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RADIOACTIVITY SURVEY DATA in Japan

Part 2
= Dietary Materials =

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Radioactivity Survey Data
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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 5000cm^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. Thetray was washed with 5ℓ of distilled water and the washing was combined to the filtrate.

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

(2) Airborne dust

Airborne dust was collected by an electrostatic precipitator or a filter air sampler for every three-months at a rate of more than 3000m^3 per month.

The sampling was done 1 to 1.5 meters above the ground.

(3) Service water and freshwater

Service water, 100ℓ 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 thesection (1). Freshwater was treated inthe sameway 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 2mm 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 givento 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 1 ℓ of sea water, and then stored in 20ℓ 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 1m 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 thesample in wet weight was spread on a stainless steel dish after removed of the pebbles, shells and other foreign materials, and ried 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 areaswhen 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 nonstarch roots, respectively. After removing soil, the edible part of vegetable samplewas dried and carbonized in a stainless steelpan 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 wasused 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 4kg of shellfish including the shells was collected or purchased. Afterremoving 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 persons
(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 0.25mm 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 0.35mm 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 thesame 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. Thesupernatant 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 andthe precipitate was filtered off, washed and counted.

(2) Cesium-137

The supernatant separated from the strontium fraction was acidified with hydrochloricacid. While stirring, cesium was adsorbed on the ammonium molybdophosphate added.

After filtered off and washed with hydrochlotric acid the precipitate was dissolved in 2.5N 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 forextraction.
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 90min. 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 theresults, concentrations of these nuclides in the original samples were calculated.

6. Results

(1) Strontium-90 and Cesium-137 in Total Diet
(from Oct. 1994 to Mar. 1995)
-continued from No. 111 of this publication-
Table (1) Strontium-90 and Cesium-137 in Total Diet

Location	Ash	Ca	K	^{90}Sr				^{137}Cs			
	Ash(g/p·d)	Ca(mg/p·d)	K(mg/p·d)	(Bq/p·d)		(Bq/gCa)		(Bq/p·d)		(Bq/gK)	
October, 1994											
Yamagata, YAMAGATA	16.7	396	1790	0.070	± 0.0065	0.18	± 0.016	0.048	± 0.0068	0.027	± 0.0038
Sagae, YAMAGATA	13.4	471	1630	0.047	± 0.0066	0.10	± 0.014	0.030	± 0.0062	0.018	± 0.0038
Kochi, KOCHI	13.6	431	1580	0.043	± 0.0059	0.099	± 0.014	0.052	± 0.0070	0.033	± 0.0044
Saga-machi, KOCHI	14.2	461	1700	0.077	± 0.013	0.17	± 0.028	0.042	± 0.0083	0.025	± 0.0049
Ooita, OOITA	15.2	653	2230	0.064	± 0.0073	0.099	± 0.011	0.090	± 0.0094	0.040	± 0.0042
Saiki, OOITA	12.5	440	1700	0.043	± 0.0062	0.098	± 0.014	0.041	± 0.0066	0.024	± 0.0039
November, 1994											
Iwaizumi-machi, IWATE	12.1	378	1260	0.069	± 0.013	0.18	± 0.035	0.046	± 0.0072	0.036	± 0.0057
Ishinomaki, MIYAGI	15.4	410	1790	0.079	± 0.0076	0.19	± 0.019	0.026	± 0.0061	0.015	± 0.0034
Onagawa-machi, MIYAGI	20.5	1010	2430	0.063	± 0.013	0.062	± 0.013	0.082	± 0.0093	0.034	± 0.0038
Akita, AKITA	20.1	622	2460	0.072	± 0.0070	0.12	± 0.011	0.084	± 0.0090	0.034	± 0.0036
Oomagari, AKITA	14.3	742	1840	0.084	± 0.0072	0.11	± 0.010	0.055	± 0.0075	0.030	± 0.0041
Maebashi, GUNMA	16.1	554	2440	0.073	± 0.0071	0.13	± 0.013	0.062	± 0.0077	0.025	± 0.0032
Nakanojou-machi, GUNMA	15.9	575	1880	0.053	± 0.0065	0.092	± 0.011	0.069	± 0.0087	0.037	± 0.0046
Ichihara, CHIBA	16.4	561	1850	0.041	± 0.013	0.072	± 0.023	0.037	± 0.0075	0.020	± 0.0040
Chikura-machi, CHIBA	17.8	1090	2400	0.069	± 0.0098	0.063	± 0.0089	0.039	± 0.0089	0.016	± 0.0037
Yokohama, KANAGAWA	13.4	290	1860	0.051	± 0.0062	0.18	± 0.021	0.092	± 0.0096	0.050	± 0.0052
Hiratsuka, KANAGAWA	17.5	697	2720	0.074	± 0.0071	0.11	± 0.010	0.16	± 0.012	0.060	± 0.0045
Toyama, TOYAMA	14.1	471	1950	0.069	± 0.014	0.15	± 0.030	0.038	± 0.0076	0.020	± 0.0039
Takaoka, TOYAMA	16.7	512	2300	0.029	± 0.012	0.057	± 0.023	0.065	± 0.0084	0.028	± 0.0037
Fukui, FUKUI	13.1	528	1800	0.075	± 0.012	0.14	± 0.023	0.077	± 0.0089	0.043	± 0.0050
Tsuruga, FUKUI	15.4	629	1760	0.096	± 0.0081	0.15	± 0.013	0.057	± 0.0073	0.033	± 0.0041
Shizuoka, SHIZUOKA	14.6	569	2410	0.061	± 0.0065	0.11	± 0.011	0.033	± 0.0068	0.014	± 0.0028

