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Part 2
= Dietary Materials =

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Contents

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Environmental and Dietary Materials*

(Japan Chemical Analysis Center)

1. Collection and pretreatment of samples

(1) Rain and dry fallout

Rain and dry fallout was collected monthly on asampling tray, approximately 5000 cm^2 in area, which was filled with water to a depth of 1 cm at the beginning of every month.

Strontium and cesium carrier solutions were added after the sample was filtered. The tray was washed with 5 ℓ of distilled water and the washing was combined to the filtrate.

The sample was passed through a cation exchange column (500 mℓ of Dowex 50W X8, 50~100 mesh, Na form)at a rate flow of 80 mℓ/min.

(2) Airborne dust

Airborne dust was collected by an electrostatic precipitator or a filter air sampler for every threemonths at a rate of more than 3000 m^3 per month. The sampling was done 1 to 1.5 meters above the ground.

(3) Service water and freshwater

Service water, 100 ℓ each, was collected at the intake of the water-treatment plant and at the tap after water was left running for five minutes. Strontium andcesium carriers were added to the filtered water sample. The subsequent process was the same as that describedin the section (1). Freshwater was treated inthe same way as the service water.

(4) Soil

Soil was collected from the location in the spacious and flat area without past surface disturbance caused by duststorms, inflow and out flow due to precipitation, etc.. Any places located under trees in a forest, in astony area or inside of river banks were avoided. Soil was taken from two layers of different depths, 0-5cm and 5-20cm. The soil lumps were crushed by hands and driedin a drying oven regulated 105℃. The soil was then passed through a 2 mm sieve to remove plant roots and pebbles.

(5) Sea water

Sea water was collected at the fixed stations where the effect of terrestrial fresh water from rivers was expected to be negligibly small. A special consideration was also given to weather conditions. The sampling was carried out when there was no rainfall for the last few days. To prevent contamination, water samples were collected at the bow of a sampling boat just before she stood still by scooping surface water using a polyethylene bucket.

Immediately after the collection, the samples were acidified to a pH lower than 3 by adding concentrated hydrochloric acid in a ratio of 1mℓ to 1ℓ of sea water, and then stored in 20 ℓ polyethylene containers. The sampling equipments as well as containers were thoroughly rinsed with dilute hydrochloric acid and then with distilled water before use. Two hundred milliliters of sea water was also collected at the same stations for the determination of chlorinity.

(6) Sea sediments

Sediment was collected in the same area as that for the sea water sample, taking the following criteria into account:

a. The depth of water exceeds 1 m at low tide.
b. No significant sedimental movement is observed in the vicinity of concern.
c. Mud, silt and fine sand are preferable.

A conventional sediment sampling device was used for collecting the top few centimeters of surface sediment. Approximately 4kg of the sample in wet weight was spread on a stainless steel dish after removed of the pebbles, shells and other foreign materials, and dried in a drying oven regulated at 105℃.

(7) Total diet

A full one day ordinary diet including three meals, water, tea and otherin-between snacks for five persons was collected as a sample of "total diet".

The sample in a large stainless steel pan was carbonized carefully by direct application of gas flame, and was transfered to a porcelain dish and then ashed at 450℃ in an electric muffle furnace.

(8) Rice

Polished rice was collected in producing districts at the harvest and in consuming areas when new crops were first put on sale. The sample was carbonized and ashed in a porcelain dish.

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* Samples were sent to the Center from 46 contracted prefectures.

(9) Milk

Raw milk was collected in producing districts and commercial milk was purchased in consuming districts. Milk in a stainless steel pan or a porcelain dish was evaporated to dryness followed by carbonization and ashing.

(10) Vegetables

Spinach and Japanese radish were selected as the representatives for left vegetables and for non-starch roots, respectively. After removing soil, the edible part of vegetable sample was dried and carbonized in a stainless steel pan or a porcelain dish.

(11) Tea

Five hundred grams of manufactured green tea was collected, carbonized and ashed in a stainless steel pan or a porcelain dish.

(12) Fish, shellfish and seaweeds

a. Sea fish and freshwater fish

Fish was rinsed with water and blotted with a filter paper. Only the edible part was used in case of larger sized fish, and the whole part was used in case of smaller ones. Each sample was weighed and placed in a stainless steel pan or a porcelain dish. After carbonized, the sample was ashed in an electric muffle furnace.

b. Shellfish

Approximately 4 kg of shellfish including the shells was collected or purchased. After removing the shells, it was treated in the same way as that for the sea fish.

c. Seaweeds

Edible seaweeds were collected and rinsed with water to remove sand and other adhering matters on the surface. These were removed of excess water, weighed dried and ashed.

Table 1 shows detailes of sample collection.

Table 1 Details of sample collection

Sample	Frequency of sampling	Quantity of sample
=Environmental materials=		
(1) Rain and dry fallout		
1. For domestic program	monthly	
2. For WHO program	monthly	
(2) Airborne dust	quarterly	>3000 m^3/month
(3) Service water and freshwater		
1. Service water (source water)	semiyearly	100 ℓ
2. Service water (tap water)	semiyearly	100 ℓ
3. Freshwater	yearly (fishing season)	100 ℓ
(4) Soil		
1. 0～ 5 cm	yearly	4 kg
2. 5～ 20cm	yearly	4 kg
(5) Sea water	yearly	40 ℓ
(6) Sea sediments	yearly	4 kg
=Dietary materials=		
(7) Total diet	semiyearly	daily amount for 5 p
ersons		
(8) Rice		
1. Producing districts	yearly (harvesting season)	5 kg (polished rice)
2. Consuming districts	yaerly (harvesting season)	5 kg (polished rice)
(9) Milk		
1. Producing districts for WHO program	quarterly (February, May, August and November)	3 ℓ
2. Producing districts for domestic program	semiyearly (February and August)	3 ℓ

Sample	Frequency of sampling	Quantity of sample
3. Consuming districts	semiyearly (February and August)	3 ℓ
4. Powdered milk	semiyearly (April and October)	2～ 3 kg
(10) Vegetables		
1. Producing districts	yearly (harvesting season)	4 kg
2. Consuming districts	yearly (harvesting season)	4 kg
(11) Tea	yearly (the first harvesting season)	500g (manufactured tea)
(12) Fish, shellfish and seaweeds		
1. Sea fish	yearly (fishing season)	4 kg
2. Freshwater fish	yearly (fishing season)	4 kg
3. Shellfish	yearly (fishing season)	4 kg
4. Seaweeds	yearly (fishing season)	2～ 3 kg

2. Preparation of samples for analysis

(1) Rain, service water and freshwater

Strontium and cesium were eluted with hydrochloric acid from the cation exchange column. The residue of rain sample on the filter paper was ashed in an electric muffle furnace and the ash was dissolved in hydrochloric acid. The insoluble part was filtered and washed. The filtrate and the washings were combined to the previous eluate and used for radiochemical analysis.

(2) Soil and Sea sediment

Dried soil was crushed to smaller ones than 0.25 mm in size by a crusher. The sieved sample was ashed in an electric muffle furnace regulated at 450℃. The sample was then heated with hydrochloric acid, strontium and cesium carrier solutions and the mixture washeated. The insoluble constituent was filtered off and washed with water.

The dried sample was crushed to smaller ones than 0.25 mm by a crushing machine. The further preparation of the sample was the same as that described in the section 2-(2).

(3) Rice

The ashed sample was pulverized with a porcelain mortar and passed through a 0.35 mm sieve. The sievedsample to which both strontium and cesium carriers were added, was digested with nitric acid by heating. After the sample was heated again with nitric acid to dryness, strontium and cesium were extracted with hydrochloric acid and water. The insoluble constituent was filtered and washed. The filtrate and washings were combined for subsequent radiochemical analysis.

(4) Airborne dust, diet, milk, vegetables, fish and shellfish, seaweeds, tea and others

These ashed samples were treated with the same procedure as that described in the section 2-(4).

3. Separation of strontium-90 and cesium-137

(1) Strontium-90

Sample solutions, prepared as in the foregoing sections 2-(1) through 2-(4), were neutralized with sodium hydroxide. After sodium carbonate was added, the precipitate of strontium and calcium carbonates was separated. The supernatant solution was retainedfor cesium-137 determination. The carbonates weredissolved in hydrochloric acid and strontium and calcium were precipitated as oxalates. The precipitate was dissolved in nitric acid and strontium was separated from calcium by successive fuming nitric acid separation. Iron scavenge was made after addition of ferric iron carrier followed by barium chromate separation after addition of barium carrier to remove radium, its daughters and lead. Strontium was recovered as carbonate, and the precipitate was dried and weighed to determine strontium recovery. The strontium carbonate was dissolved in hydrochloric acid and iron carrier was added. The solution was allowed to stand for two weeks for strontium-90 and yttrium-90 to attain equilibrium. Yttrium-90 was coprecipitated with ferric hydroxide and the precipitate was filtered off, washed and counted.

(2) Cesium-137

The supernatant separated from the strontium fraction was acidified with hydrochloric

acid. While stirring, cesium was adsorbed on the ammonium molybdophosphate added.

After filtered off and washed with hydrochlotric acid the precipitate was dissolved in 2.5 N sodium hydroxide solution. The solution was adjusted to pH 8.2 with hydrochloric acid and allowed to cool. Resultant molybdenum hydroxide which separated out in the solution, was filtered off and washed with water. EDTA was added to the filtrate and washings. Cesium and rubidium were adsorbed on a cation exchange column and cesiumwas separated from rubidium by eluting with hydrochloric acid.

The eluate was evaporated to dryness and was dissolved. The solution was filtered. Chloroplatinic acid was added to precipitate cesium. The precipitate was filtered onto a tared paper using a demountable filter and washed with water and then ethanol. After drying, the chemical yield of cesium was determined by weighing the precipitate. Cesium-137 radioactivity was measured for this precipitate.

4. Determination of stable strontium, calcium and potassium

A weighed amount of soil or sea sediment was heated in a electric muffle furnace at 450 ℃ and then treated with hydrochloric acid for extraction. A weighed aliquot of ashed samples of total diet, vegetables, milk, fish, shellfish or seaweeds was digested with hydrofluoric acid and nitric acid.

The extract was made up to an appropriate volume with dilute hydrochloric acid. The sample solution was analyzed for calcium by titration with standard potassium permanganate solution after separating calcium as oxalate. Atomic absorption spectroscopy was applied when appropriate. Stable strontium andpotassium were determined by atomic absorption andflame emission spectrometry, respectively.

5. Counting

After the radiochemical separation the mounted precipitates were counted for activity using low background beta counters normally for 60 to 90 min.

Net sample counting rates were corrected for counter efficiency, recovery, self-absorption and decay to obtain the content of strontium-90 and cesium-137 per sample aliquot. From the results, concentrations of these nuclides in the original samples were calculated.

6. Results

(1) Strontium-90 and Cesium-137 in Total Diet
(from Nov. 1992 to Feb. 1993)

