)  Mugi-cha Beer  Malt I Remo Comr	Infusion Infusion Tea Infusion Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa zake cha Fruit flavored and colored drink Cola drink Clear soft drink Infusion Pilsener lager beer Alcohol free beer Deverage Ulade Infusion Infusion Infusion Deverage Ulade Infusion Infusion Infusion Deverage Ulade Infusion Infusi	100 99 100 98 5 91 1 5 5 84 11 91 89 92 100	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9 26.8 7.8 0.1 0.0 0.0 0.0	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 88.4 2.5	(46)
	16042 16043 16044 16045 16046 16047 16050 16051 16053 16054 16055	<coffees and="" cocoas=""> <others>  Orthers  <seasonings> (Worcester sauces) (Hot seasonings)</seasonings></others></coffees>	Gennai-cha Oolong tea Black tea Coffee  Cocoa  Ama-  Kobu- (Carbonated beverages)  Mugi-cha Beer  Malt I Remo Comr Semi- Cayer	Infusion Infusion Tea Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa cake cha Fruit flavored and colored drink Cola drink Infusion Pilsener lager beer Alcohol free beer everage ulade non type thick type nne pepper oil	100 99 100 98 5 91 1 5 84 11 91 89 92 100	0.5 0.4 0.2 2.3 60.3° 1.9 26.8 7.8 0.1 0.8 0.1 0.0 0.0 0.0	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 88.4 2.5 0.0	(46)
INGS AND	16042 16043 16044 16045 16046 16047 16050 16051 16051 16053 16054 17001 17001 17002 17006	<coffees and="" cocoas=""> <others>  Orthers  <seasonings> (Worcester sauces) (Hot seasonings) (Shoyu: soy sauces)</seasonings></others></coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Amai- Kobu (Carbonated beverages)  Mugi-cha Beer  Malt I Remo Com Semi- Cayer Koku	Infusion Infusion Tea Infusion Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa cake cha Fruit flavored and colored drink Cola drink Clear soft drink Infusion Pilsener lager beer Alcohol free beer severage ulade unon type thick type une pepper oil chi-shoyu	100 99 100 98 5 91 1 5 84 11 91 89 92 100 61	0.5 0.4 0.2 2.3 60.3° 1.9 26.8 0.1 0.8 0.1 0.0 0.0 0.0	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 88.4 2.5 0.0 0.1	(46)
INGS AND	16042 16043 16044 16045 16046 16049 16050 16051 16052 16053 17000 17000 17000 17000 17000	<coffees and="" cocoas=""> <others>  Orthers  <seasonings> (Worcester sauces) (Hot seasonings) (Shoyu: soy sauces)</seasonings></others></coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Amai- Kobu- (Carbonated beverages)  Mugi-cha Beer  Malt I Remo Comm Semi- Cayer Koiku Usukt	Infusion Infusion Tea Infusion Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa zake cha Fruit flavored and colored drink Cola drink Clear soft drink Infusion Pilsener lager beer Alcohol free beer overage ulade non type thick type une pepper oil chi-shoyu chi-shoyu	100 99 100 98 5 91 1 5 84 11 91 89 92 100 61 90 68 71	0.5 0.4 0.2 2.3 1.9 26.8 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.7 13.5 11.9	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 88.4 2.5 0.0 0.1	(46)
INGS AND	16042 16043 16044 16045 16046 16047 16050 16051 16052 16053 16054 17001 17002 17006 17006 17007	<coffees and="" cocoas=""> <others>  Orthers  <seasonings> (Worcester sauces) (Hot seasonings) (Shoyu: soy sauces) (Edible salts)</seasonings></others></coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Amai- Kobu- (Carbonated beverages)  Mugi-cha Beer  Malt I Remo Comr Semi- Cayer Koiku Usuka	Infusion Infusion Tea Infusion Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa eake cocha Fruit flavored and colored drink Cola drink Infusion Pilsener lager beer Alcohol free beer everage ulade non type thick type me pepper oil cchi-shoyu cchi-shoyu non salt, Shokuen	100 99 100 98 5 5 91 1 1 91 91 91 91 100 61 61	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9 26.8 0.1 0.0 0.0 0.0 5.7 0.7 13.5 1.9 0.0	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 2.5 0.0 0.0 0.1 0.1 5.8 8.4 0.0	(46)
INGS AND	16042 16043 16044 16045 16046 16047 16048 16050 16051 16053 16053 17001 17002 17006 17007 17008 17017 17017 17017	<pre><coffees and="" cocoas="">  <others>  Orthers  <seasonings> (Worcester sauces) (Hot seasonings) (Shoyu: soy sauces) (Edible salts) (Vinegars)</seasonings></others></coffees></pre>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Ama-: Kobu (Carbonated beverages)  Mugi-cha Beer  Malt I Remo Comr Semi- Cayer Koiku Usukt Comr Grain	Infusion Infusion Tea Infusion Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa cake cha Fruit flavored and colored drink Cola drink Clear soft drink Infusion Pilsener lager beer Alcohol free beer everage ulade non type thick type une pepper oil chi-shoyu uchi-shoyu	100 99 100 98 5 91 1 1 91 91 99 92 100 61 90 68 71 1 98	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 7.8 0.1 0.0 0.0 0.0 5.7 0.7 13.5 11.9 0.0 0.0	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 88.4 2.5 0.0 0.1	(46)