Location	Ash	Ca	K	^{90}Sr		^{137}Cs	
	Ash(g/p·d)	Ca(mg/p·d)	K(mg/p·d)	(Bq/p·d)	(Bq/gCa)	(Bq/p·d)	(Bq/gK)
Hamaoka-machi, SHIZUOKA	15.7	744	1900	0.042 ± 0.0056	0.057 ± 0.0076	0.026 ± 0.0061	0.014 ± 0.0032
Nagoya, AICHI	16.5	804	2210	0.10 ± 0.008	0.13 ± 0.010	0.026 ± 0.0063	0.012 ± 0.0028
Shinshiro, AICHI	16.7	580	2050	0.078 ± 0.0075	0.13 ± 0.013	0.061 ± 0.0072	0.030 ± 0.0035
Tsu, MIE	20.1	735	2260	0.094 ± 0.0076	0.13 ± 0.010	0.10 ± 0.009	0.045 ± 0.0042
Hamasaka-machi, HYOUGO	13.5	615	1970	0.058 ± 0.0064	0.095 ± 0.010	0.066 ± 0.0072	0.034 ± 0.0037
Gojou, NARA	13.9	1230	1690	0.052 ± 0.0062	0.042 ± 0.0051	0.046 ± 0.0070	0.027 ± 0.0041
Kashihara, NARA	12.1	639	1440	0.042 ± 0.0058	0.066 ± 0.0091	0.037 ± 0.0063	0.026 ± 0.0044
Wakayama, WAKAYAMA	11.9	383	1580	0.051 ± 0.0058	0.13 ± 0.015	0.026 ± 0.0054	0.016 ± 0.0034
Kitayama-mura, WAKAYAMA	14.0	638	1870	0.082 ± 0.0073	0.13 ± 0.011	0.084 ± 0.0084	0.045 ± 0.0045
Matsue, SHIMANE	26.3	939	3520	0.14 ± 0.009	0.15 ± 0.010	0.069 ± 0.0089	0.020 ± 0.0025
Okayama, OKAYAMA	18.0	630	2540	0.067 ± 0.0070	0.11 ± 0.011	0.052 ± 0.0078	0.020 ± 0.0031
Kamisaibara-mura, OKAYAMA	14.3	448	2230	0.13 ± 0.016	0.30 ± 0.036	0.17 ± 0.013	0.078 ± 0.0056
Matsuyama, EHIME	14.4	444	2060	0.050 ± 0.012	0.11 ± 0.027	0.037 ± 0.0064	0.018 ± 0.0031
Ikata-machi, EHIME	11.7	668	1450	0.031 ± 0.011	0.046 ± 0.016	0.019 ± 0.0058	0.013 ± 0.0040
Dazaifu, FUKUOKA	13.6	563	2040	0.071 ± 0.012	0.13 ± 0.022	0.049 ± 0.0080	0.024 ± 0.0039
Fukuoka, FUKUOKA	13.3	504	1340	0.020 ± 0.0093	0.040 ± 0.019	0.046 ± 0.0076	0.035 ± 0.0057
Saga, SAGA	16.9	552	2240	0.044 ± 0.012	0.081 ± 0.022	0.036 ± 0.0075	0.016 ± 0.0033
Nagasaki, NAGASAKI	18.3	920	2480	0.079 ± 0.013	0.086 ± 0.014	0.083 ± 0.0091	0.034 ± 0.0037
Matsuura, NAGASAKI	12.2	508	1850	0.071 ± 0.014	0.14 ± 0.027	0.035 ± 0.0066	0.019 ± 0.0036
Sendai, MIYAGI	13.8	389	1490	0.048 ± 0.0059	0.12 ± 0.015	0.046 ± 0.0070	0.031 ± 0.0047
Ookuchi, KAGOSHIMA	16.0	632	2240	0.073 ± 0.0071	0.12 ± 0.011	0.067 ± 0.0079	0.030 ± 0.0035
December, 1994							
Sapporo, HOKKAIDOU	21.1	688	2360	0.077 ± 0.013	0.11 ± 0.019	0.087 ± 0.0097	0.037 ± 0.0041
Iwanai-machi, HOKKAIDOU	18.9	979	2340	0.072 ± 0.012	0.073 ± 0.012	0.063 ± 0.0083	0.027 ± 0.0036
Aomori, AOMORI	21.1	669	2110	0.048 ± 0.012	0.072 ± 0.017	0.037 ± 0.0068	0.018 ± 0.0032