-continued from No.103 of this publication-

Table (1): Strontium-90 and Cesium-137 in Total Diet

Location	Ash	Ca	K	^{90}Sr		^{137}Cs	
	(g/p·d)	(mg/p·d)	(mg/p·d)	(Bq/p·d)	(Bq/gCa)	(Bq/p·d)	(Bq/gK)
November, 1992							
Iwaizumi-machi, IWATE	11.7	337	1040	0.042 ±0.0071	0.12 ±0.021	0.036 ±0.0056	0.034 ±0.0053
Ishimaki, MIYAGI	13.6	462	1810	0.082 ±0.0061	0.18 ±0.013	0.037 ±0.0058	0.021 ±0.0032
Onagawa-machi, MIYAGI	15.5	459	1840	0.066 ±0.0063	0.14 ±0.014	0.035 ±0.0066	0.019 ±0.0036
Akita, AKITA	15.4	443	1980	0.082 ±0.0082	0.18 ±0.018	0.085 ±0.011	0.043 ±0.0054
Oomagari, AKITA	14.2	436	2290	0.076 ±0.0075	0.18 ±0.017	0.20 ±0.015	0.088 ±0.0064
Yamagata, YAMAGATA	15.5	460	1440	0.066 ±0.0084	0.14 ±0.018	0.058 ±0.0095	0.040 ±0.0066
Higashine, YAMAGATA	7.50	322	1140	0.044 ±0.0037	0.14 ±0.011	0.024 ±0.0035	0.021 ±0.0031
Ichihara, CHIBA	14.6	363	1660	0.037 ±0.0048	0.10 ±0.013	0.016 ±0.0044	0.0096±0.0027
Chikura-machi, CHIBA	16.0	392	2000	0.067 ±0.0065	0.17 ±0.017	0.026 ±0.0054	0.013 ±0.0027
Hiratsuka, KANAGAWA	17.4	548	2490	0.065 ±0.0068	0.12 ±0.012	0.056 ±0.0093	0.023 ±0.0037
Kosugi-machi, TOYAMA	16.1	466	2360	0.070 ±0.0075	0.15 ±0.016	0.045 ±0.0086	0.019 ±0.0036
Nagano, NAGANO	15.8	576	2130	0.068 ±0.0077	0.12 ±0.013	0.031 ±0.0087	0.014 ±0.0041
Shizuoka, SHIZUOKA	16.3	657	2590	0.070 ±0.0075	0.11 ±0.011	0.060 ±0.010	0.023 ±0.0040
Hamaoka-machi, SHIZUOKA	15.5	799	2460	0.072 ±0.0076	0.090±0.0095	0.054 ±0.0099	0.022 ±0.0040
Nagoya, AICHI	21.0	1230	2320	0.052 ±0.011	0.042±0.0092	0.020 ±0.010	0.0085±0.0044
Shinshiro, AICHI	15.4	384	1670	0.051 ±0.015	0.13 ±0.038	0.043 ±0.0094	0.026 ±0.0056
Owase, MIE	8.62	266	1170	0.027 ±0.0054	0.10 ±0.020	0.023 ±0.0072	0.020 ±0.0061
Hamasaka-machi, HYOGO	13.9	575	1810	0.056 ±0.0059	0.097±0.010	0.038 ±0.0079	0.021 ±0.0044
Kashihara, NARA	11.8	608	1410	0.066 ±0.0081	0.11 ±0.013	0.040 ±0.0093	0.028 ±0.0066
Gojo, NARA	15.2	895	1890	0.056 ±0.0092	0.063±0.010	0.044 ±0.0069	0.024 ±0.0036
Wakayama, WAKAYAMA	14.8	690	1480	0.042 ±0.0048	0.061±0.0070	0.058 ±0.0073	0.040 ±0.0049
Koza-machi WAKAYAMA	18.6	1280	1860	0.068 ±0.0066	0.053±0.0051	0.040 ±0.0080	0.021 ±0.0043
Tottori, TOTTORI	16.1	502	2210	0.069 ±0.010	0.14 ±0.021	0.18 ±0.013	0.083 ±0.0058
Fukube-mura, TOTTORI	14.4	374	1990	0.0095±0.011	0.25 ±0.029	0.031 ±0.0063	0.015 ±0.0032
Okayama, OKAYAMA	18.8	743	2640	0.095 ±0.0087	0.13 ±0.012	0.030 ±0.0063	0.011 ±0.0024
Kamisaibara-mura, OKAYAMA	16.6	535	2340	0.099 ±0.0090	0.18 ±0.017	0.081 ±0.0090	0.035 ±0.0038
Matsuyama, EHIME	13.8	553	1860	0.087 ±0.011	0.16 ±0.020	0.050 ±0.0083	0.027 ±0.0044
Ikata-machi, EHIME	12.9	679	1760	0.048 ±0.0091	0.071±0.013	0.032 ±0.0065	0.018 ±0.0037
Kochi, KOCHI	15.5	518	1940	0.10 ±0.007	0.20 ±0.014	0.053 ±0.0074	0.027 ±0.0038
Saga-machi, KOCHI	12.6	446	1610	0.070 ±0.0057	0.16 ±0.013	0.057 ±0.0068	0.035 ±0.0042
Fukuoka, FUKUOKA	11.1	344	1270	0.019 ±0.0098	0.057±0.029	0.021 ±0.0082	0.017 ±0.0065
Dazaifu, FUKUOKA	15.2	570	2020	0.050 ±0.011	0.088±0.019	0.050 ±0.0091	0.025 ±0.0045

Location	Ash	Ca	K	^{90}Sr		^{137}Cs	
	(g/p·d)	(mg/p·d)	(mg/p·d)	(Bq/p·d)	(Bq/gCa)	(Bq/p·d)	(Bq/gK)
Saga, SAGA	19.9	652	2420	0.057 ± 0.0066	0.088 ± 0.010	0.072 ± 0.010	0.030 ± 0.0043
Genkai-machi, SAGA	18.6	1070	2100	0.081 ± 0.0070	0.076 ± 0.0065	0.032 ± 0.0074	0.015 ± 0.0035
Nagasaki, NAGASAKI	20.0	957	2230	0.074 ± 0.0073	0.078 ± 0.0077	0.061 ± 0.0096	0.027 ± 0.0043
Ooita, OOITA	13.4	471	2210	0.050 ± 0.0090	0.11 ± 0.019	0.043 ± 0.0063	0.020 ± 0.0028
Saeki, OOITA	12.5	316	1240	0.040 ± 0.0079	0.13 ± 0.025	0.038 ± 0.0058	0.031 ± 0.0047
Sendai, KAGOSHIMA	12.8	411	1450	0.070 ± 0.0057	0.17 ± 0.014	0.045 ± 0.0065	0.031 ± 0.0044
Ookuchi, KAGOSHIMA	15.1	476	1740	0.074 ± 0.0060	0.16 ± 0.013	0.065 ± 0.0078	0.038 ± 0.0045
December, 1992							
Sapporo, HOKKAIDO	16.1	631	2490	0.076 ± 0.011	0.12 ± 0.017	0.094 ± 0.0096	0.038 ± 0.0039
Iwanai-machi, HOKKAIDO	13.5	574	1920	0.060 ± 0.0084	0.10 ± 0.015	0.061 ± 0.0076	0.032 ± 0.0040
Aomori, AOMORI	21.0	554	2430	0.083 ± 0.0091	0.15 ± 0.016	0.052 ± 0.0085	0.021 ± 0.0035
Ajigasawa-machi, AOMORI	16.2	535	2180	0.10 ± 0.009	0.19 ± 0.016	0.041 ± 0.0067	0.019 ± 0.0031
Morioka, IWATE	15.2	360	1470	0.052 ± 0.0091	0.15 ± 0.025	0.037 ± 0.0068	0.025 ± 0.0046
Fukushima, FUKUSHIMA	19.9	581	2310	0.096 ± 0.013	0.17 ± 0.023	0.028 ± 0.0078	0.012 ± 0.0034
Ookuma-machi, FUKUSHIMA	14.8	607	1820	0.084 ± 0.013	0.14 ± 0.021	0.036 ± 0.0064	0.020 ± 0.0035
Mito, IBARAKI	21.6	589	2610	0.095 ± 0.0091	0.16 ± 0.015	0.11 ± 0.013	0.043 ± 0.0048
Tokai-mura, IBARAKI	17.7	453	2040	0.065 ± 0.0069	0.14 ± 0.015	0.043 ± 0.0080	0.021 ± 0.0039
Utsunomiya, TOCHIGI	12.5	473	1580	0.047 ± 0.0048	0.099 ± 0.010	0.033 ± 0.0056	0.021 ± 0.0036
Mooka, TOCHIGI	16.5	559	2110	0.067 ± 0.0062	0.12 ± 0.011	0.082 ± 0.0092	0.039 ± 0.0044
Maebashi, GUNMA	12.2	508	2100	0.057 ± 0.0061	0.11 ± 0.012	0.021 ± 0.0051	0.0099 ± 0.0024
Nakajou-machi, GUNMA	15.9	573	1670	0.053 ± 0.0060	0.092 ± 0.010	0.042 ± 0.0060	0.025 ± 0.0036
Urawa, SAITAMA	14.3	399	1810	0.061 ± 0.0074	0.15 ± 0.018	0.035 ± 0.0076	0.019 ± 0.0042
Kumagaya, SAITAMA	14.7	687	2260	0.056 ± 0.0065	0.081 ± 0.0094	0.049 ± 0.0083	0.022 ± 0.0037
Shinjuku, TOKYO	12.3	477	1760	0.046 ± 0.0084	0.097 ± 0.018	0.032 ± 0.0061	0.018 ± 0.0035
Hachijo-machi, TOKYO	16.0	924	1930	0.055 ± 0.010	0.060 ± 0.011	0.062 ± 0.0086	0.032 ± 0.0045
Yokohama, KANAGAWA	13.8	487	1970	0.052 ± 0.0065	0.11 ± 0.013	0.039 ± 0.0081	0.020 ± 0.0041
Kashiwazaki, NIIGATA	21.3	528	2550	0.14 ± 0.017	0.27 ± 0.032	0.034 ± 0.0084	0.013 ± 0.0033
Nishikawa, NIIGATA	25.8	942	2930	0.12 ± 0.010	0.12 ± 0.011	0.10 ± 0.013	0.035 ± 0.0044
Takaoka, TOYAMA	14.0	410	2040	0.062 ± 0.0065	0.15 ± 0.016	0.027 ± 0.0071	0.013 ± 0.0035
Kanazawa, ISHIKAWA	12.2	214	1090	0.026 ± 0.0047	0.12 ± 0.022	0.031 ± 0.0071	0.028 ± 0.0065
Yoshinodani-mura, ISHIKAWA	12.3	434	1660	0.037 ± 0.0051	0.086 ± 0.012	0.043 ± 0.0078	0.026 ± 0.0047
Fukui, FUKUI	12.4	456	1850	0.063 ± 0.0052	0.14 ± 0.011	0.039 ± 0.0061	0.021 ± 0.0033
Tsuruga, FUKUI	13.2	804	1470	0.055 ± 0.0051	0.068 ± 0.0063	0.038 ± 0.0067	0.026 ± 0.0046
Kofu, YAMANASHI	15.2	422	1750	0.062 ± 0.0066	0.15 ± 0.016	0.037 ± 0.0068	0.021 ± 0.0039
Nirasaki, YAMANASHI	18.2	530	2410	0.073 ± 0.0079	0.14 ± 0.015	0.043 ± 0.0078	0.018 ± 0.0032
Sanada-machi, NAGANO	18.0	617	2680	0.064 ± 0.0064	0.10 ± 0.010	0.033 ± 0.0079	0.012 ± 0.0030
Gifu, GIFU	14.0	572	1750	0.069 ± 0.0082	0.12 ± 0.014	0.018 ± 0.0072	0.010 ± 0.0041
Takayama, GIFU	15.5	518	2290	0.062 ± 0.0070	0.12 ± 0.013	0.027 ± 0.0077	0.012 ± 0.0034
Tsu, MIE	17.8	408	2210	0.065 ± 0.012	0.16 ± 0.028	0.020 ± 0.0067	0.0091 ± 0.0031

Location	Ash	Ca	K	^{90}Sr		^{137}Cs	
	(g/p·d)	(mg/p·d)	(mg/p·d)	(Bq/p·d)	(Bq/gCa)	(Bq/p·d)	(Bq/gK)
Ootsu, SHIGA	17.6	562	2240	0.078 ±0.0073	0.14 ±0.013	0.031 ±0.0079	0.014 ±0.0035
Imazu-machi, SHIGA	12.6	537	1840	0.068 ±0.0081	0.13 ±0.015	0.036 ±0.0096	0.020 ±0.0052
Kyoto, KYOTO	16.1	525	2400	0.065 ±0.0060	0.12 ±0.011	0.14 ±0.011	0.058 ±0.0046
Maizuru, KYOTO	17.4	1050	1940	0.061 ±0.0059	0.059±0.0057	0.041 ±0.0080	0.021 ±0.0041
Osaka, OSAKA	18.6	851	2610	0.078 ±0.0084	0.091±0.0098	0.068 ±0.010	0.026 ±0.0039
Neyagawa, OSAKA	17.8	592	2680	0.064 ±0.010	0.11 ±0.017	0.045 ±0.0078	0.017 ±0.0029
Kakogawa, HYOGO	13.1	621	1810	0.076 ±0.010	0.12 ±0.017	0.030 ±0.0068	0.017 ±0.0038
Matsue, SHIMANE	23.4	888	3780	0.13 ±0.010	0.14 ±0.011	0.12 ±0.013	0.032 ±0.0033
Shimane-machi, SHIMANE	16.9	858	2270	0.12 ±0.008	0.14 ±0.009	0.067 ±0.0086	0.029 ±0.0038
Miyoshi, HIROSHIMA	13.2	570	1450	0.057 ±0.0096	0.10 ±0.017	0.023 ±0.0052	0.016 ±0.0036
Yamaguchi, YAMAGUCHI	13.7	477	1960	0.059 ±0.0090	0.12 ±0.019	0.047 ±0.0073	0.024 ±0.0037
Ajisu-machi, YAMAGUCHI	17.3	581	2470	0.096 ±0.012	0.16 ±0.020	0.057 ±0.0092	0.023 ±0.0037
Tokushima, TOKUSHIMA	16.5	630	2270	0.13 ±0.017	0.21 ±0.027	0.032 ±0.010	0.014 ±0.0045
Takamatsu, KAGAWA	16.9	466	2330	0.068 ±0.011	0.15 ±0.023	0.033 ±0.0067	0.014 ±0.0029
Nagao-machi, KAGAWA	13.1	440	1820	0.049 ±0.0090	0.11 ±0.021	0.020 ±0.0056	0.011 ±0.0031
Matsuura, NAGASAKI	12.3	407	1660	0.064 ±0.0055	0.16 ±0.014	0.030 ±0.0055	0.018 ±0.0033
Kumamoto, KUMAMOTO	15.9	501	2250	0.056 ±0.011	0.11 ±0.022	0.045 ±0.0097	0.020 ±0.0043
Aso-machi, KUMAMOTO	19.4	1030	2420	0.098 ±0.012	0.095±0.012	0.096 ±0.011	0.039 ±0.0045
Miyazaki, MIYAZAKI	14.0	431	2010	0.075 ±0.0063	0.17 ±0.015	0.071 ±0.0080	0.035 ±0.0040
Takaharu-machi, MIYAZAKI	18.2	551	2560	0.087 ±0.0082	0.16 ±0.015	0.15 ±0.013	0.059 ±0.0049
January, 1993							
Hiroshima, HIROSHIMA	17.8	1280	1970	0.067 ±0.011	0.052±0.0082	0.083 ±0.0094	0.042 ±0.0048
February, 1993							
Komatsushima, TOKUSHIMA	16.1	478	2270	0.054 ±0.0054	0.11 ±0.011	0.034 ±0.0064	0.015 ±0.0028
Naha, OKINAWA	13.1	481	1820	0.040 ±0.0047	0.083±0.0098	0.072 ±0.0076	0.039 ±0.0041
Ginowan, OKINAWA	19.0	588	2390	0.067 ±0.0073	0.11 ±0.012	0.064 ±0.0090	0.027 ±0.0038