INGS AND	16042 16043 16044 16045 16046 16047 16050 16051 16052 17001 17000 17007 17008 17012 17012	<coffees and="" cocoas=""> <others>  Orthers  <seasonings> (Worcester sauces) (Hot seasonings) (Shoyu: soy sauces) (Edible salts) (Vinegars)</seasonings></others></coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Amai- Kobu- (Carbonated beverages)  Mugi-cha Beer  Malt I Remo Comr Semi- Cayer Koiku Usukt Comr Grain Rice v	Infusion Infusion Tea Infusion Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa zake cha Fruit flavored and colored drink Cola drink Clear soft drink Infusion Pilsener lager beer Alcohol free beer everage ulade non type thick type une pepper oil chi-shoyu uchi-shoyu uchi-shoyu unon salt, Shokuen vinegar inegar	100 99 100 98 5 5 91 1 1 91 91 91 91 100 61 61	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9 26.8 0.1 0.0 0.0 0.0 5.7 0.7 13.5 1.9 0.0	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 2.5 0.0 0.1 0.1 6.4 5.8 8.4 0.0 0.1 0.4	(46)
INGS AND	16042 16043 16044 16045 16046 16047 16048 16050 16051 16053 16053 17001 17002 17006 17007 17008 17017 17017 17017	<coffees and="" cocoas=""> <others>  Orthers  <seasonings> (Worcester sauces) (Hot seasonings) (Shoyu: soy sauces) (Edible salts) (Vinegars)</seasonings></others></coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Ama-: Kobu (Carbonated beverages)  Mugi-cha Beer  Malt I Remo Comr Semi- Cayer Koiku Usukt Comr Grain	Infusion Infusion Tea Infusion Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa cake cha Fruit flavored and colored drink Cola drink Clear soft drink Infusion Pilsener lager beer Alcohol free beer everage ulade non type thick type une pepper oil chi-shoyu uchi-shoyu	100 99 100 98 5 5 91 1 1 1 91 92 100 61 90 68 71 1 1 1 1 1 1 1 1 1 1 1 1 1	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 7.8 0.1 0.0 0.0 0.0 5.7 0.7 13.5 11.9 0.0 0.0	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 88.4 2.5 0.0 0.1	(46)
INGS AND	16042   16043   16044   16045   16046   16047   16048   16059   16051   17001   17002   17006   17007   17018   17015   17016   17017   17017   17018	<coffees and="" cocoas=""> <others>  Orthers  <seasonings> (Worcester sauces) (Hot seasonings) (Shoyu: soy sauces) (Edible salts) (Vinegars)</seasonings></others></coffees>	Genmai-cha Oolong tea Black tea Coffee  Cocoa  Ama Kobu- (Carbonated beverages)  Mugi-cha Beer  Malt I Remo Comr Semi- Cayer Koiku Usukt Comr Grain Rice v	Infusion Infusion Tea Infusion Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa zake cha Fruit flavored and colored drink Cola drink Clear soft drink Infusion Pilsener lager beer Alcohol free beer beverage ulade non type thick type une pepper oil chi-shoyu chi-shoyu unon salt, Shokuen vinegar vinegar imegar	100 99 100 98 5 5 91 1 1 91 11 91 100 61 90 68 71 1 1 98 99 98 99 98 99 99 99 99 99	0.5 0.4 0.2 2.3 60.3° 1.9 26.8 7.8 0.1 0.0 0.0 0.0 0.0 0.7 13.5 11.9 0.0 0.2 0.3 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 2.5 0.0 0.1 0.1 6.4 5.8 8.4 0.0 0.1 0.4	(46)
INGS AND	16042   16043   16044   16045   16046   16047   16048   16059   16051   17001   17002   17006   17007   17018   17015   17016   17017   17017   17018	<coffees and="" cocoas=""> <others>  Orthers  <seasonings> (Worcester sauces) (Hot seasonings) (Shoyu: soy sauces) (Edible salts) (Vinegars)  (Soup stocks)</seasonings></others></coffees>	Genmai-cha Oolong tea Black tea  Coffee  Cocoa  Amai- Kobu (Carbonated beverages)  Mugi-cha Beer  Malt I Remo Comm Semi- Cayer Koiku Usuka Comm Grain Rice v Fruit vinegar	Infusion Infusion Tea Infusion Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa adke cha Fruit flavored and colored drink Cola drink Clear soft drink Infusion Pilsener lager beer Alcohol free beer everage ulade non type thick type une pepper oil chi-shoyu uchi-shoyu uchi-shoyu uchi-shoyu uchi-shoyu vinegar jinegar Wine vinegar Cider vinegar	100 99 100 98 5 5 1 5 84 11 91 100 61 61 61 90 68 71 1 98 99 99 99 99 99	0.5 0.4 0.2 2.3 60.3 <sup>a</sup> 1.9 26.8 7.8 0.1 0.0 0.0 0.0 0.0 0.0 0.7 13.5 11.9 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 88.4 2.5 0.0 0.1 6.4 5.8 12.3 8.4 0.0 0.1	(46)
INGS AND	16042 16043 16044 16045 16046 16047 16052 16053 16053 16053 17001 17000 17000 17000 17007 17008 17016 17017 17016 17017	<coffees and="" cocoas=""> <others>  Orthers  <seasonings> (Worcester sauces) (Hot seasonings) (Shoyu: soy sauces) (Edible salts) (Vinegars)  (Soup stocks)</seasonings></others></coffees>	Gennai-cha Oolong tea Black tea Coffee  Cocoa  Ama Kobu- (Carbonated beverages)  Mugi-cha Beer  Malt I Remo Comr Semi- Cayer Koiku Usukt Comr Grain Rice v Fruit vinegar	Infusion Infusion Tea Infusion Infusion Infusion Infusion Instant coffee Coffee drink Pure cocoa Milk cocoa zake ccha Fruit flavored and colored drink Cola drink Clear soft drink Infusion Pilsener lager beer Alcohol free beer everage ulade non type thick type nne pepper oil chi-shoyu uchi-shoyu uchi-shoyu uchi-shoyu uchi-shoyu uchi-shoyu inegar Cider vinegar Cider vinegar Cider vinegar Cider vinegar	100 99 100 98 5 5 91 1 1 91 11 91 100 61 90 68 71 1 1 98 99 98 99 98 99 99 99 99 99	0.5 0.4 0.2 2.3 60.3° 1.9 26.8 7.8 0.1 0.0 0.0 0.0 0.0 0.7 13.5 11.9 0.0 0.2 0.3 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.2	1.2** 0.7			0.4	0.2 31.9 0.2 1.7 88.4 2.5 0.0 0.1 6.4 5.8 8.4 0.0 0.1 0.1 0.1	(46)