Location	Ash	Ca	K	^{90}Sr		^{137}Cs	
	Ash(g/p·d)	Ca(mg/p·d)	K(mg/p·d)	(Bq/p·d)	(Bq/gCa)	(Bq/p·d)	(Bq/gK)
Ajigasawa-machi, AOMORI	14.6	630	1950	0.091 ± 0.014	0.14 ± 0.021	0.031 ± 0.0063	0.016 ± 0.0033
Morioka, IWATE	15.5	502	4200	0.075 ± 0.013	0.15 ± 0.026	0.039 ± 0.0071	0.0093 ± 0.0017
Fukushima, FUKUSHIMA	14.5	416	1840	0.054 ± 0.0060	0.13 ± 0.014	0.040 ± 0.0069	0.022 ± 0.0038
Ookuma-machi, FUKUSHIMA	15.7	466	1720	0.069 ± 0.0065	0.15 ± 0.014	0.061 ± 0.0077	0.036 ± 0.0045
Mito, IBARAKI	15.2	454	2130	0.084 ± 0.0077	0.19 ± 0.017	0.064 ± 0.0083	0.030 ± 0.0039
Tokai-mura, IBARAKI	22.1	834	2590	0.096 ± 0.0080	0.12 ± 0.010	0.046 ± 0.0074	0.018 ± 0.0029
Utsunomiya, TOCHIGI	18.0	601	2210	0.063 ± 0.0063	0.11 ± 0.011	0.068 ± 0.0080	0.031 ± 0.0036
Mooka, TOCHIGI	13.5	419	1470	0.047 ± 0.0053	0.11 ± 0.013	0.036 ± 0.0062	0.025 ± 0.0042
Urawa, SAITAMA	14.7	524	1940	0.061 ± 0.0062	0.12 ± 0.012	0.053 ± 0.0075	0.027 ± 0.0039
Kumagaya, SAITAMA	15.8	518	1790	0.065 ± 0.0070	0.13 ± 0.013	0.042 ± 0.0069	0.024 ± 0.0039
Shinjuku, TOKYO	15.4	491	2090	0.047 ± 0.013	0.096 ± 0.026	0.056 ± 0.0077	0.027 ± 0.0037
Hachijou-machi, TOKYO	13.4	436	1730	0.078 ± 0.014	0.18 ± 0.031	0.045 ± 0.0070	0.026 ± 0.0041
Kashiwazaki, NIIGATA	20.2	594	2390	0.13 ± 0.017	0.21 ± 0.028	0.077 ± 0.0094	0.032 ± 0.0039
Nishikawa-machi, NIIGATA	25.3	808	3560	0.066 ± 0.014	0.081 ± 0.017	0.040 ± 0.0079	0.011 ± 0.0022
Kanazawa, ISHIKAWA	15.5	522	1400	0.056 ± 0.0065	0.11 ± 0.012	0.043 ± 0.0079	0.031 ± 0.0056
Yoshinodani-mura, ISHIKAWA	17.1	483	2120	0.097 ± 0.0082	0.20 ± 0.017	0.081 ± 0.0097	0.038 ± 0.0046
Koufu, YAMANASHI	13.4	514	1470	0.048 ± 0.0054	0.093 ± 0.011	0.038 ± 0.0062	0.026 ± 0.0043
Nirasaki, YAMANASHI	13.3	400	1820	0.057 ± 0.0058	0.14 ± 0.015	0.072 ± 0.0082	0.039 ± 0.0045
Nagano, NAGANO	12.7	482	2100	0.037 ± 0.011	0.076 ± 0.024	0.053 ± 0.0074	0.025 ± 0.0035
Toubu-machi, NAGANO	16.3	772	2120	0.060 ± 0.013	0.077 ± 0.016	0.034 ± 0.0064	0.016 ± 0.0030
Gifu, GIFU	15.1	547	2200	0.053 ± 0.0064	0.097 ± 0.012	0.041 ± 0.0064	0.019 ± 0.0029
Takayama, GIFU	12.8	1130	1520	0.062 ± 0.0067	0.054 ± 0.0059	0.030 ± 0.0063	0.019 ± 0.0041
Owase, MIE	14.0	453	1690	0.11 ± 0.014	0.25 ± 0.030	0.029 ± 0.0065	0.017 ± 0.0038
Ootsu, SHIGA	13.4	500	2150	0.045 ± 0.0091	0.091 ± 0.018	0.053 ± 0.0075	0.025 ± 0.0035
Imazu-machi, SHIGA	13.0	488	2070	0.091 ± 0.012	0.19 ± 0.025	0.057 ± 0.0080	0.027 ± 0.0039