(2)-1 Strontium-90 and Cesium-137 in Rice(producing districts)
(from Oct. 1992 to Dec. 1992)

-continued from No.103 of this publication-

Table (2)-1: Strontium-90 and Cesium-137 in Rice

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	Bq/kgwet	Bq/gCa	Bq/kgwet	Bq/gK
October, 1992							
Mito, IBARAKI	0.539	0.043	0.803	0.005 ± 0.011	0.11 ± 0.25	0.073 ± 0.010	0.091 ± 0.013
Maki-machi, NIIGATA	0.547	0.030	0.957	0.0000± 0.0097	0.00 ± 0.33	0.028 ± 0.0068	0.029 ± 0.0071
Toyoshina-machi, NAGANO	0.676	0.040	1.05	0.017 ± 0.014	0.42 ± 0.34	0.0000± 0.0050	0.0000± 0.0047
Matsusaka, MIE	0.621	0.037	0.894	0.002 ± 0.012	0.06 ± 0.33	0.031 ± 0.0075	0.035 ± 0.0083
Shiga-machi, SHIGA	0.707	0.046	1.20	0.0000± 0.0053	0.00 ± 0.12	0.028 ± 0.0099	0.023 ± 0.0082
Kashihara, NARA	0.501	0.028	0.962	0.0055± 0.0037	0.19 ± 0.13	0.0044± 0.0062	0.0045± 0.0065
Ishii-machi, TOKUSHIMA	0.538	0.033	0.802	0.0071± 0.0040	0.22 ± 0.12	0.0000± 0.0060	0.0000± 0.0075
Tsuda-machi, KAGAWA	0.655	0.034	1.25	0.0073± 0.0098	0.21 ± 0.29	0.0029± 0.0069	0.0023± 0.0055
Koushi-machi, KUMAMOTO	0.619	0.021	1.02	0.009 ± 0.010	0.43 ± 0.50	0.0043± 0.0069	0.0042± 0.0068
November, 1992							
Ishikari-machi, HOKKAIDO	0.694	0.037	0.895	0.0000± 0.0059	0.00 ± 0.16	0.0097± 0.0080	0.011 ± 0.0090
Takizawa-machi, IWATE	0.516	0.024	0.789	0.0033± 0.0040	0.14 ± 0.16	0.025 ± 0.0067	0.032 ± 0.0085
Ishimaki, MIYAGI	0.653	0.039	1.17	0.0062± 0.0048	0.16 ± 0.12	0.0000± 0.0066	0.0000± 0.0057
Fukushima, FUKUSHIMA	0.753	0.027	1.15	0.028 ± 0.013	1.0 ± 0.46	0.028 ± 0.010	0.024 ± 0.0088
Maebashi, GUNMA	0.587	0.035	0.693	0.010 ± 0.0046	0.30 ± 0.13	0.0031± 0.0066	0.0045± 0.0095
Kasai, NARA	0.452	0.031	0.818	0.010 ± 0.0076	0.33 ± 0.25	0.0000± 0.0044	0.0000± 0.0054
Yamaguchi, YAMAGUCHI	0.719	0.039	1.09	0.0000± 0.0057	0.00 ± 0.15	0.038 ± 0.011	0.035 ± 0.010
Saga, SAGA	0.580	0.035	0.963	0.0055± 0.0041	0.16 ± 0.12	0.0031± 0.0067	0.0032± 0.0070
Usa, OOITA	0.600	0.028	0.996	0.0020± 0.0046	0.07 ± 0.17	0.0000± 0.0047	0.0000± 0.0047
December, 1992							
Utsunomiya, TOCHIGI	0.711	0.027	0.924	0.0047± 0.0050	0.18 ± 0.19	0.019 ± 0.0090	0.021 ± 0.0097
Nagasaka-machi, YAMANASHI	0.631	0.025	1.33	0.000 ± 0.012	0.00 ± 0.45	0.0000± 0.0054	0.0000± 0.0041
Chikushino, FUKUOKA	0.704	0.038	1.10	0.0035± 0.0068	0.09 ± 0.18	0.0075± 0.0082	0.0068± 0.0075

(2)-2 Strontium-90 and Cesium-137 in Rice(consuming districts)
(from Oct. 1992 to Feb. 1993)

-continued from No.101 of this publication-

Table (2)-2: Strontium-90 and Cesium-137 in Rice

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	Bq/kgwet	Bq/gCa	Bq/kgwet	Bq/gK
October, 1992							
Akita, AKITA	0.494	0.029	0.785	0.013 ± 0.010	0.44 ± 0.36	0.036 ± 0.0066	0.046 ± 0.0084
Shinjuku, TOKYO	0.590	0.036	0.749	0.0014± 0.0048	0.04 ± 0.13	0.027 ± 0.0082	0.037 ± 0.011
Niigata, NIIGATA	0.382	0.022	0.638	0.014 ± 0.0078	0.65 ± 0.36	0.018 ± 0.0048	0.028 ± 0.0075
Fukui, FUKUI	0.516	0.035	0.826	0.0062± 0.0051	0.18 ± 0.14	0.012 ± 0.0068	0.015 ± 0.0082
November, 1992							
Sapporo, HOKKAIDO	0.631	0.035	0.871	0.0000± 0.0052	0.00 ± 0.15	0.0058± 0.0078	0.0067± 0.0090
Yamagata, YAMAGATA	0.518	0.028	0.891	0.014 ± 0.0083	0.49 ± 0.30	0.052 ± 0.0088	0.059 ± 0.0099
Yokohama, KANAGAWA	0.510	0.035	0.770	0.018 ± 0.010	0.51 ± 0.30	0.053 ± 0.0094	0.069 ± 0.012
Shizuoka, SHIZUOKA	0.515	0.030	0.731	0.0083± 0.0040	0.28 ± 0.13	0.0010± 0.0066	0.0013± 0.0090
Kyoto, KYOTO	0.517	0.034	0.900	0.005 ± 0.010	0.14 ± 0.30	0.0000± 0.0044	0.0000± 0.0049
Osaka, OSAKA	0.482	0.031	0.766	0.000 ± 0.012	0.00 ± 0.37	0.021 ± 0.0069	0.028 ± 0.0090
Kobe, HYOGO	0.550	0.033	0.792	0.012 ± 0.0094	0.37 ± 0.29	0.012 ± 0.0072	0.015 ± 0.0091
Shinguu, WAKAYAMA	0.535	0.029	1.03	0.0000± 0.0091	0.00 ± 0.31	0.0087± 0.0051	0.0085± 0.0050
Hiroshima, HIROSHIMA	0.499	0.034	0.734	0.018 ± 0.0084	0.53 ± 0.25	0.069 ± 0.0094	0.095 ± 0.013
Yonagusuku-mura, OKINAWA	0.595	0.035	0.940	0.0064± 0.0044	0.19 ± 0.13	0.012 ± 0.0068	0.012 ± 0.0073
December, 1992							
Urawa, SAITAMA	0.465	0.026	0.767	0.012 ± 0.0038	0.44 ± 0.14	0.0020± 0.0056	0.0026± 0.0072
Nagoya, AICHI	0.474	0.039	0.735	0.0057± 0.0036	0.14 ± 0.091	0.016 ± 0.0058	0.022 ± 0.0080
Tottori, TOTTORI	0.557	0.028	0.791	0.011 ± 0.0045	0.39 ± 0.16	0.065 ± 0.011	0.082 ± 0.014
Seto-machi, OKAYAMA	0.487	0.031	0.867	0.0085± 0.0042	0.27 ± 0.13	0.0095± 0.0053	0.011 ± 0.0061
Kochi, KOCHI	0.500	0.034	0.830	0.019 ± 0.0091	0.58 ± 0.27	0.049 ± 0.0086	0.059 ± 0.010
Kasuga, FUKUOKA	0.563	0.036	0.861	0.0015± 0.0037	0.04 ± 0.10	0.0059± 0.0098	0.068 ± 0.011
January, 1993							
Hirosaki, AOMORI	0.522	0.032	1.01	0.006 ± 0.010	0.19 ± 0.33	0.014 ± 0.0051	0.014 ± 0.0051
Matsue, SHIMANE	0.647	0.027	1.00	0.0053± 0.0039	0.19 ± 0.14	0.093 ± 0.0099	0.092 ± 0.0099
Nagasaki, NAGASAKI	0.613	0.031	0.791	0.012 ± 0.0049	0.39 ± 0.16	0.043 ± 0.0092	0.054 ± 0.012
February, 1993							
Kagoshima, KAGOSHIMA	0.534	0.022	1.09	0.000 ± 0.0097	0.00 ± 0.43	0.076 ± 0.0094	0.070 ± 0.0086

(3)-1 Strontium-90 and Cesium-137 in Milk(producing districts for domestic program)
(from Oct. 1992 to Mar. 1993)

-continued from No. 103 of this publication-

Table (3)-1: Strontium-90 and Cesium-137 in Milk

Location	Component			^{90}Sr		^{137}Cs	
	Ash(g/ℓ)	Ca(g/ℓ)	K(g/ℓ)	Bq/ℓ	Bq/gCa	Bq/ℓ	Bq/gK
October, 1992							
Yamato-machi, SAGA	7.55	1.15	1.69	0.031 ±0.0076	0.027 ±0.0066	0.0000±0.0074	0.0000±0.0044
Febrary, 1993							
Aomori, AOMORI	7.39	1.08	1.57	0.059 ±0.0099	0.054 ±0.0092	0.031 ±0.0069	0.019 ±0.0044
Takizawa-mura, IWATE	7.12	1.06	1.61	0.039 ±0.0095	0.037 ±0.0089	0.066 ±0.0085	0.041 ±0.0053
Mito, IBARAKI	7.60	1.15	1.64	0.049 ±0.0098	0.042 ±0.0086	0.0020±0.0057	0.0012±0.0035
Nishinasuno-machi, TOCHIGI	5.76	0.877	1.23	0.023 ±0.0061	0.026 ±0.0069	0.033 ±0.0073	0.026 ±0.0059
Fujimi-mura, GUNMA	7.34	1.07	1.64	0.031 ±0.0085	0.029 ±0.0079	0.019 ±0.0072	0.012 ±0.0044
Yachimata, CHIBA	7.61	1.12	1.68	0.030 ±0.0088	0.027 ±0.0078	0.075 ±0.0097	0.044 ±0.0058
Tonami, TOYAMA	7.30	1.11	1.54	0.042 ±0.010	0.038 ±0.0090	0.048 ±0.0075	0.031 ±0.0049
Oshimizu, ISHIKAWA	7.27	1.12	1.58	0.044 ±0.0058	0.040 ±0.0052	0.30 ±0.017	0.19 ±0.011
Kasamatsu, GIFU	6.84	1.06	1.45	0.032 ±0.0099	0.031 ±0.0094	0.0098±0.0078	0.0068±0.0054
Oouchiyama-mura, MIE	7.35	1.09	1.53	0.011 ±0.0084	0.010 ±0.0076	0.013 ±0.0056	0.0083±0.0036
Hino-machi, SHIGA	7.52	1.15	1.61	0.026 ±0.011	0.023 ±0.0091	0.0032±0.0087	0.0020±0.0054
Mihara-machi, HYOGO	7.32	1.12	1.58	0.047 ±0.012	0.042 ±0.010	0.0008±0.0086	0.0005±0.0054
Oouda-machi, NARA	7.07	1.06	1.38	0.054 ±0.0096	0.051 ±0.0091	0.019 ±0.0060	0.014 ±0.0044
Kamiita-machi, TOKUSHIMA	6.98	1.07	1.55	0.030 ±0.0094	0.028 ±0.0088	0.0000±0.0061	0.0000±0.0039
Takase-machi, KAGAWA	7.35	1.09	1.56	0.023 ±0.0085	0.021 ±0.0078	0.0082±0.0055	0.0053±0.0035
Matsuyama, EHIME	7.35	1.13	1.56	0.0097±0.0080	0.0086±0.0071	0.0099±0.0056	0.0063±0.0036
Koushi-machi, KUMAMOTO	7.64	1.17	1.72	0.056 ±0.010	0.048 ±0.0089	0.0066±0.0056	0.0038±0.0033
Kujuu-machi, OOITA	7.66	1.17	1.61	0.034 ±0.0095	0.029 ±0.0081	0.15 ±0.012	0.095 ±0.0076
Takaharu-machi, MIYAZAKI	6.93	0.997	1.54	0.019 ±0.0093	0.019 ±0.0093	0.078 ±0.0099	0.050 ±0.0065
March, 1993							
Takane-machi, YAMANASHI	5.97	0.958	1.26	0.036 ±0.0099	0.037 ±0.010	0.0081±0.0057	0.0064±0.0045