(Continued on page 122)

	17023	Nibos	hi extract	100	0.1							
	17027		omme, cubes	1	1.1						0.5	
	17028		ning mix, granule		1.1						3.8	
	17029	Mentsuvu	Straight	89	0.9							
	17034 (Tomato processed goods)	Puree		94	5.0	1.5					8.9	
	17036	Ketch	up	65	4.0	1.5		1.8		0.1	5.9	
	17039 (Dressings)		ese style dressing	62	2.7							
	17041	Thous	sand Island dressing	42	1.1							
	17042	Mayonnaise	Whole egg type	17	0.5a	12.0				0.2	3.8	
	17043	•	Egg yolk type								7.3	
	17044 (Miso)	Rice-koji miso	Sweet type	42	20.4b						5.4	
	17045		Light yellow type								11.9	
	17046		Dark yellow type								13.7	
	17047	Barley	y-koji miso	35	7.7						8.4	
	17018	Soybe	ean-koji miso								16.8	
	17049	Instant miso	Powdered type	13	4.5							
	17050		Paste type	63	4.9							
	17051 (Roux)	Curry	roux	3	2.8							
	17053 (Others)	Sakek		56	6.5							
	17054	Mirin	fu-chomiryo	51	0.0							
	17057   <spices></spices>	Mustard	Powder								158.1	
	17058		Paste	30	23.9							
	17059		Prepared mustard								24.7	
	17060		Grain mustard	67	16.4						22.5	
	17061	Curry	powder	7	30.7						27.8	
	17063	Pepper	Black, ground	12	3.0						19.5	
	17064		White, ground								4.7	
	17065		Mixed, ground								15.0	
	17066	Japanese pepper	Ground	13	9.5						27.1	
	17067	Cinnamon	Ground	8	4.4						1.4	
	17068	Ginger	Dried, ground								9.6	
	17069		Paste	84	0.7						0.3	
	17073	Red pepper	Ground	7	48.6						49.1	
	17075	Garlic	Garlic powder								3.5	
	17076		Paste	64	0.9						1.0	
	17077	Basil	Ground								61.5	
	17078	Parsley	Dried								23.5	
	17079	Paprica	Ground								38.7	
	17080	Wasabi	Powder, mixed with								23.6	
			mustard powder									
	17081		Paste	36	3.3							
	17082 <others></others>	Yeast	Baker's yeast, compressed			60.0	33.0			20.2		
	17083		Baker's yeast, dried	6	88.2	200.0					309.7	
	Others	Miscellaneous	Yeast, brewer's				115.0		200.0			
OTHERS	Others	Royal	ielly	4	460.1			1 1	410.0		1	