Location	Ash	Ca	K	^{90}Sr		^{137}Cs	
	Ash(g/p·d)	Ca(mg/p·d)	K(mg/p·d)	(Bq/p·d)	(Bq/gCa)	(Bq/p·d)	(Bq/gK)
Osaka, OSAKA	17.0	590	2650	0.062 ± 0.0069	0.11 ± 0.012	0.075 ± 0.0090	0.028 ± 0.0034
Sakai, OSAKA	13.9	566	1970	0.056 ± 0.0068	0.099 ± 0.012	0.073 ± 0.0090	0.037 ± 0.0046
Kakogawa, HYOUGO	14.9	655	1830	0.059 ± 0.0067	0.089 ± 0.010	0.038 ± 0.0076	0.021 ± 0.0042
Miyoshi, HIROSHIMA	12.9	491	1640	0.072 ± 0.0078	0.15 ± 0.016	0.036 ± 0.0069	0.022 ± 0.0042
Yamaguchi, YAMAGUCHI	17.1	580	2210	0.067 ± 0.0072	0.12 ± 0.012	0.11 ± 0.011	0.048 ± 0.0048
Ajisu-machi, YAMAGUCHI	19.4	1070	2300	0.067 ± 0.0072	0.062 ± 0.0067	0.10 ± 0.011	0.045 ± 0.0046
Tokushima, TOKUSHIMA	14.9	412	1980	0.057 ± 0.010	0.14 ± 0.025	0.025 ± 0.0080	0.013 ± 0.0041
Takamatsu, KAGAWA	15.3	488	1980	0.063 ± 0.013	0.13 ± 0.027	0.026 ± 0.0060	0.013 ± 0.0030
Kokubunji-machi, KAGAWA	14.8	505	2210	0.073 ± 0.014	0.14 ± 0.027	0.029 ± 0.0063	0.013 ± 0.0028
Karatsu, SAGA	17.8	574	2180	0.067 ± 0.013	0.12 ± 0.023	0.069 ± 0.0091	0.032 ± 0.0042
Kumamoto, KUMAMOTO	13.1	314	1700	0.026 ± 0.0045	0.082 ± 0.014	0.039 ± 0.0062	0.023 ± 0.0037
Aso-machi, KUMAMOTO	18.1	453	2200	0.069 ± 0.0071	0.15 ± 0.016	0.11 ± 0.010	0.050 ± 0.0044
Miyazaki, MIYAZAKI	18.3	681	2470	0.070 ± 0.0067	0.10 ± 0.010	0.11 ± 0.010	0.046 ± 0.0042
Takahara-machi, MIYAZAKI	21.0	759	3050	0.077 ± 0.0070	0.10 ± 0.009	0.18 ± 0.013	0.059 ± 0.0043
Ginowan, Okinawa	17.4	642	2430	0.052 ± 0.0066	0.081 ± 0.010	0.031 ± 0.0073	0.013 ± 0.0030
January, 1995							
Kyoto, KYOTO	17.4	629	2420	0.047 ± 0.0066	0.075 ± 0.010	0.045 ± 0.0071	0.019 ± 0.0029
Maizuru, KYOTO	21.3	1310	2130	0.076 ± 0.0082	0.058 ± 0.0062	0.048 ± 0.0074	0.023 ± 0.0035
Kashima-machi, SHIMANE	18.6	840	2570	0.12 ± 0.010	0.15 ± 0.011	0.032 ± 0.0068	0.012 ± 0.0026
Naha, Okinawa	17.2	644	2680	0.060 ± 0.0073	0.093 ± 0.011	0.034 ± 0.0075	0.013 ± 0.0028
Febraly, 1995							
Hiroshima, HIROSHIMA	12.7	512	1640	0.072 ± 0.013	0.14 ± 0.025	0.024 ± 0.0061	0.015 ± 0.0037
Kamiita-machi, TOKUSHIMA	15.7	425	2120	0.065 ± 0.0095	0.15 ± 0.022	0.026 ± 0.0057	0.012 ± 0.0027

(2)-1 Strontium-90 and Cesium-137 in Rice (producing districts)
(from Oct. 1994 to Mar. 1995)
-continued from No. 111 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, 1994							
Chiba, CHIBA	0.542	0.029	0.883	0.013 ± 0.0036	0.43 ± 0.13	0.0097 ± 0.0066	0.011 ± 0.0075
Maki-machi, NIIGATA	0.680	0.039	0.816	0.016 ± 0.0049	0.42 ± 0.13	0.026 ± 0.0058	0.031 ± 0.0071
Kosugi-machi, TOYAMA	0.431	0.033	0.832	0.0088 ± 0.0035	0.27 ± 0.11	0.0088 ± 0.0040	0.011 ± 0.0049
Kanazawa, ISHIKAWA	0.483	0.036	0.879	0.012 ± 0.0039	0.32 ± 0.11	0.063 ± 0.0092	0.072 ± 0.010
Kashihara, NARA	0.552	0.042	0.889	0.012 ± 0.0085	0.29 ± 0.20	0.017 ± 0.0052	0.020 ± 0.0058
Ishii-machi, TOKUSHIMA	0.500	0.038	0.835	0.0000 ± 0.0035	0.000 ± 0.091	0.015 ± 0.0055	0.018 ± 0.0066
Miki-machi, KAGAWA	0.479	0.030	0.829	0.0032 ± 0.0034	0.11 ± 0.11	0.0060 ± 0.0053	0.0072 ± 0.0064
Koushi-machi, KUMAMOTO	0.501	0.021	0.787	0.0087 ± 0.0038	0.41 ± 0.18	0.050 ± 0.0085	0.063 ± 0.011
November, 1994							
Ishikari-machi, HOKKAIDOU	0.592	0.024	0.841	0.0088 ± 0.0042	0.36 ± 0.17	0.033 ± 0.0067	0.039 ± 0.0080
Takizawa-mura, IWATE	0.565	0.038	0.695	0.0016 ± 0.0032	0.042 ± 0.085	0.23 ± 0.014	0.33 ± 0.020
Ishinomaki, MIYAGI	0.681	0.037	1.14	0.0077 ± 0.0086	0.21 ± 0.23	0.014 ± 0.0048	0.013 ± 0.0043
Fukushima, FUKUSHIMA	0.441	0.037	0.793	0.0093 ± 0.0035	0.25 ± 0.095	0.019 ± 0.0048	0.024 ± 0.0060
Mito, IBARAKI	0.429	0.039	0.618	0.0086 ± 0.0030	0.22 ± 0.077	0.044 ± 0.0075	0.072 ± 0.012
Maebashi, GUNMA	0.523	0.030	0.638	0.0030 ± 0.0031	0.1 ± 0.10	0.0099 ± 0.0045	0.016 ± 0.0071
Takane-machi, YAMANASHI	0.673	0.035	1.05	0.0053 ± 0.0034	0.15 ± 0.097	0.028 ± 0.0058	0.026 ± 0.0055
Toyosina-machi, NAGANO	0.529	0.037	0.873	0.0064 ± 0.0034	0.17 ± 0.093	0.0035 ± 0.0041	0.0040 ± 0.0047
Kasai, HYOUGO	0.530	0.027	0.949	0.0082 ± 0.0035	0.31 ± 0.13	0.011 ± 0.0046	0.011 ± 0.0049
Saga, SAGA	0.515	0.032	0.891	0.0049 ± 0.0026	0.15 ± 0.081	0.014 ± 0.0058	0.016 ± 0.0065
Usa, OOITA	0.416	0.026	0.649	0.0031 ± 0.0028	0.12 ± 0.11	0.012 ± 0.0038	0.018 ± 0.0058
December, 1994							
Utsunomiya, TOCHIGI	0.533	0.029	0.522	0.0080 ± 0.0034	0.28 ± 0.12	0.038 ± 0.0071	0.074 ± 0.014
Yokohama, KANAGAWA	0.490	0.033	0.715	0.0046 ± 0.0035	0.14 ± 0.11	0.023 ± 0.0051	0.032 ± 0.0071
Shinguu, WAKAYAMA	0.545	0.039	0.883	0.020 ± 0.0042	0.51 ± 0.11	0.093 ± 0.0093	0.11 ± 0.011
Yamaguchi, YAMAGUCHI	0.690	0.036	1.17	0.0089 ± 0.0036	0.25 ± 0.099	0.16 ± 0.012	0.13 ± 0.010
Chikushino, FUKUOKA	0.601	0.036	0.889	0.0071 ± 0.0037	0.20 ± 0.10	0.0000 ± 0.0040	0.0000 ± 0.0045