(3)-2 Strontium-90 and Cesium-137 in Milk(producing districts for WHO program)
(from Nov. 1991 to Feb. 1992)

-continued from No. 103 of this publication-

Table (3)-2: Strontium-90 and Cesium-137 in Milk

Location	Component			^{90}Sr		^{137}Cs	
	Ash(g/ℓ)	Ca(g/ℓ)	K(g/ℓ)	Bq/ℓ	Bq/gCa	Bq/ℓ	Bq/gK
November, 1992							
Hokudainoujou, HOKKAIDO	7.67	1.20	1.69	0.033 ± 0.0054	0.027 ± 0.0045	0.11 ± 0.012	0.065 ± 0.0069
Hachijo-island, TOKYO	6.58	0.939	1.22	0.062 ± 0.0061	0.066 ± 0.0065	0.097 ± 0.0099	0.079 ± 0.0081
Nishikawa-machi, NIIGATA	8.14	1.16	1.52	0.019 ± 0.0053	0.016 ± 0.0046	0.050 ± 0.010	0.033 ± 0.0066
Katsuyama, FUKUI	7.42	1.20	1.60	0.031 ± 0.0054	0.026 ± 0.0045	0.059 ± 0.0086	0.037 ± 0.0054
Nose-machi, OOSAKA	7.48	1.09	1.59	0.046 ± 0.017	0.042 ± 0.015	0.0049 ± 0.0071	0.0031 ± 0.0045
Hikawa-machi, SHIMANE	7.33	1.08	1.61	0.043 ± 0.010	0.039 ± 0.0093	0.089 ± 0.0099	0.055 ± 0.0061
Takamiya-machi, HIROSHIMA	6.86	1.05	1.51	0.032 ± 0.014	0.031 ± 0.013	0.0000 ± 0.0063	0.0000 ± 0.0042
Kochi, KOCHI	7.96	1.23	1.64	0.11 ± 0.017	0.093 ± 0.014	0.033 ± 0.0078	0.020 ± 0.0048
Yasu-machi, FUKUOKA	7.37	1.14	1.61	0.041 ± 0.016	0.036 ± 0.014	0.0069 ± 0.0073	0.0043 ± 0.0045
Kajiki-machi, KAGOSHIMA	7.60	1.13	1.57	0.016 ± 0.012	0.014 ± 0.011	0.0065 ± 0.0075	0.0041 ± 0.0048
January, 1993							
Nose-machi, OOSAKA	7.21	1.07	1.51	0.038 ± 0.0055	0.036 ± 0.0051	0.016 ± 0.0065	0.011 ± 0.0043
Takamiya-machi, HIROSHIMA	7.10	1.08	1.55	0.029 ± 0.0048	0.027 ± 0.0044	0.010 ± 0.0061	0.0065 ± 0.0039
February, 1993							
Hokudainoujou, HOKKAIDO	6.64	1.01	1.40	0.028 ± 0.010	0.028 ± 0.010	0.065 ± 0.0087	0.047 ± 0.0062
Hachijo-island, TOKYO	6.85	1.01	1.32	0.084 ± 0.015	0.083 ± 0.015	0.077 ± 0.0095	0.058 ± 0.0072
Nishikawa-machi, NIIGATA	7.18	1.01	1.48	0.026 ± 0.0053	0.025 ± 0.0053	0.017 ± 0.0067	0.011 ± 0.0045
Katsuyama, FUKUI	7.36	1.16	1.57	0.030 ± 0.0087	0.026 ± 0.0075	0.074 ± 0.0088	0.047 ± 0.0056
Hikawa-machi, SHIMANE	7.58	1.22	1.50	0.033 ± 0.0053	0.027 ± 0.0043	0.037 ± 0.0074	0.024 ± 0.0050
Kochi, KOCHI	7.67	1.23	1.50	0.055 ± 0.0059	0.045 ± 0.0048	0.012 ± 0.0063	0.0078 ± 0.0042
Yasu-machi, FUKUOKA	7.25	1.11	1.56	0.022 ± 0.0040	0.020 ± 0.0036	0.0067 ± 0.0057	0.0043 ± 0.0036
Kajiki-machi, KAGOSHIMA	7.37	1.13	1.56	0.015 ± 0.0085	0.013 ± 0.0075	0.026 ± 0.0065	0.017 ± 0.0042

(3)-3 Strontium-90 and Cesium-137 in Milk(consuming districts)
(from Oct. 1992 to Mar. 1993)

-continued from No. 103 of this publication-

Table (3)-3: Strontium-90 and Cesium-137 in Milk

Location	Component			^{90}Sr		^{137}Cs	
	Ash(g/ℓ)	Ca(g/ℓ)	K(g/ℓ)	Bq/ℓ	Bq/gCa	Bq/ℓ	Bq/gK
October, 1992							
Kyoto, KYOTO	7.28	1.08	1.62	0.041 ± 0.016	0.038 ± 0.015	0.024 ± 0.0075	0.015 ± 0.0046
November, 1992							
Shinguu, WAKAYAMA	7.09	1.09	1.50	0.031 ± 0.0051	0.029 ± 0.0046	0.0085 ± 0.0052	0.0057 ± 0.0035
December, 1992							
Akita, AKITA	5.52	0.830	1.11	0.018 ± 0.0037	0.022 ± 0.0045	0.022 ± 0.0052	0.020 ± 0.0047
January, 1993							
Osaka, OSAKA	7.16	1.09	1.53	0.035 ± 0.0055	0.032 ± 0.0050	0.015 ± 0.0065	0.0097 ± 0.0042
Yonago, TOTTORI	7.23	1.09	1.56	0.026 ± 0.0050	0.024 ± 0.0046	0.043 ± 0.0076	0.027 ± 0.0049
Hiroshima, HIROSHIMA	7.43	1.09	1.53	0.032 ± 0.0053	0.029 ± 0.0048	0.0070 ± 0.0063	0.0046 ± 0.0042
February, 1993							
Sapporo, HOKKAIDO	7.61	1.25	1.58	0.026 ± 0.010	0.020 ± 0.0082	0.065 ± 0.0094	0.041 ± 0.0060
Yamagata, YAMAGATA	6.88	1.04	1.50	0.049 ± 0.012	0.048 ± 0.011	0.0038 ± 0.0060	0.0025 ± 0.0040
Fukushima, FUKUSHIMA	7.38	1.08	1.53	0.033 ± 0.0099	0.031 ± 0.0092	0.024 ± 0.0073	0.015 ± 0.0047
Urawa, SAITAMA	7.01	1.05	1.49	0.027 ± 0.0052	0.026 ± 0.0050	0.016 ± 0.0061	0.011 ± 0.0041
Shinjuku, TOKYO	7.20	1.05	1.51	0.013 ± 0.010	0.012 ± 0.0095	0.010 ± 0.0059	0.0068 ± 0.0039
Yokohama, KANAGAWA	7.26	1.11	1.54	0.027 ± 0.0043	0.024 ± 0.0038	0.015 ± 0.0061	0.0096 ± 0.0040
Niigata, NIIGATA	7.55	1.13	1.61	0.021 ± 0.0054	0.019 ± 0.0048	0.041 ± 0.0078	0.025 ± 0.0049
Fukui, FUKUI	7.18	1.08	1.41	0.018 ± 0.0077	0.017 ± 0.0071	0.020 ± 0.0057	0.014 ± 0.0041
Nagano, NAGANO	7.17	1.09	1.54	0.018 ± 0.0091	0.017 ± 0.0083	0.0008 ± 0.0053	0.0005 ± 0.0034
Shizuoka, SHIZUOKA	7.17	1.10	1.55	0.025 ± 0.0087	0.023 ± 0.0079	0.012 ± 0.0058	0.0079 ± 0.0037
Nagoya, AICHI	7.70	1.13	1.60	0.031 ± 0.010	0.028 ± 0.0090	0.021 ± 0.0068	0.013 ± 0.0042
Matue, SHIMANE	6.99	1.04	1.46	0.020 ± 0.0047	0.020 ± 0.0045	0.024 ± 0.0071	0.016 ± 0.0049
Okayama, OKAYAMA	7.06	1.05	1.51	0.032 ± 0.0088	0.030 ± 0.0084	0.039 ± 0.0070	0.026 ± 0.0046
Yamaguchi, YAMAGUCHI	7.20	1.08	1.52	0.018 ± 0.0092	0.016 ± 0.0085	0.014 ± 0.0088	0.0093 ± 0.0057
Matsuyama, EHIME	7.30	1.06	1.49	0.022 ± 0.0090	0.021 ± 0.0085	0.021 ± 0.0064	0.014 ± 0.0043
Kochi, KOCHI	7.38	1.13	1.56	0.032 ± 0.010	0.028 ± 0.0090	0.024 ± 0.0095	0.016 ± 0.0061
Chikushino, FUKUOKA	7.19	1.07	1.51	0.038 ± 0.0051	0.036 ± 0.0048	0.013 ± 0.0063	0.0087 ± 0.0042
Nagasaki, NAGASAKI	6.87	1.04	1.47	0.024 ± 0.0049	0.023 ± 0.0047	0.017 ± 0.0066	0.011 ± 0.0045
Yonagusuku-mura, OKINAWA	7.01	1.03	1.51	0.026 ± 0.0086	0.025 ± 0.0083	0.011 ± 0.0053	0.0072 ± 0.0035
March, 1992							
Kagoshima, KAGOSHIMA	7.21	1.28	1.56	0.035 ± 0.0096	0.027 ± 0.0075	0.022 ± 0.0065	0.014 ± 0.0041

(3)-4 Strontium-90 and Cesium-137 in Milk(powderd milk)

-continued from No. 103 of this publication-

Table (3)-4: Strontium-90 and Cesium-137 in Milk

Market Milk	Component			^{90}Sr		^{137}Cs	
	Ash(g/ℓ)	Ca(g/ℓ)	K(g/ℓ)	Bq/ℓ	Bq/gCa	Bq/ℓ	Bq/gK
November, 1992							
Sample A	8.01	12.1	17.8	0.46 ± 0.025	0.038 ± 0.0021	0.43 ± 0.021	0.024 ± 0.0012
Sample B	2.54	3.33	6.07	0.085 ± 0.011	0.026 ± 0.0032	0.42 ± 0.021	0.069 ± 0.0034
Sample C	8.08	12.2	17.8	0.65 ± 0.020	0.053 ± 0.0017	2.4 ± 0.05	0.13 ± 0.003
Sample D	2.61	4.05	5.79	0.052 ± 0.0062	0.013 ± 0.0015	0.16 ± 0.014	0.027 ± 0.0024
Sample E	2.45	3.72	5.81	0.083 ± 0.0071	0.022 ± 0.0019	0.29 ± 0.017	0.049 ± 0.0030
Sample F	2.49	3.44	5.28	0.080 ± 0.0071	0.023 ± 0.0021	0.43 ± 0.021	0.082 ± 0.0040

*Skim milk

(4)-1 Strontium-90 and Cesium-137 in Vegetables(producing districts)
(from Oct. 1991 to Feb. 1992)