(): Type category.

[]: Middle category.

<>: Sub category in fishes and shellfishes, meats, milks, beverages, seasonings and spices.

Others: Not described foods in the Standard Tables of Food Composition in Japan.

Itaric: Japanese food name (no name in English).

(): in Notes points at Biotin contents with the asterisk (\*\*).

a: average of two products.

b: average of three products.

c : percentage of free biotin to total biotin (free and protein-bound biotin).

<sup>&</sup>lt;sup>1)</sup> %.

 $<sup>^{2)}</sup>$ µg/100g per food.

<sup>&</sup>lt;sup>3)</sup>The present study (Himeji study).

<sup>&</sup>lt;sup>4)</sup>The Danish Food Composition Databank is on the Web - Now revision 6.0 (2007)<sup>20</sup>.

<sup>&</sup>lt;sup>5)</sup>Food Composition and Nutrition Tables 6th revised and completed edition (2000) <sup>21</sup>.

<sup>&</sup>lt;sup>6)</sup>Hoppner K et al. (1978; 1983; 1989; 1992; 1994)<sup>23-27</sup>.

<sup>&</sup>lt;sup>7)</sup>Hardinge MG and Crooks H (1961)<sup>28</sup>.

<sup>8)</sup>Staggs CG et al. (2004)<sup>29</sup>.

<sup>&</sup>lt;sup>9)</sup>Standard Tables of Food Composition in Japan<sup>18</sup>.

Table 2 The estimation of biotin intake by the 98 food group calculation method in Japanese