(2)-2 Strontium-90 and Cesium-137 in Rice (consuming districts)
(from Oct. 1994 to Mar. 1995)
-continued from No, 111 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, 1994							
Shinjuku, TOKYO	0.600	0.032	0.804	0.0031 ± 0.0036	0.1 ± 0.11	0.011 ± 0.0052	0.014 ± 0.0064
Fukui, FUKUI	0.426	0.042	0.754	0.0002 ± 0.0026	0.006 ± 0.062	0.042 ± 0.0073	0.056 ± 0.0097
Matsuyama, EHIME	0.542	0.028	0.835	0.0062 ± 0.0030	0.22 ± 0.11	0.036 ± 0.0073	0.044 ± 0.0087
November, 1994							
Sapporo, HOKKAIDOU	0.678	0.032	0.936	0.012 ± 0.0040	0.37 ± 0.13	0.074 ± 0.0091	0.080 ± 0.0097
Yamagata, YAMAGATA	0.603	0.031	0.983	0.0077 ± 0.0033	0.24 ± 0.10	0.052 ± 0.0069	0.053 ± 0.0070
Mito, IBARAKI	0.533	0.033	0.789	0.010 ± 0.0031	0.31 ± 0.092	0.030 ± 0.0070	0.038 ± 0.0088
Niigata, NIIGATA	0.440	0.033	0.594	0.013 ± 0.0039	0.41 ± 0.12	0.019 ± 0.0048	0.032 ± 0.0082
Shizuoka, SHIZUOKA	0.572	0.033	0.692	0.0068 ± 0.0037	0.21 ± 0.11	0.015 ± 0.0051	0.022 ± 0.0074
Kyoto, KYOTO	0.412	0.031	0.705	0.014 ± 0.0035	0.45 ± 0.11	0.031 ± 0.0056	0.043 ± 0.0080
Osaka, OSAKA	0.455	0.032	0.805	0.0062 ± 0.0028	0.19 ± 0.088	0.0041 ± 0.0054	0.0051 ± 0.0068
Kobe, HYOUGO	0.470	0.033	0.785	0.0078 ± 0.0042	0.24 ± 0.13	0.010 ± 0.0047	0.013 ± 0.0060
Hiroshima, HIROSHIMA	0.529	0.036	0.910	0.012 ± 0.0036	0.34 ± 0.10	0.12 ± 0.011	0.13 ± 0.012
December, 1994							
Urawa, SAITAMA	0.448	0.030	0.676	0.0087 ± 0.0037	0.29 ± 0.12	0.019 ± 0.0050	0.027 ± 0.0074
Nagoya, AICHI	0.447	0.034	0.925	0.0083 ± 0.0035	0.24 ± 0.10	0.0035 ± 0.0041	0.0038 ± 0.0045
Tottori, TOTTORI	0.702	0.040	0.642	0.0056 ± 0.0037	0.14 ± 0.093	0.052 ± 0.0073	0.081 ± 0.011
Matsue, SHIMANE	0.514	0.035	0.730	0.0053 ± 0.0034	0.15 ± 0.097	0.098 ± 0.0090	0.13 ± 0.012
Seto-machi, OKAYAMA	0.479	0.033	0.776	0.0028 ± 0.0033	0.09 ± 0.10	0.0019 ± 0.0038	0.0024 ± 0.0049
Kochi, KOCHI	0.498	0.027	1.03	0.0008 ± 0.0031	0.03 ± 0.11	0.11 ± 0.010	0.11 ± 0.009
Kasuga, FUKUOKA	0.505	0.034	0.712	0.0069 ± 0.0032	0.20 ± 0.093	0.046 ± 0.0063	0.065 ± 0.0089
Kagoshima, KAGOSHIMA	0.476	0.038	0.904	0.012 ± 0.0087	0.31 ± 0.23	0.71 ± 0.024	0.79 ± 0.026
January, 1995							
Hirosaki, AOMORI	0.549	0.039	0.961	0.020 ± 0.0043	0.51 ± 0.11	0.0073 ± 0.0042	0.0076 ± 0.0043
Nagasaki, NAGASAKI	0.582	0.033	0.693	0.0070 ± 0.0038	0.21 ± 0.12	0.015 ± 0.0048	0.021 ± 0.0070
Yonagusuku-mura, Okinawa	0.639	0.037	0.939	0.010 ± 0.0037	0.27 ± 0.10	0.024 ± 0.0053	0.025 ± 0.0056