-continued from No. 97 of this publication-

Table (4)-1: Strontium-90 and Cesium-137 in Vegetables

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	Bq/kgwet	Bq/gCa	Bq/kgwet	Bq/gK
(Japanese radish)							
October, 1992							
Tamayama-mura, IWATE	0.535	0.249	2.03	0.095 ± 0.0081	0.38 ± 0.033	0.014 ± 0.0049	0.0068 ± 0.0024
Takamatsu, KAGAWA	0.487	0.178	2.14	0.016 ± 0.0043	0.092 ± 0.024	0.0095 ± 0.0054	0.0045 ± 0.0025
November, 1992							
Mito-machi, AOMORI	0.482	0.300	1.76	0.19 ± 0.011	0.64 ± 0.037	0.032 ± 0.0065	0.018 ± 0.0037
Fukushima, FUKUSHIMA	0.593	0.318	2.15	0.057 ± 0.0075	0.18 ± 0.023	0.0005 ± 0.0061	0.0002 ± 0.0029
Mito, IBARAGI	0.465	0.461	1.32	0.23 ± 0.012	0.49 ± 0.026	0.070 ± 0.0095	0.053 ± 0.0072
Maebashi, GUNMA	0.582	0.203	2.60	0.074 ± 0.012	0.36 ± 0.059	0.016 ± 0.0058	0.0063 ± 0.0022
Chiba, CHIBA	0.471	0.221	1.67	0.10 ± 0.009	0.45 ± 0.039	0.051 ± 0.0074	0.031 ± 0.0044
Kosugi-machi, TOYAMA	0.466	0.243	1.84	0.027 ± 0.0049	0.11 ± 0.020	0.0044 ± 0.0050	0.0024 ± 0.0027
Fukui, FUKUI	0.498	0.153	2.16	0.011 ± 0.0049	0.072 ± 0.032	0.018 ± 0.0082	0.0086 ± 0.0038
Takane-machi, YAMANASHI	0.553	0.329	2.24	0.17 ± 0.017	0.51 ± 0.050	0.0097 ± 0.0050	0.0043 ± 0.0022
Saku, NAGANO	0.520	0.224	2.17	0.048 ± 0.011	0.21 ± 0.051	0.0000 ± 0.0049	0.0000 ± 0.0022
Gifu, GIFU	0.508	0.208	1.96	0.050 ± 0.0059	0.24 ± 0.028	0.0021 ± 0.0048	0.0011 ± 0.0024
Gotenba, SHIZUOKA	0.613	0.299	2.71	0.11 ± 0.010	0.36 ± 0.033	0.028 ± 0.0074	0.010 ± 0.0027
Hamamatsu, SHIZUOKA	0.566	0.176	2.13	0.098 ± 0.0075	0.55 ± 0.043	0.0000 ± 0.0031	0.0000 ± 0.0015
Meiwa-machi, MIE	0.508	0.237	2.15	0.093 ± 0.0082	0.39 ± 0.035	0.011 ± 0.0059	0.0052 ± 0.0027
Adogawa-machi, SHIGA	0.523	0.135	2.31	0.25 ± 0.013	1.9 ± 0.10	0.0016 ± 0.0053	0.0007 ± 0.0023
Kasai, HYOUGO	0.617	0.197	2.61	0.21 ± 0.011	1.1 ± 0.06	0.030 ± 0.0068	0.011 ± 0.0026
Shinguu, WAKAYAMA	0.546	0.407	1.83	0.13 ± 0.009	0.32 ± 0.022	0.0060 ± 0.0059	0.0033 ± 0.0032
Shime-machi, FUKUOKA	0.552	0.275	2.06	0.033 ± 0.0057	0.12 ± 0.021	0.017 ± 0.0065	0.0081 ± 0.0032
Saga, SAGA	0.636	0.256	2.92	0.068 ± 0.010	0.26 ± 0.040	0.0045 ± 0.0096	0.0015 ± 0.0033
Takanabe-machi, MIYAZAKI	0.593	0.193	2.25	0.15 ± 0.011	0.79 ± 0.058	0.030 ± 0.0070	0.014 ± 0.0031
December, 1992							
Utsunomiya, TOCHIGI	0.600	0.205	2.47	0.10 ± 0.009	0.51 ± 0.044	0.017 ± 0.0057	0.0069 ± 0.0023
Kashihara, NARA	0.614	0.576	2.14	0.13 ± 0.010	0.22 ± 0.017	0.0050 ± 0.0059	0.0023 ± 0.0027
Kokufu-machi, TOTTORI	0.497	0.254	1.97	0.071 ± 0.0074	0.28 ± 0.029	0.0000 ± 0.0049	0.0000 ± 0.0025
Hiroshima, HIROSHIMA	0.460	0.179	1.76	0.036 ± 0.0053	0.20 ± 0.030	0.012 ± 0.0058	0.0069 ± 0.0033
Yuya-machi, YAMAGUCHI	0.600	0.229	2.51	0.17 ± 0.018	0.76 ± 0.079	0.0028 ± 0.0054	0.0011 ± 0.0022
Ishii-machi, TOKUSHIMA	0.649	0.202	2.75	0.041 ± 0.0053	0.20 ± 0.027	0.0000 ± 0.0046	0.0000 ± 0.0017
Kubokawa-machi, KOCHI	0.531	0.260	2.24	0.11 ± 0.008	0.44 ± 0.032	0.0042 ± 0.0058	0.0019 ± 0.0026
Usa, OOITA	0.615	0.168	2.72	0.061 ± 0.0083	0.36 ± 0.050	0.0000 ± 0.0053	0.0000 ± 0.0019

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	Bq/kgwet	Bq/gCa	Bq/kgwet	Bq/gK
Kaimon-machi, KAGOSHIMA	0.593	0.159	2.40	0.11 ± 0.009	0.67 ± 0.055	0.016 ± 0.0061	0.0065 ± 0.0026
(cabbage)							
November, 1992							
Mito-machi, AOMORI	0.528	0.346	1.95	0.19 ± 0.011	0.55 ± 0.032	0.063 ± 0.0078	0.032 ± 0.0040
January, 1993							
Kumatori-machi, OSAKA	0.578	0.303	2.29	0.034 ± 0.0051	0.11 ± 0.017	0.015 ± 0.0052	0.0064 ± 0.0023
(Spinach)							
October, 1992							
Toyama, TOYAMA	1.58	0.998	6.11	0.054 ± 0.013	0.054 ± 0.013	0.011 ± 0.0051	0.0018 ± 0.00084
Takamatsu, KAGAWA	1.99	0.433	8.78	0.024 ± 0.0056	0.056 ± 0.013	0.0000 ± 0.0062	0.00000 ± 0.00070
November, 1992							
Fukushima, FUKUSHIMA	1.73	0.910	6.79	0.13 ± 0.009	0.14 ± 0.010	0.012 ± 0.0056	0.0017 ± 0.00082
Mito, IBARAGI	1.82	1.14	7.23	0.32 ± 0.014	0.28 ± 0.013	0.018 ± 0.0090	0.0024 ± 0.0012
Maebashi, GUNMA	1.94	0.911	7.80	0.21 ± 0.011	0.23 ± 0.013	0.039 ± 0.0069	0.0050 ± 0.00088
Chiba, CHIBA	1.44	0.259	5.86	0.029 ± 0.0057	0.11 ± 0.022	0.0000 ± 0.0042	0.00000 ± 0.00072
Fukui, FUKUI	2.04	0.564	9.61	0.077 ± 0.012	0.14 ± 0.021	0.0090 ± 0.0048	0.00094 ± 0.00050
Saku, NAGANO	2.09	1.10	7.93	0.12 ± 0.008	0.11 ± 0.008	0.0000 ± 0.0059	0.00000 ± 0.00074
Gifu, GIFU	1.61	0.775	6.53	0.095 ± 0.0085	0.12 ± 0.011	0.018 ± 0.0063	0.0027 ± 0.00096
Gotenba, SHIZUOKA	1.06	0.876	3.51	0.12 ± 0.010	0.14 ± 0.011	0.26 ± 0.016	0.075 ± 0.0046
Kusu-machi, MIE	1.71	0.914	7.28	0.054 ± 0.011	0.059 ± 0.013	0.018 ± 0.0058	0.0024 ± 0.00079
Rittou-machi, SHIGA	1.61	0.652	6.83	0.061 ± 0.0068	0.093 ± 0.010	0.0000 ± 0.0044	0.00000 ± 0.00065
Kasai, HYOUGO	1.30	0.342	5.82	0.065 ± 0.0072	0.19 ± 0.021	0.014 ± 0.0077	0.0024 ± 0.0013
Kurayoshi, TOTTORI	1.54	0.581	6.16	0.061 ± 0.0062	0.10 ± 0.011	0.043 ± 0.0078	0.0070 ± 0.0013
Ishii-machi, TOKUSHIMA	2.13	0.646	9.32	0.091 ± 0.014	0.14 ± 0.022	0.0064 ± 0.0050	0.00069 ± 0.00053
Matsuyama, EHIME	1.51	0.738	4.88	0.030 ± 0.0053	0.041 ± 0.0072	0.022 ± 0.0064	0.0045 ± 0.0013
Shime-machi, FUKUOKA	1.80	0.768	7.35	0.079 ± 0.011	0.10 ± 0.014	0.0034 ± 0.0054	0.00046 ± 0.00074
Saga, SAGA	1.53	0.712	6.57	0.015 ± 0.0060	0.022 ± 0.0084	0.0000 ± 0.0071	0.0000 ± 0.0011
Koushi-machi, KUMAMOTO	1.78	1.07	6.44	0.11 ± 0.012	0.10 ± 0.011	0.0086 ± 0.0060	0.0013 ± 0.00093
December, 1992							
Takane-machi, YAMANASHI	2.23	1.51	6.34	0.74 ± 0.019	0.49 ± 0.012	0.023 ± 0.0056	0.0036 ± 0.00089
Kashihara, NARA	1.46	0.440	5.84	0.15 ± 0.010	0.34 ± 0.022	0.022 ± 0.0073	0.0037 ± 0.0012
Hiroshima, HIROSHIMA	1.21	0.412	4.52	0.042 ± 0.0070	0.10 ± 0.017	0.010 ± 0.0062	0.0023 ± 0.0014
Yuya-machi, YAMAGUCHI	1.81	0.577	7.08	0.094 ± 0.0077	0.16 ± 0.013	0.0070 ± 0.0061	0.00099 ± 0.00086
Kubokawa-machi, KOCHI	1.77	0.623	7.02	0.34 ± 0.016	0.54 ± 0.026	0.025 ± 0.0075	0.0035 ± 0.0011
Usa, OOITA	1.80	0.295	7.82	0.057 ± 0.0091	0.19 ± 0.031	0.0000 ± 0.0056	0.00000 ± 0.00072
Takanabe-machi, MIYAZAKI	1.36	1.10	4.55	0.47 ± 0.016	0.42 ± 0.014	0.19 ± 0.014	0.043 ± 0.0031

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	Bq/kgwet	Bq/gCa	Bq/kgwet	Bq/gK
Kaimon-machi, KAGOSHIMA	1.55	0.823	5.33	0.20 ± 0.010	0.25 ± 0.013	0.054 ± 0.0083	0.010 ± 0.0016
(Chinese cabbage)							
October, 1992							
Tamayama-mura, IWATE	0.596	0.397	2.34	0.11 ± 0.009	0.28 ± 0.024	0.0033 ± 0.0071	0.0014 ± 0.0030
November, 1992							
Utsunomiya, TOCHIGI	0.497	0.312	1.84	0.28 ± 0.013	0.91 ± 0.043	0.026 ± 0.0068	0.014 ± 0.0037
Shinguu, WAKAYAMA	0.609	0.339	2.41	0.28 ± 0.012	0.82 ± 0.034	0.047 ± 0.0072	0.020 ± 0.0030

(4)-2 Strontium-90 and Cesium-137 in Vegetables(consuming districts)
(from Oct. 1992 to Feb. 1993)

-continued from No. 101 of this publication-

Table (4)-2: Strontium-90 and Cesium-137 in Vegetables

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	Bq/kgwet	Bq/gCa	Bq/kgwet	Bq/gK
(Japanese radish)							
October, 1992							
Akita, AKITA	0.498	0.202	2.20	0.021 ± 0.0098	0.11 ± 0.048	0.0083 ± 0.0048	0.0038 ± 0.0022
Yamagata, YAMAGATA	0.355	0.331	1.14	2.3 ± 0.04	7.0 ± 0.13	0.11 ± 0.010	0.10 ± 0.008
Kanazawa, ISHIKAWA	0.626	0.234	2.85	0.032 ± 0.0075	0.14 ± 0.032	0.0006 ± 0.0085	0.0002 ± 0.0030
Kyoto, KYOTO	0.435	0.121	1.63	0.015 ± 0.0054	0.13 ± 0.044	0.011 ± 0.0059	0.0066 ± 0.0036
November, 1992							
Shinjuku, TOKYO	0.555	0.356	2.04	0.10 ± 0.008	0.29 ± 0.024	0.010 ± 0.0050	0.0049 ± 0.0025
Niigata, NIIGATA	0.402	0.152	1.36	0.011 ± 0.0044	0.070 ± 0.029	0.0089 ± 0.0051	0.0066 ± 0.0037
Osaka, OSAKA	0.397	0.135	1.59	0.025 ± 0.0047	0.18 ± 0.035	0.011 ± 0.0052	0.0068 ± 0.0033
Okayama, OKAYAMA	0.512	0.128	2.18	0.011 ± 0.0046	0.086 ± 0.036	0.0010 ± 0.0059	0.0005 ± 0.0027
Yonagusuku-mura, OKINAWA	0.454	0.171	1.87	0.0097 ± 0.0085	0.057 ± 0.050	0.0000 ± 0.0033	0.0000 ± 0.0018
January, 1993							
Nagasaki, NAGASAKI	0.482	0.136	1.97	0.063 ± 0.0067	0.46 ± 0.049	0.0018 ± 0.0050	0.0009 ± 0.0025
Febrary, 1993							
Yokohama, KANAGAWA	0.532	0.298	2.14	0.048 ± 0.0070	0.16 ± 0.023	0.0027 ± 0.0059	0.0013 ± 0.0028
(Spinach)							
October, 1992							
Yamagata, YAMAGATA	1.82	0.362	7.74	0.042 ± 0.012	0.11 ± 0.032	0.015 ± 0.0050	0.0020 ± 0.00065
Kanazawa, ISHIKAWA	1.37	0.378	5.99	0.032 ± 0.011	0.085 ± 0.028	0.0024 ± 0.0048	0.00040 ± 0.00081
November, 1992							
Shinjuku, TOKYO	1.90	0.683	8.17	0.086 ± 0.0076	0.13 ± 0.011	0.0025 ± 0.0045	0.00030 ± 0.00055
Kyoto, KYOTO	1.27	0.523	4.86	0.036 ± 0.0058	0.069 ± 0.011	0.043 ± 0.0079	0.0089 ± 0.0016
Osaka, OSAKA	1.54	0.442	6.80	0.027 ± 0.0061	0.062 ± 0.014	0.0000 ± 0.0097	0.0000 ± 0.0014
Okayama, OKAYAMA	1.91	0.557	6.74	0.086 ± 0.0095	0.15 ± 0.017	0.021 ± 0.0069	0.0030 ± 0.0010
Matsuyama, EHIME	1.64	0.379	7.50	0.053 ± 0.0069	0.14 ± 0.018	0.012 ± 0.0051	0.0016 ± 0.00068
Yonagusuku-mura, OKINAWA	1.29	0.626	4.70	0.018 ± 0.0045	0.029 ± 0.0072	0.0027 ± 0.0054	0.0006 ± 0.0011
January, 1993							
Nagasaki, NAGASAKI	1.41	0.342	5.79	0.058 ± 0.0080	0.17 ± 0.023	0.0009 ± 0.0059	0.0001 ± 0.0010