	Food 9	groups	Average				Biotin i	intake <sup>2</sup>			
Large category	Middle category	Small category	content of	4.03		ales	10.00			nales	40.00
(18 food group) Cerials	(33 food group)	(98 food group)	biotin <sup>1</sup>	1-23	8-9	10-11	18-29	1-2	8-9	10-11	18-29 5.2
Certais	Rice-processed products										0.1
	Wheat-processed products	Wheats	1.8	0.0	0.1	0.1	0.1		0.1	0.1	0.1
		Breads	2.4	0.5	1.0	1.1	0.7	0.4	1.0	1.1	0.7
		Sweet buns	2.9	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.1
											0.4
											0.0
											0.3
	Other cereal-processed products		2.5	0.0	0.0	0.0	0.1		0.0	0.0	0.1
		Corn products	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Others						0.0	0.2		0.1
Potatoes and Starches	Potato-processed products										0.2
											0.3
	Starch-processed products										0.0
Sugars and Sweetnener	Sugars and sweetneners	Sugars and sweetneners	3.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2
Pulses	Soybeans-processed products	Whole soybeans and its products	19.3	0.1	0.7	0.7	0.1	0.2	0.6	0.6	0.1
		Tofu	7.5	1.2	2.3	2.1	2.1	1.2	2.3		1.9
								0.1			0.2
											0.6
	Other nulses-processed products										0.7
Nuts and Seeds	Nuts and seeds										0.1
Vegetables	Green and yellow vegetables	Tomatoes	1.7	0.1	0.3	0.1			0.3	0.4	0.2
^		Carrots	1.9	0.3	0.6	0.5	0.4	0.2	0.5	0.5	0.3
		Spinach	3.3	0.1	0.3	0.3	0.3	0.2	0.3	0.3	0.4
		Sweet peppers	1.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
	<u></u>	Others	5.3	0.8	1.3	1.3	1.2	0.9	1.1	1.5	1.4
	Other vegetables										0.5
											0.1
											0.1
											0.4
		Others	2.6	0.4	1.0	1.1	1.1		0.9	0.9	1.1
	Vegetable juce	Vegetable juce	2.7	0.4	0.2	0.2	0.4	0.4	0.3	0.2	0.5
	Pickles	Leaf vegetable pickles	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.											0.0
Fruits	Raw fruits										0.0
											0.1
											0.2
											0.3
	Jam	Jam	0.5	0.0	0.0	0.0				0.0	0.0
	Fruit juices	Fruit juices	0.7	0.4	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Mushrooms	Mushrooms	Mushrooms	9.3	0.7	1.1	1.1	1.4	0.5	1.1	1.2	1.2
Algae	Algae										0.4
Fishes and Shellfishes	Raw fishes and shellfishes										0.2
											0.3
											0.1
				0.1	0.1					0.2	0.2
		Shellfishes	9.1	0.0	0.1	0.2	0.2	0.0	0.0	0.1	0.2
		Cuttlefishes	3.9	0.0	0.1	0.2	0.1	0.0	0.1	0.2	0.1
		Prawns, shrimps and crabs			0.1			0.0	0.1		0.1
	Fishes and shellfishes-products										1.0
											0.2
		Rice	0.0								
											0.0
Meats	Animal meats	01	1.2	0.1	0.1	0.1					0.2
		Swine	2.1			0.9	1.1	0.2	0.7		0.8
				0.3	0.6	0.7	0.7	0.3	0.6	0.6	0.6
	Doubtries			0.2	0.6	0.0	1.0	0.1	0.7	0.0	0.7
	Poultries			0.5	0.0	0.8	1.0	0.4	0./	0.8	0.7
				0.1	0.0	0.1	1.0	0.0	0.0	0.1	0.4
	Meats (offals)				2.0	7		V.U	0.0		
	Meats (offals) Other meats		_								
		Whale Others									
Eggs	Other meats Eggs	Whale Others Eggs	17.9								6.1
Eggs Milks	Other meats	Whale Others Eggs Milks	17.9 3.1	3.1	9.2	9.5	2.2	2.5	8.1	7.9	1.9
	Other meats Eggs	Whale Others Eggs Milks Cheeses	17.9 3.1 2.6	3.1 0.1	9.2 0.1	9.5 0.1	2.2 0.1	2.5 0.1	8.1 0.1	7.9 0.1	1.9 0.1