(3)-1 Strontium-90 and Cesium-137 in Milk (producing districts for domestic program)
(from Oct. 1994 to Mar. 1995)
-continued from No. 111 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, 1994							
Yamato-machi, SAGA	7.26	1.05	1.58	0.031 ± 0.0054	0.029 ± 0.0052	0.054 ± 0.0087	0.034 ± 0.0055
November, 1994							
Shinguu, WAKAYAMA	6.38	0.971	1.42	0.014 ± 0.0057	0.014 ± 0.0059	0.011 ± 0.0052	0.0080 ± 0.0037
Febraly, 1995							
Aomori, AOMORI	7.38	1.07	1.52	0.041 ± 0.0052	0.038 ± 0.0049	0.025 ± 0.0059	0.016 ± 0.0039
Takizawa-mura, IWATE	6.82	1.04	1.43	0.023 ± 0.0041	0.022 ± 0.0039	0.046 ± 0.0068	0.032 ± 0.0047
Mito, IBARAKI	7.77	1.20	1.57	0.029 ± 0.0095	0.024 ± 0.0079	0.015 ± 0.0051	0.0099 ± 0.0033
Nishinasuno-machi, TOCHIGI	6.92	1.06	1.58	0.027 ± 0.0050	0.026 ± 0.0047	0.054 ± 0.0081	0.034 ± 0.0051
Fujimi-mura, GUNMA	7.62	1.13	1.58	0.025 ± 0.0045	0.022 ± 0.0040	0.028 ± 0.0059	0.018 ± 0.0037
Yachimata, CHIBA	7.69	1.13	1.65	0.026 ± 0.0051	0.023 ± 0.0045	0.041 ± 0.0071	0.025 ± 0.0043
Tonami, TOYAMA	7.38	1.12	1.57	0.023 ± 0.0052	0.021 ± 0.0047	0.028 ± 0.0061	0.018 ± 0.0039
Oshimizu-machi, ISHIKAWA	7.08	1.12	1.55	0.028 ± 0.0052	0.025 ± 0.0046	0.063 ± 0.0081	0.041 ± 0.0053
Kasamatsu-machi, GIFU	7.06	1.13	1.41	0.037 ± 0.0057	0.033 ± 0.0051	0.034 ± 0.0074	0.024 ± 0.0052
Oouchiyama-mura, MIE	7.20	1.08	1.55	0.0089 ± 0.0051	0.0082 ± 0.0047	0.0046 ± 0.0051	0.0029 ± 0.0033
Hino-machi, SHIGA	7.37	1.14	1.54	0.018 ± 0.0044	0.016 ± 0.0039	0.014 ± 0.0055	0.0090 ± 0.0036
Mihara-machi, HYOUGO	7.31	1.17	1.51	0.027 ± 0.0047	0.023 ± 0.0040	0.0089 ± 0.0046	0.0059 ± 0.0030
Oouda-machi, NARA	6.75	1.01	1.46	0.024 ± 0.0049	0.024 ± 0.0048	0.0088 ± 0.0049	0.0061 ± 0.0034
Kamiita-machi, TOKUSHIMA	7.41	1.13	1.66	0.031 ± 0.0080	0.027 ± 0.0071	0.0052 ± 0.0042	0.0032 ± 0.0025
Takase-machi, KAGAWA	7.63	1.14	1.59	0.0075 ± 0.0061	0.0066 ± 0.0054	0.019 ± 0.0053	0.012 ± 0.0034
Matsuyama, EHIME	7.45	1.17	1.43	0.026 ± 0.0086	0.023 ± 0.0074	0.020 ± 0.0055	0.014 ± 0.0038
Koushi-machi, KUMAMOTO	7.18	1.09	1.55	0.023 ± 0.0052	0.021 ± 0.0048	0.0000 ± 0.0045	0.0000 ± 0.0029
Kujuu-machi, OOITA	7.48	1.17	1.57	0.031 ± 0.0084	0.026 ± 0.0072	0.16 ± 0.012	0.10 ± 0.007
Takahara-machi, MIYAZAKI	7.13	1.07	1.53	0.015 ± 0.0040	0.014 ± 0.0037	0.039 ± 0.0064	0.025 ± 0.0042
March, 1995							
Takane-machi, YAMANASHI	5.88	0.902	1.22	0.033 ± 0.0048	0.036 ± 0.0053	0.011 ± 0.0046	0.0088 ± 0.0037
Shinguu, WAKAYAMA	6.98	1.09	1.44	0.030 ± 0.0099	0.028 ± 0.0091	0.024 ± 0.0055	0.016 ± 0.0038