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	Bq/kgwet	Bq/gCa	Bq/kgwet	Bq/gK
Febrary, 1993 Yokohama, KANAGAWA	1.41	0.416	5.63	0.061 ± 0.0064	0.15 ± 0.015	0.014 ± 0.0053	0.0026 ± 0.00094
(cabbage)							
October, 1992 Akita, AKITA	0.636	0.536	2.45	0.091 ± 0.016	0.17 ± 0.030	0.029 ± 0.0076	0.012 ± 0.0031

(5) Strontium-90 and Cesium-137 in Sea Fish
(from Oct. 1992 to Mar. 1993)

-continue d from No. 103 of this publication-

Table (5): Strontium-90 and Cesium-137 in Sea Fish

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	Bq/kgwet	Bq/gCa	Bq/kgwet	Bq/gK
(Hexagrammos otakii)							
October, 1992							
Souma, FUKUSHIMA	0.953	1.11	2.27	0.0000±0.0035	0.0000±0.0032	0.11 ±0.012	0.048 ±0.0053
(Trachurus sp)							
November, 1992							
Shizuoka, SHIZUOKA	3.47	7.68	3.18	0.010 ±0.0040	0.0013±0.00053	0.17 ±0.014	0.053 ±0.0044
December, 1992							
Odawara, KANAGAWA	0.736	0.457	1.98	0.0021±0.0028	0.0045±0.0062	0.10 ±0.010	0.051 ±0.0049
Shinguu, WAKAYAMA	2.22	5.00	1.97	0.0082±0.0037	0.0016±0.00074	0.11 ±0.010	0.054 ±0.0051
(Branchiostegus sp.)							
November, 1992							
Nagasaki, NAGASAKI	1.28	0.673	3.40	0.012 ±0.0068	0.018 ±0.010	0.21 ±0.019	0.062 ±0.0055
(Sardinops melanosticta)							
January, 1993							
Nagano, NAGANO	3.86	7.92	2.86	0.0012±0.0041	0.00016±0.00052	0.12 ±0.014	0.041 ±0.0048
(Limanda herzensteini)							
November, 1992							
Mutsu, AOMORI	1.51	1.36	3.54	0.0080±0.0032	0.0059 ±0.0024	0.10 ±0.009	0.030 ±0.0027
Niigata, NIIGATA	1.46	1.01	3.66	0.0069±0.0033	0.0069 ±0.0033	0.11 ±0.010	0.030 ±0.0027
Echizen, FUKUI	1.50	1.84	3.17	0.0033±0.0037	0.0018 ±0.0020	0.12 ±0.011	0.036 ±0.0036
Aji-machi, KAGAWA	1.44	0.407	4.81	0.0013±0.0033	0.0032 ±0.0081	0.11 ±0.011	0.023 ±0.0023
January, 1993							
Ootake, HIROSHIMA	3.07	6.44	3.86	0.012 ±0.0046	0.0019 ±0.00072	0.11 ±0.013	0.028 ±0.0033
(Spratelloides gracilis)							
January, 1993							
Akune, KAGOSHIMA	3.08	5.75	3.45	0.013 ±0.0035	0.0023 ±0.00060	0.19 ±0.013	0.054 ±0.0038
(Scomber sp)							
November, 1992							
Kyoto, KYOTO	1.17	0.175	3.15	0.0053±0.0031	0.030 ±0.018	0.14 ±0.011	0.045 ±0.0034
Osaka, OSAKA	1.05	0.126	3.33	0.0000±0.0033	0.000 ±0.026	0.17 ±0.012	0.050 ±0.0036

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	Bq/kgwet	Bq/gCa	Bq/kgwet	Bq/gK
January, 1993							
Sakaiminato, TOTTORI	1.29	0.176	3.33	0.0042±0.0028	0.024 ±0.016	0.19 ±0.012	0.056 ±0.0035
March, 1993							
Chikura, CHIBA	0.970	0.169	2.82	0.0047±0.0043	0.028 ±0.025	0.13 ±0.012	0.048 ±0.0042
(Pterocaesio diagramma)							
November, 1992							
Yonagusuku-mura, OKINAWA	3.67	8.94	4.23	0.011 ±0.0040	0.0012 ±0.0045	0.16 ±0.014	0.039 ±0.0033
(Seriola quinqueradiata)							
October, 1992							
Togi-machi, ISHIKAWA	0.733	0.544	2.17	0.0033±0.0032	0.0060 ±0.0058	0.15 ±0.011	0.071 ±0.0051
(Mugil cephalus)							
November, 1992							
Ushimado-machi, OKAYAMA	1.30	0.907	3.22	0.0099±0.0044	0.011 ±0.0049	0.14 ±0.012	0.042 ±0.0036
(Sebastes inermis)							
January, 1993							
Yamaguchi, YAMAGUCHI	4.89	11.7	3.20	0.026 ±0.0056	0.0022 ±0.00048	0.14 ±0.014	0.044 ±0.0044

Sea Fish

Japanese name	English name	Scientific name
Ainame	Fat greenling	Hexagrammos otakii
Aji	Horse mackerel	Trachurus sp
Amadai	Tilefish	Branchiostegus sp
Iwashi	Sardine	Sardinops melanosticta
Karei	Brown sole	Limanda herzensteini
Kibinago	Blue sprat	Spratelloides gracilis
Saba	Mackerel	Scomber sp
Takasago	Golden banded fusilier	Pterocaesio diagramma
Buri	Yellow-tail	Seriola quinqueradiata
Bora	Gray mullet	Mugil cephalus
Mebaru	Black rockfish	Sebastes inermis

(6) Strontium-90 and Cesium-137 in Freshwater Fish
(from May. 1992 to Dec. 1992)

-continued from No.103 of this publication-

Table (6): Strontium-90 and Cesium-137 in Freshwater Fish

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	Bq/kgwet	Bq/gCa	Bq/kgwet	Bq/gK
(Cyprinus carpio)							
December, 1992							
Syoubara, HIROSHIMA	1.05	0.264	3.54	0.029 ± 0.0091	0.11 ± 0.035	0.14 ± 0.014	0.041 ± 0.0041
(Salmo gairdneri)							
November, 1992							
Kumagaya, SAITAMA	1.24	0.15	4.51	0.0000 ± 0.0031	0.000 ± 0.021	0.15 ± 0.011	0.034 ± 0.0025
(Carassius auratus)							
November, 1992							
Niigata, NIIGATA	1.07	0.511	3.24	0.078 ± 0.0063	0.15 ± 0.012	0.14 ± 0.010	0.042 ± 0.0032
December, 1992							
Mikata-machi, FUKUI	1.70	2.76	3.47	0.18 ± 0.011	0.065 ± 0.0041	0.18 ± 0.016	0.051 ± 0.0047
Uji, KYOTO	4.44	13.2	2.76	1.2 ± 0.03	0.093 ± 0.0023	0.055 ± 0.0092	0.020 ± 0.0033
(Hypomesus nipponensis)							
December, 1992							
Suwa, NAGANO	1.68	4.34	0.762	0.095 ± 0.0084	0.022 ± 0.0019	0.032 ± 0.010	0.042 ± 0.013

Freshwater Fish

Japanese name	English name	Scientific name
Koi	Carp	*Cyprinus carpio*
Nijimasu	Rainbow trout	*Salmo gairdneri*
Funa	Crucian carp	*Carassius auratus*
Wakasagi	Japanese smelt	*Hypomesus nipponensis*

(7) Strontium-90 and Cesium-137 in Shellfish
(from Nov. 1992 to Jan. 1993)

-continued from No. 103 of this publication-

Table (7): Strontium-90 and Cesium-137 in Shellfish

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	Bq/kgwet	Bq/gCa	Bq/kgwet	Bq/gK
(Crassostrea gigas)							
January, 1993							
Hatsukaichi, HIROSHIMA	1.80	0.605	2.37	0.0074±0.0043	0.012 ±0.0070	0.012 ±0.0065	0.0051±0.0027
(Patinopecten yessoensis)							
November, 1992							
Mutsu, AOMORI	1.80	0.268	2.90	0.0000±0.0029	0.000 ±0.011	0.033 ±0.0066	0.011 ±0.0023

Shellfish

Japanese name	English name	Scientific name
Kaki	Oyster	Crassostrea gigas
Hotategai	Japanese scallop	Patinopecten yessoensis

(8) Strontium-90 and Cesium-137 in Seaweeds
(from Jan. 1993 to Feb. 1993)

-continued from No. 103 of this publication-

Table (8): Strontium-90 and Cesium-137 in Seaweeds

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	Bq/kgwet	Bq/gCa	Bq/kgwet	Bq/gK
(Undaria pinnatifida)							
January, 1993							
Hiroshima, HIROSHIMA	2.00	0.332	6.57	0.013 ± 0.0052	0.040 ± 0.016	0.017 ± 0.0074	0.0026 ± 0.0011
Shimabara, NAGASAKI	2.53	0.988	8.40	0.040 ± 0.0053	0.040 ± 0.0053	0.037 ± 0.0067	0.0044 ± 0.00079
Febrary, 1993							
Minamichita-machi, AICHI	2.18	0.696	6.18	0.035 ± 0.0048	0.051 ± 0.0069	0.033 ± 0.0068	0.0054 ± 0.0011

Seaweeds

Japanese name	English name	Scientific name
Wakame	Wakame seaweed	Undaria pinnatifida