	Other meats Eggs	Whale Others Eggs Milks Cheeses Fermented milk and lactic acid bacteria beverages	17.9 3.1 2.6 1.4	3.1 0.1 0.8	9.2 0.1 0.6	9.5 0.1 0.5	2.2 0.1 0.3	2.5 0.1 0.5	8.1 0.1 0.4	7.9 0.1 0.4	1.9 0.1 0.4
	Other meats  Eggs  Milk and dairy products	Whale Others Eggs Milks Cheeses Fermented milk and lactic acid bacteria beverages Others	17.9 3.1 2.6 1.4 1.7	3.1 0.1 0.8	9.2 0.1 0.6	9.5 0.1 0.5	2.2 0.1 0.3	2.5 0.1 0.5	8.1 0.1 0.4	7.9 0.1 0.4	1.9 0.1
Milks	Other meats  Eggs  Milk and dairy products  Other milks	Whale Others Eggs Milks Cheeses Fermented milk and lactic acid bacteria beverages Others Other milks	17.9 3.1 2.6 1.4 1.7	3.1 0.1 0.8 0.7	9.2 0.1 0.6 0.2	9.5 0.1 0.5 0.3	2.2 0.1 0.3 0.3	2.5 0.1 0.5 0.6	8.1 0.1 0.4 0.2	7.9 0.1 0.4 0.2	1.9 0.1 0.4
Milks	Other meats  Eggs  Milk and dairy products	Whale Others Eggs Milks Cheeses Fermented milk and lactic acid bacteria beverages Others Other milks Butters	17.9 3.1 2.6 1.4 1.7 — 0.6	3.1 0.1 0.8 0.7	9.2 0.1 0.6 0.2	9.5 0.1 0.5 0.3	2.2 0.1 0.3 0.3	2.5 0.1 0.5 0.6	8.1 0.1 0.4 0.2	7.9 0.1 0.4 0.2	1.9 0.1 0.4 0.2
Milks	Other meats  Eggs  Milk and dairy products  Other milks	Whale Others Eggs Milks Cheeses Fermented milk and lactic acid bacteria beverages Others Other milks Butters	17.9 3.1 2.6 1.4 1.7 — 0.6	3.1 0.1 0.8 0.7	9.2 0.1 0.6 0.2	9.5 0.1 0.5 0.3	2.2 0.1 0.3 0.3	2.5 0.1 0.5 0.6	8.1 0.1 0.4 0.2	7.9 0.1 0.4 0.2 0.0 0.0	1.9 0.1 0.4 0.2
Milks	Other meats  Eggs  Milk and dairy products  Other milks	Whale Others Eggs Milks Cheeses Fermented milk and lactic acid bacteria beverages Others Other milks Butters Margarines Vegetable fats and oils Animal fats	17.9 3.1 2.6 1.4 1.7 - 0.6 0.1 0.0	3.1 0.1 0.8 0.7 0.0 0.0	9.2 0.1 0.6 0.2 0.0 0.0	9.5 0.1 0.5 0.3 0.0 0.0	2.2 0.1 0.3 0.3 0.0 0.0	2.5 0.1 0.5 0.6 0.0	8.1 0.1 0.4 0.2 0.0 0.0	7.9 0.1 0.4 0.2 0.0 0.0	1.9 0.1 0.4 0.2 0.0 0.0
Milks  Fats and Oils	Other meats  Eggs  Milk and dairy products  Other milks  Fats and oils	Whale Others Eggs Milks Cheeses Fermented milk and lactic acid bacteria beverages Others Other milks Butters Margarines Vegetable fats and oils Animal fats Others	17.9 3.1 2.6 1.4 1.7 - 0.6 0.1 0.0 0.0	3.1 0.1 0.8 0.7 0.0 0.0 0.0 0.0	9.2 0.1 0.6 0.2 0.0 0.0 0.0 0.0	9.5 0.1 0.5 0.3 0.0 0.0 0.0 0.0	2.2 0.1 0.3 0.3 0.0 0.0 0.0 0.0	2.5 0.1 0.5 0.6 0.0 0.0 0.0	8.1 0.4 0.2 0.0 0.0 0.0 0.0	7.9 0.1 0.4 0.2 0.0 0.0 0.0	1.9 0.1 0.4 0.2 0.0 0.0 0.0
Milks  Fats and Oils	Other meats  Eggs  Milk and dairy products  Other milks	Whale Others Eggs Milks Cheeses Fermented milk and lactic acid bacteria beverages Others Other milks Butters Margarines Vegetable fats and oils Animal fats Others Traditional confectioneries	17.9 3.1 2.6 1.4 1.7 - 0.6 0.1 0.0 - 1.7	3.1 0.1 0.8 0.7 0.0 0.0 0.0 0.0	9.2 0.1 0.6 0.2 0.0 0.0 0.0 0.0	9.5 0.1 0.5 0.3 0.0 0.0 0.0 0.0	0.1 0.3 0.3 0.0 0.0 0.0 0.0 0.0	2.5 0.1 0.5 0.6 0.0 0.0 0.0 0.0	8.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0	7.9 0.1 0.4 0.2 0.0 0.0 0.0 0.0	1.9 0.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0