(3)-2 Strontium-90 and Cesium-137 in Milk (producing districts for WHO program)
(from Oct. 1994 to Mar. 1995)
-continued from No. 111 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, 1994							
Hokudainoujou, HOKKAIDOU	7.63	1.16	1.76	0.036 ± 0.0059	0.031 ± 0.0051	0.088 ± 0.011	0.050 ± 0.0060
Hachijo-Island, TOKYO	6.98	0.955	1.31	0.080 ± 0.011	0.084 ± 0.011	0.28 ± 0.014	0.21 ± 0.011
Nishikawa-machi, NIIGATA	7.67	1.17	1.61	0.024 ± 0.0074	0.020 ± 0.0063	0.017 ± 0.0049	0.011 ± 0.0030
Katsuyama, FUKUI	7.32	1.12	1.62	0.021 ± 0.0074	0.019 ± 0.0066	0.016 ± 0.0050	0.010 ± 0.0031
Shijounawate, OSAKA	7.19	1.07	1.48	0.037 ± 0.0057	0.035 ± 0.0054	0.051 ± 0.0078	0.034 ± 0.0052
Hikawa-machi, SHIMANE	7.54	1.28	1.55	0.050 ± 0.0089	0.039 ± 0.0070	0.092 ± 0.0093	0.060 ± 0.0060
Kochi, KOCHI	7.36	1.18	1.58	0.029 ± 0.0052	0.025 ± 0.0045	0.052 ± 0.0081	0.033 ± 0.0052
Yasu-machi, FUKUOKA	7.47	1.12	1.54	0.017 ± 0.0073	0.015 ± 0.0065	0.010 ± 0.0044	0.0068 ± 0.0029
Kajiki-machi, KAGOSHIMA	7.89	1.12	1.57	0.030 ± 0.0087	0.027 ± 0.0078	0.051 ± 0.0079	0.032 ± 0.0050
December, 1994							
Takamiya-machi, HIROSHIMA	7.23	1.10	1.51	0.021 ± 0.0069	0.019 ± 0.0063	0.033 ± 0.0060	0.022 ± 0.0040
January, 1995							
Shijounawate, OSAKA	7.32	1.07	1.50	0.037 ± 0.0083	0.035 ± 0.0078	0.016 ± 0.0048	0.011 ± 0.0032
Febraly, 1995							
Hokudainoujou, HOKKAIDOU	7.51	1.27	1.57	0.038 ± 0.0090	0.030 ± 0.0071	0.055 ± 0.0079	0.035 ± 0.0051
Hachijo-Island, TOKYO	7.43	0.998	1.34	0.082 ± 0.0070	0.083 ± 0.0070	0.096 ± 0.0091	0.072 ± 0.0068
Nishikawa-machi, NIIGATA	7.55	1.13	1.63	0.026 ± 0.0050	0.023 ± 0.0044	0.015 ± 0.0054	0.0093 ± 0.0033
Katsuyama, FUKUI	7.25	1.14	1.62	0.028 ± 0.0089	0.024 ± 0.0078	0.036 ± 0.0070	0.022 ± 0.0043
Hikawa-machi, SHIMANE	7.49	1.17	1.55	0.076 ± 0.011	0.065 ± 0.0096	0.058 ± 0.0076	0.037 ± 0.0049
Kochi, KOCHI	7.30	1.19	1.50	0.031 ± 0.0052	0.027 ± 0.0044	0.0093 ± 0.0048	0.0062 ± 0.0032
Yasu-machi, FUKUOKA	7.26	1.12	1.51	0.038 ± 0.0096	0.034 ± 0.0086	0.0000 ± 0.0046	0.0000 ± 0.0031
Kajiki-machi, KAGOSHIMA	7.47	1.16	1.55	0.022 ± 0.0047	0.019 ± 0.0040	0.020 ± 0.0052	0.013 ± 0.0034
March, 1995							
Takamiya-machi, HIROSHIMA	7.19	1.11	1.48	0.017 ± 0.0047	0.015 ± 0.0043	0.010 ± 0.0047	0.0069 ± 0.0032