* * * Total Diet * * *

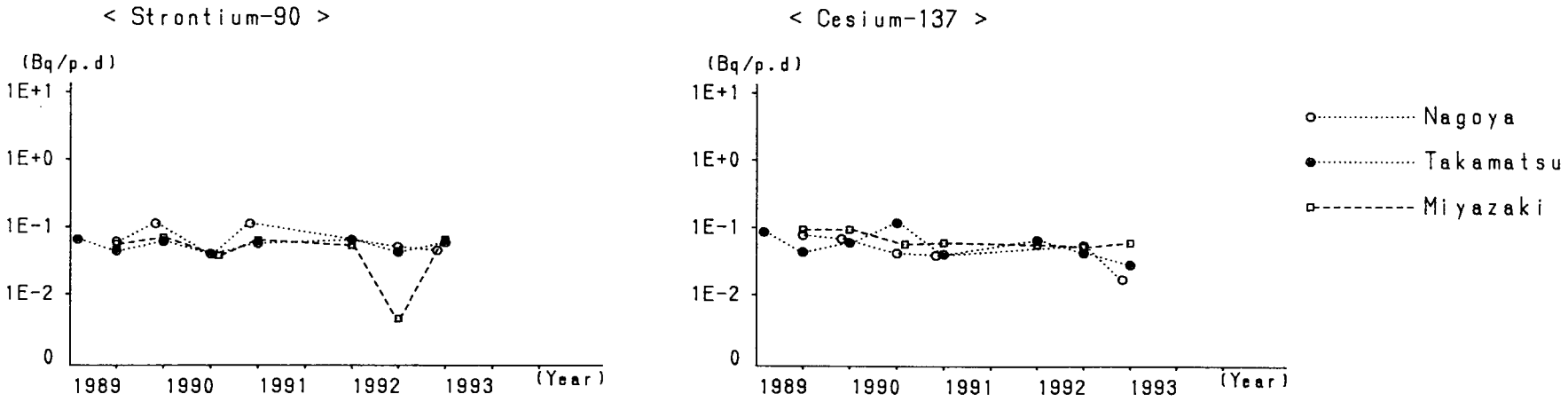

Fig. 1

* * * Rice(producing districts) * * *

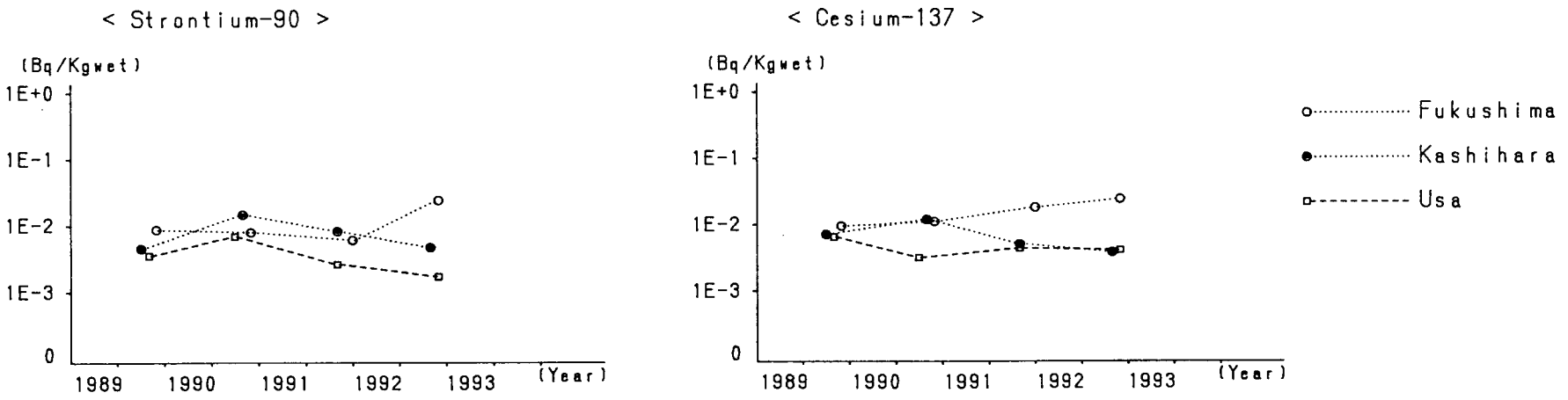

Fig.2-1

* * * Rice(consuming districts) * * *

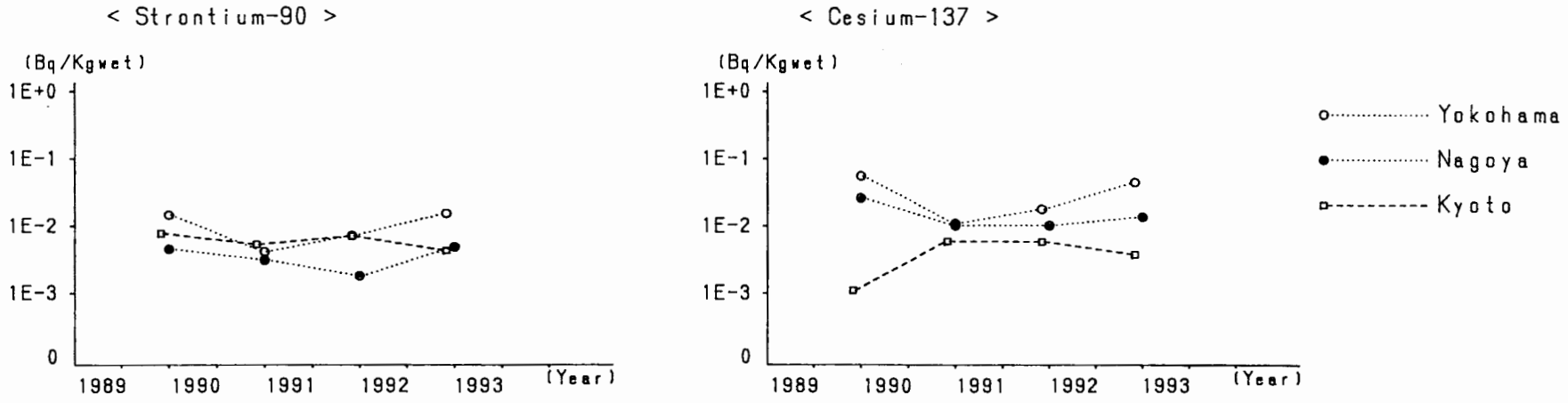

Fig.2-2

* * * Milk(producing districts for domestic program) * * *

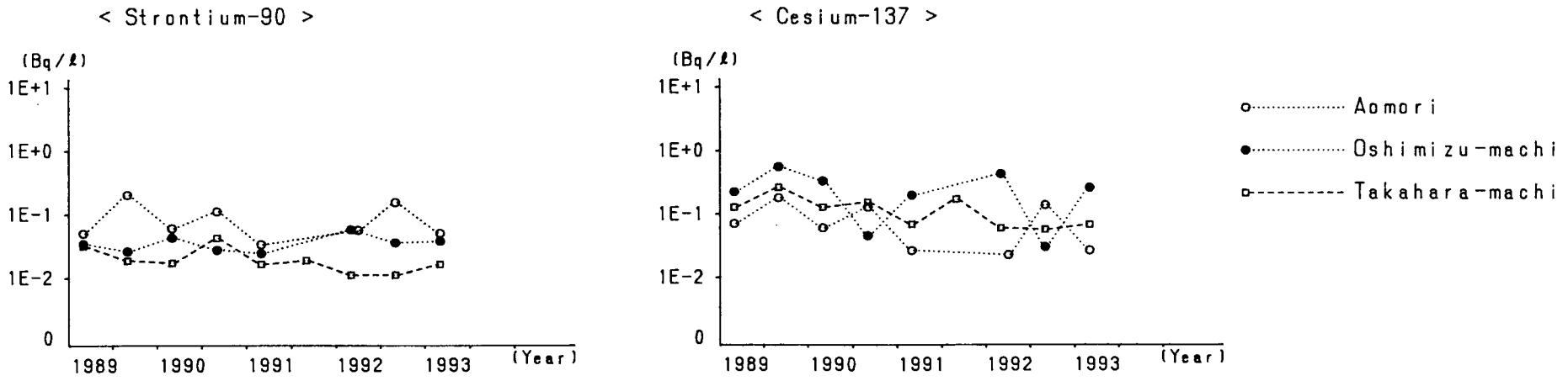

Fig.3-1

* * * Milk (producing districts for WHO program) * * *

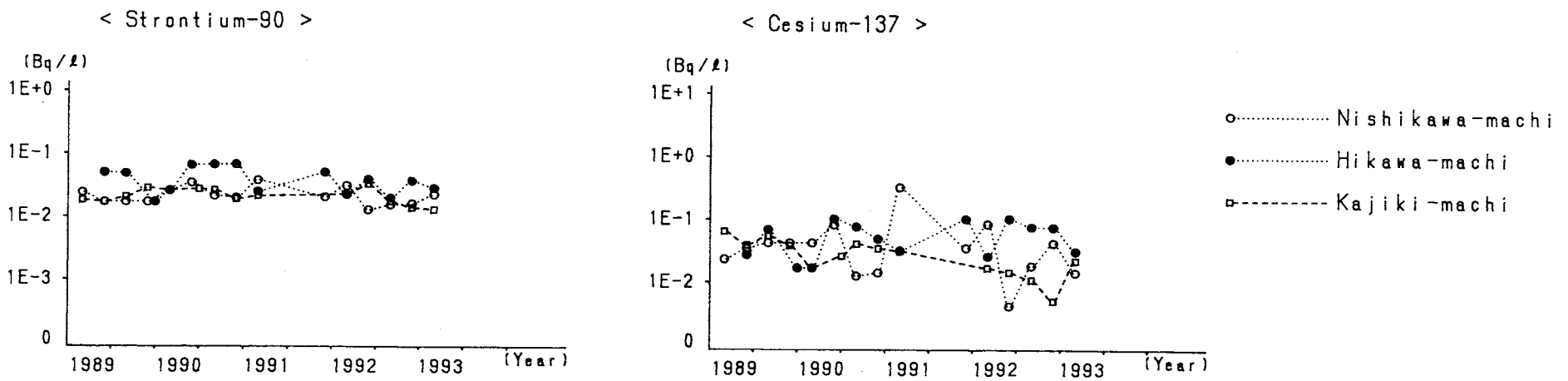

Fig.3-2

* * * Milk(consuming districts) * * *

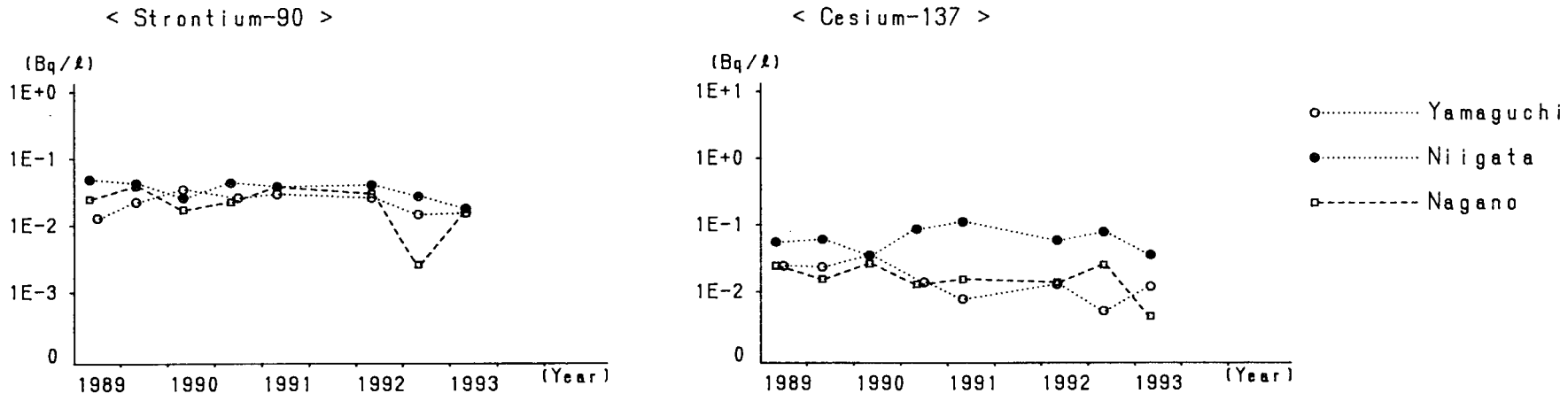

Fig.3-3

* * * Powdered Milk * * *

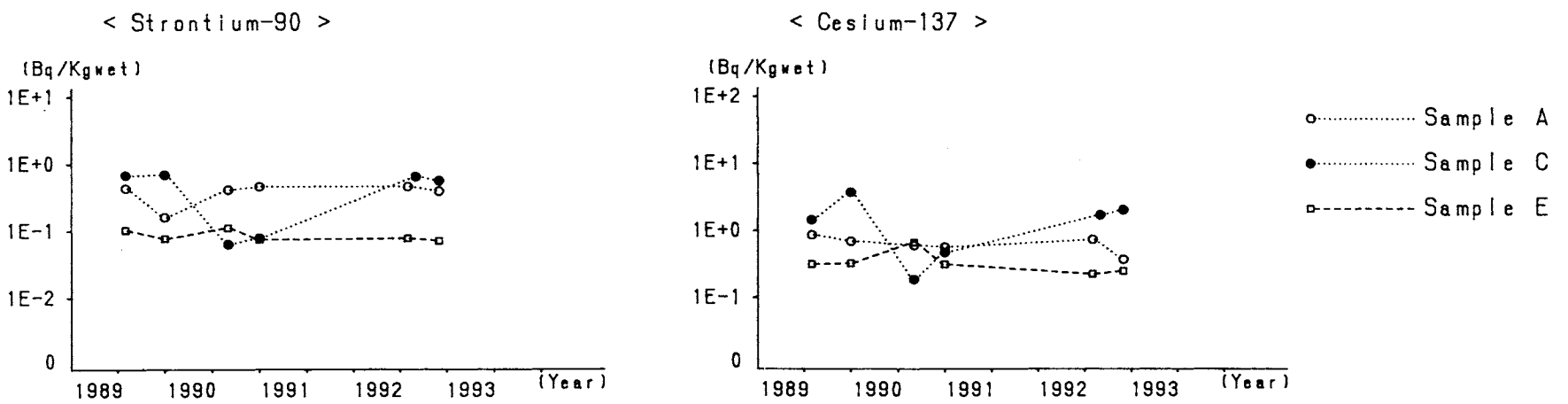

Fig.3-4

* * * Vegetables(producing districts) * * *

[Japanese radish]