Milks  Fats and Oils	Other meats  Eggs  Milk and dairy products  Other milks  Fats and oils	Whale Others Eggs Milks Cheeses Fermented milk and lactic acid bacteria beverages Others Other milks Butters Wegetable fats and oils Animal fats Others Traditional confectioneries Cakes, buns and pastries	17.9 3.1 2.6 1.4 1.7 - 0.6 0.1 0.0 - 1.7 4.9	3.1 0.1 0.8 0.7 0.0 0.0 0.0 0.0 0.0	9.2 0.1 0.6 0.2 0.0 0.0 0.0 0.0 0.0	9.5 0.1 0.5 0.3 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.3 0.3 0.0 0.0 0.0 0.0 0.0	2.5 0.1 0.5 0.6 0.0 0.0 0.0 0.0	8.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0 0.0	7.9 0.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0	1.9 0.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0 0.0
Milks  Fats and Oils	Other meats  Eggs  Milk and dairy products  Other milks  Fats and oils	Whale Others Eggs Milks Cheeses Fermented milk and lactic acid bacteria beverages Others Other milks Butters Margarines Vegetable fats and oils Animal fats Others Traditional confectioneries Cakes, buns and pastries Biscuits	17.9 3.1 2.6 1.4 1.7 - 0.6 0.1 0.0 - 1.7 4.9 1.2	3.1 0.1 0.8 0.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0	9.2 0.1 0.6 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	9.5 0.1 0.5 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2.5 0.1 0.5 0.6 0.0 0.0 0.0 0.0 0.1 0.3 0.0	8.1 0.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	7.9 0.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0 0.0	1.9 0.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Milks	Other meats  Eggs  Milk and dairy products  Other milks  Fats and oils	Whale Others Eggs Milks Cheeses Fermented milk and lactic acid bacteria beverages Others Other milks Butters Wargarines Vegetable fats and oils Animal fats Others Traditional confectioneries Cakes, buns and pastries Biscuits Candies	17.9 3.1 2.6 1.4 1.7 - 0.6 0.1 0.0 0.0 - 1.7 4.9 1.2	3.1 0.1 0.8 0.7 0.0 0.0 0.0 0.0 0.1 0.3 0.1	9.2 0.1 0.6 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	9.5 0.1 0.5 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2.5 0.1 0.5 0.6 0.0 0.0 0.0 0.1 0.3 0.0 0.0	8.1 0.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	7.9 0.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1.9 0.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Milks  Fats and Oils	Other meats  Eggs  Milk and dairy products  Other milks  Fats and oils	Whale Others Eggs Milks Cheeses Fermented milk and lactic acid bacteria beverages Others Other milks Butters Margarines Vegetable fats and oils Animal fats Others Traditional confectioneries Cakes, buns and pastries Biscuits	17.9 3.1 2.6 1.4 1.7 - 0.6 0.1 0.0 - 1.7 4.9 1.2	3.1 0.1 0.8 0.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0	9.2 0.1 0.6 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	9.5 0.1 0.5 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2.5 0.1 0.5 0.6 0.0 0.0 0.0 0.0 0.1 0.3 0.0	8.1 0.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	7.9 0.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0 0.0	1.9 0.1 0.4 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0

(Continued on page 124)

Food groups			Average	Average Biotin intake <sup>2</sup>							
Large category	Middle category	Small category	content of	Males			Females				
(18 food group)	(33 food group)	(98 food group)	biotin1	1-23	8-9	10-11	18-29	1-2	8-9	10-11	18-29
Beverages	Alcoholic beverages	Others	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	Other beverages	Teas	0.4	0.1	0.3	0.4	1.0	0.2	0.4	0.4	1.1
		Coffes and cocoas	2.1	0.0	0.1	0.2	1.9	0.0	0.1	0.2	1.5
		Others	0.2	0.2	0.3	0.3	0.4	0.2	0.3	0.3	0.2
Seasonings and Spices	Seasonings	Suauces	5.7	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1
		Syoyu <sup>9</sup>	12.7	0.6	1.3	1.3	1.7	0.7	1.3	1.4	1.5
		Edible salts	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Mayonnaise	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Miso	9.4	0.5	0.9	1.0	0.9	0.4	0.8	0.9	0.8
		Others	1.5	0.4	0.6	0.7	1.2	0.4	0.7	0.7	0.8
	Spices	Spices and others	20.9	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1
Total amount (biotin intake <sup>10</sup> )			_	25.0	47.0	48.9	50.1	24.4	42.5	45.5	41.8

Itaric: Japanese food name (no name in English).

of biotin is not set as of yet in either country, because evidence concerning the dietary intake of biotin is not complete, and some optimized parameters to evaluate the state of biotin deficiency are not defined and established. As almost all foods analyzed in Himeji study are fresh and raw, the amount of cooking loss and the destroy of biotin by processing with a food processor remain unclear. More studies on the bioavailability of biotin in the gastrointestinal tract will be needed.

### 5. Conclusion

The "Biotin content table" covers most common foods served in Japanese meals. To summarize Himeji study and the previous studies the intake of biotin was estimated to be  $50\,\mu g/day$  for adults in Japan. This biotin content table might be useful as a database for the estimation of the dietary intake of biotin from meals.

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<sup>&</sup>lt;sup>1</sup>Determined in this study (Himeji study). µg/100g per food.

<sup>&</sup>lt;sup>2</sup>Multiplied "average content of biotin" by "food intake" in the 98 food group in the National Health and Nutrition Survey in Japan (2012). μg/day.

<sup>&</sup>lt;sup>3</sup>Age: years.

<sup>&</sup>lt;sup>4</sup>Fried thin slices of pressed tofu.

<sup>&</sup>lt;sup>5</sup>Japanese radishes.

<sup>&</sup>lt;sup>6</sup>Pickled with rice bran and salt.

<sup>&</sup>lt;sup>7</sup>Salted and semi-dried split.

<sup>&</sup>lt;sup>8</sup>Simmered in soy sauce and suger.

<sup>&</sup>lt;sup>9</sup>Soy sauce.

<sup>&</sup>lt;sup>10</sup>μg/day.

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