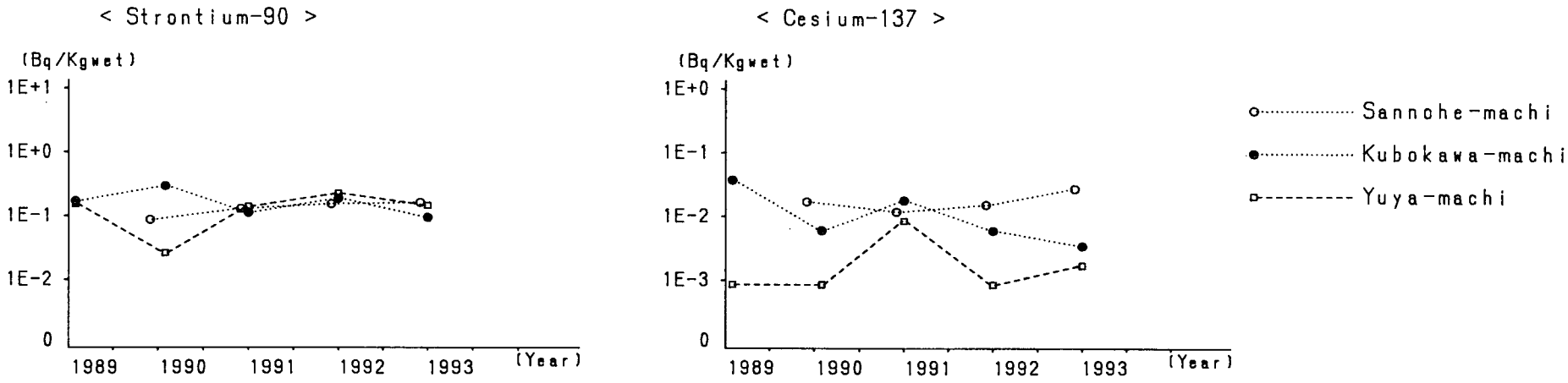

Fig.4-1

* * * Vegetables(consuming districts) * * *

[Japanese radish]

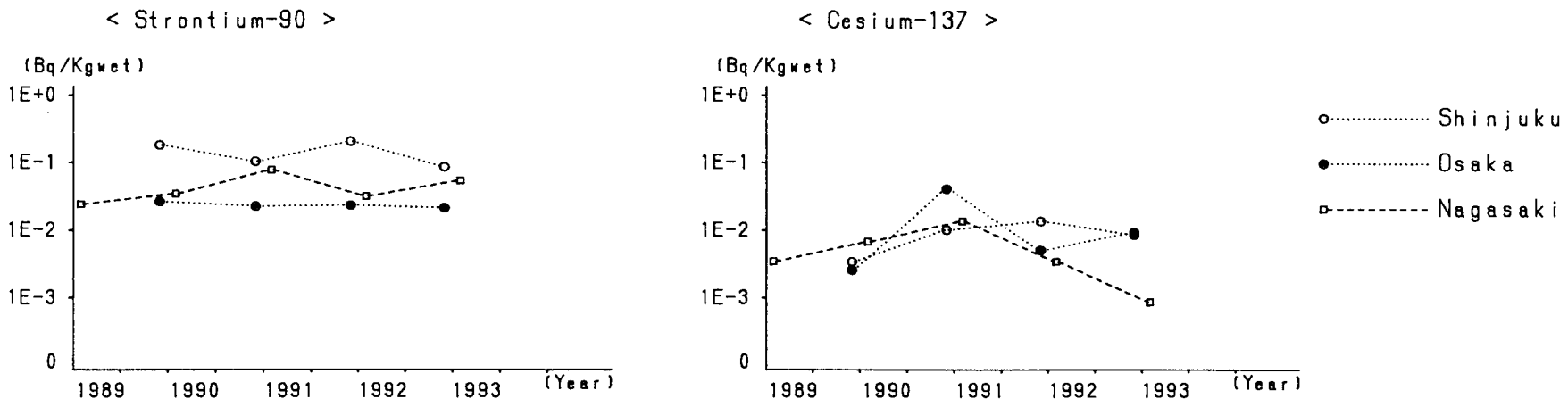

Fig.4-2

* * * Sea Fish * * *

(Scomber japonicus)

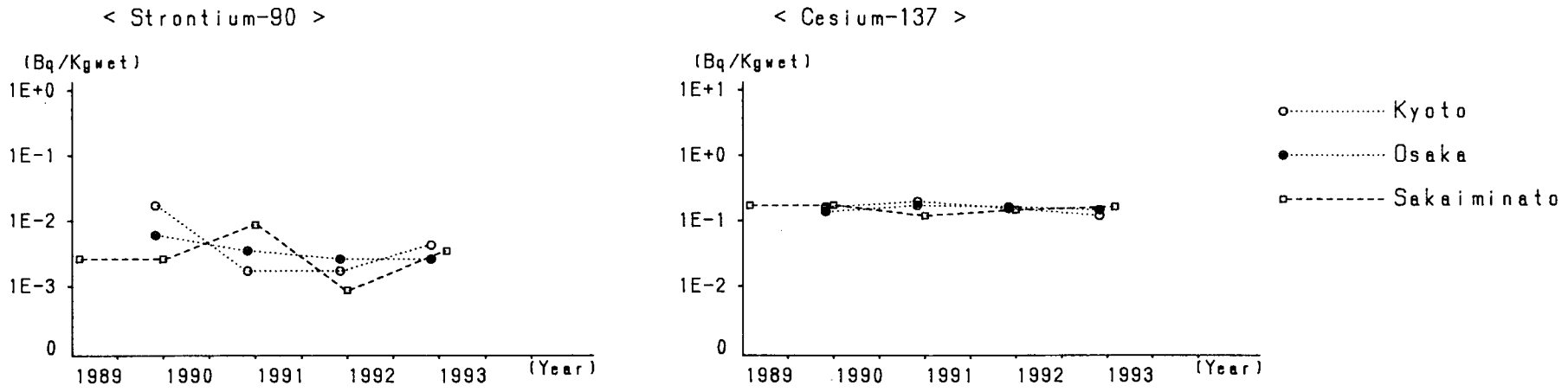

Fig.5

* * * Freshwater Fish * * *

[Carassius auratus]

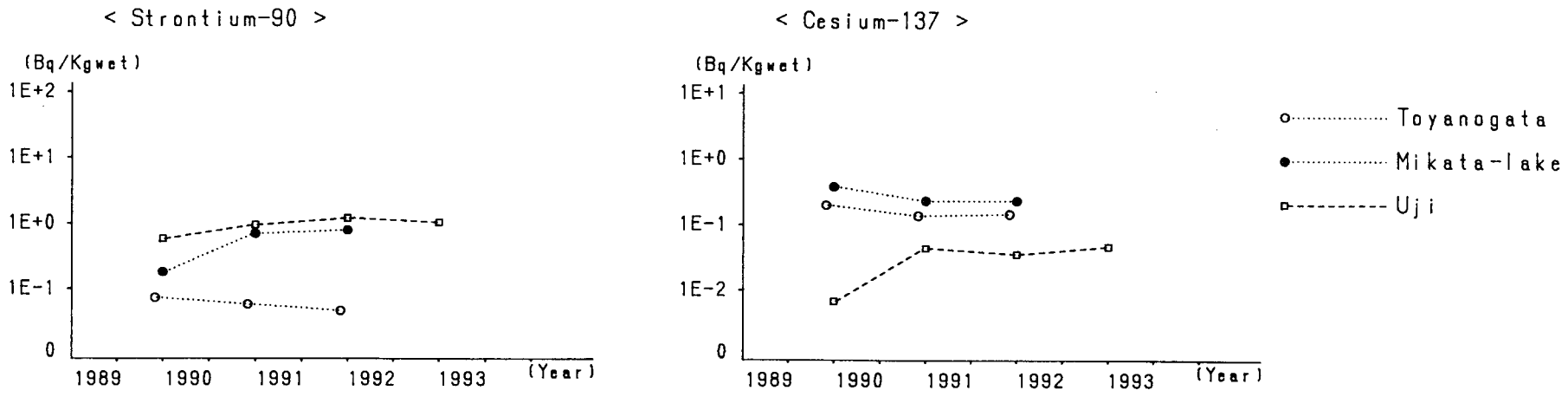

Fig.6

* * * Shellfish * * *

[Pecter Yessoensis]

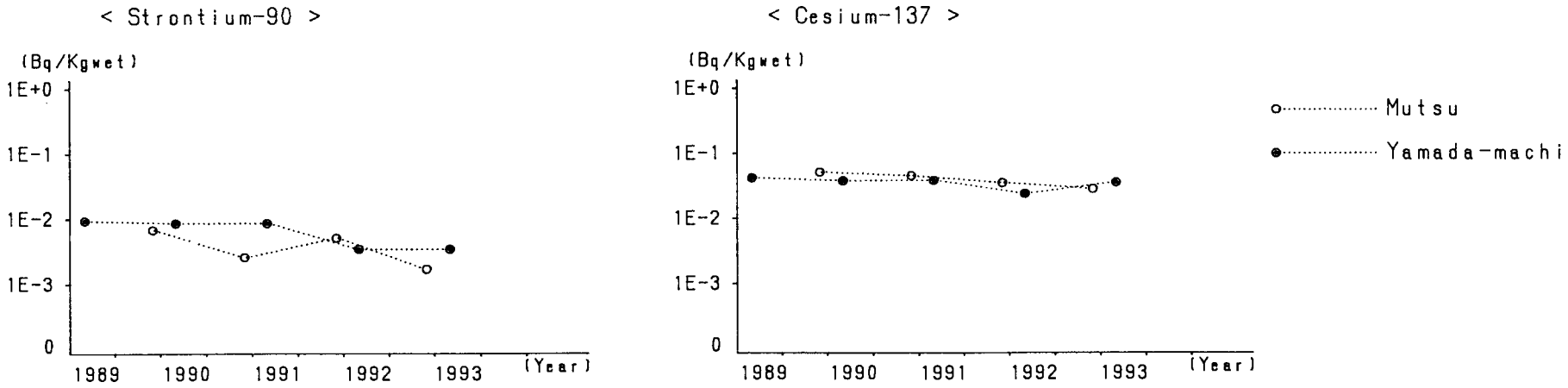

Fig.7

* * * Seaweeds * * *

[Undaria pinnatifida]

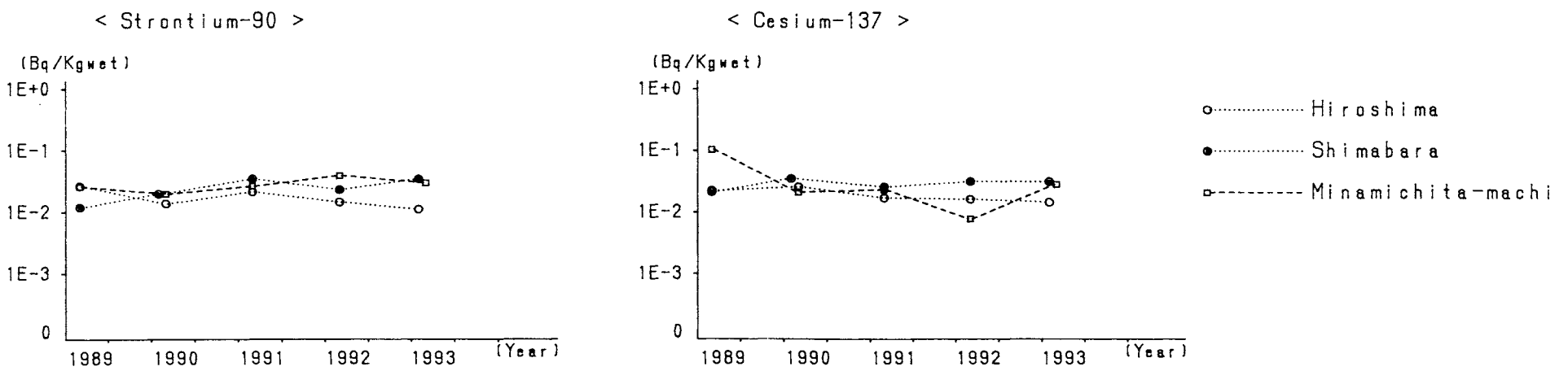

Fig.8

** Sampling Locations in Japan **

1 : Sapporo
2 : Aomori
3 : Morioka
4 : Akita
5 : Sendai
6 : Yamagata
7 : Fukushima
8 : Niigata
9 : Mito
10 : Utsunomiya
11 : Chiba
12 : Urawa
13 : Maebaahi
14 : Shinjuku
15 : Nagano
16 : Yokohama
17 : Koufu
18 : Toyama
19 : Kanazawa
20 : Shizuoka
21 : Gifu
22 : Fukui
23 : Nagoya
24 : Ootsu
25 : Tsu
26 : Kyoto
27 : Nara
28 : Osaka
29 : Tottori
30 : Kobe
31 : Wakayama
32 : Okayama
33 : Matsue
34 : Tokushima
35 : Takamatsu
36 : Hiroshima
37 : Kochi
38 : Matsuyama
39 : Yamaguchi
40 : Ooita
41 : Fukuoka
42 : Saga
43 : Kumamoto
44 : Miyazaki
45 : Nagasaki
46 : Kagoshima
47 : Naha