(3)-3 Strontium-90 and Cesium-137 in Milk (consuming districts)
(from Oct. 1994 to Mar. 1995)
-continued from No. 111 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, 1994							
Kyoto, KYOTO	7.54	1.11	1.52	0.0092 ± 0.0092	0.0083 ± 0.0083	0.036 ± 0.0069	0.024 ± 0.0045
January, 1995							
Akita, AKITA	7.25	1.08	1.53	0.023 ± 0.0078	0.021 ± 0.0072	0.026 ± 0.0058	0.017 ± 0.0038
Osaka, OSAKA	7.24	1.05	1.50	0.020 ± 0.0065	0.019 ± 0.0062	0.0064 ± 0.0038	0.0043 ± 0.0025
Yonago, TOTTORI	7.44	1.17	1.59	0.021 ± 0.0049	0.018 ± 0.0042	0.019 ± 0.0054	0.012 ± 0.0034
Febraly, 1995							
Sapporo, HOKKAIDOU	7.37	1.14	1.57	0.060 ± 0.011	0.053 ± 0.010	0.083 ± 0.0094	0.053 ± 0.0060
Yamagata, YAMAGATA	7.07	1.08	1.50	0.021 ± 0.0068	0.019 ± 0.0063	0.0091 ± 0.0042	0.0061 ± 0.0028
Fukushima, FUKUSHIMA	7.50	1.11	1.58	0.025 ± 0.0044	0.023 ± 0.0040	0.011 ± 0.0048	0.0068 ± 0.0031
Urawa, SAITAMA	7.06	1.08	1.51	0.035 ± 0.0089	0.032 ± 0.0083	0.10 ± 0.009	0.067 ± 0.0058
Shinjuku, TOKYO	6.92	1.05	1.42	0.035 ± 0.011	0.033 ± 0.010	0.015 ± 0.0054	0.011 ± 0.0038
Yokohama, KANAGAWA	7.40	1.12	1.58	0.0097 ± 0.0075	0.0087 ± 0.0067	0.019 ± 0.0059	0.012 ± 0.0038
Niigata, NIIGATA	7.53	1.13	1.51	0.030 ± 0.0060	0.027 ± 0.0053	0.021 ± 0.0061	0.014 ± 0.0040
Fukui, FUKUI	7.37	1.14	1.58	0.021 ± 0.0087	0.018 ± 0.0076	0.025 ± 0.0064	0.016 ± 0.0041
Nagano, NAGANO	6.48	1.01	1.43	0.030 ± 0.0052	0.030 ± 0.0052	0.013 ± 0.0053	0.0093 ± 0.0037
Shizuoka, SHIZUOKA	7.17	1.10	1.47	0.029 ± 0.0045	0.026 ± 0.0041	0.039 ± 0.0065	0.027 ± 0.0044
Nagoya, AICHI	7.43	1.13	1.58	0.036 ± 0.0058	0.032 ± 0.0051	0.059 ± 0.0079	0.038 ± 0.0050
Matsue, SHIMANE	7.30	1.11	1.50	0.018 ± 0.0095	0.016 ± 0.0085	0.028 ± 0.0062	0.018 ± 0.0041
Okayama, OKAYAMA	7.31	1.12	1.55	0.019 ± 0.0044	0.017 ± 0.0040	0.0080 ± 0.0049	0.0052 ± 0.0032
Yamaguchi, YAMAGUCHI	7.20	1.09	1.51	0.019 ± 0.0047	0.018 ± 0.0043	0.025 ± 0.0061	0.016 ± 0.0041
Matsuyama, EHIME	7.35	1.11	1.46	0.036 ± 0.0090	0.032 ± 0.0081	0.022 ± 0.0062	0.015 ± 0.0042
Kochi, KOCHI	7.21	1.10	1.53	0.031 ± 0.0054	0.028 ± 0.0048	0.0091 ± 0.0051	0.0059 ± 0.0034
Chikushino, FUKUOKA	7.01	1.07	1.48	0.015 ± 0.0076	0.014 ± 0.0071	0.0070 ± 0.0048	0.0047 ± 0.0033
Nagasaki, NAGASAKI	7.04	1.13	1.56	0.033 ± 0.0087	0.030 ± 0.0078	0.057 ± 0.0082	0.036 ± 0.0053
Kagoshima, KAGOSHIMA	7.31	1.14	1.49	0.022 ± 0.0041	0.019 ± 0.0036	0.029 ± 0.0059	0.020 ± 0.0040
March, 1995							

Location	Component			^{90}Sr		^{137}Cs	
	Ash(g/ ℓ)	Ca(g/ ℓ)	K(g/ ℓ)	(Bq/ ℓ)	(Bq/gCa)	(Bq/ ℓ)	(Bq/gK)
Hiroshima, HIROSHIMA	6.96	1.06	1.43	0.017 ± 0.0045	0.016 ± 0.0042	0.018 ± 0.0056	0.013 ± 0.0039

(3)-4 Strontium-90 and Cesium-137 in Milk (powdered milk)
(from Oct. 1994 to Mar. 1995)
-continued from No. 111 of this publication-
Table (3)-4 Strontium-90 and Cesium-137 in Milk

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	(Bq/kg)	(Bq/gCa)	(Bq/kg)	(Bq/gK)
January, 1995							
Sample C,	8.03	12.3	17.0	0.60 ± 0.025	0.049 ± 0.0020	2.2 ± 0.06	0.13 ± 0.003
Febraly, 1995							
Sample A,	7.98	12.0	18.0	0.44 ± 0.021	0.036 ± 0.0017	0.53 ± 0.028	0.029 ± 0.0016
Sample B,	2.60	3.22	6.42	0.055 ± 0.0069	0.017 ± 0.0021	0.14 ± 0.012	0.022 ± 0.0019
Sample D,	2.78	4.17	6.31	0.050 ± 0.0063	0.012 ± 0.0015	0.077 ± 0.0098	0.012 ± 0.0016
Sample E,	2.46	3.84	5.66	0.074 ± 0.0075	0.019 ± 0.0019	0.19 ± 0.014	0.033 ± 0.0024
Sample F,	2.58	3.51	5.47	0.058 ± 0.0070	0.017 ± 0.0020	0.23 ± 0.015	0.042 ± 0.0027

(4)-1 Strontium-90 and cesium-137 in Vegetables (producing districts)
(from Oct. 1994 to Mar. 1995)

-continued from No. 111 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)
(Cabbage)							
November, 1994							
Mutsu, AOMORI	0.624	0.435	2.57	0.18 ± 0.011	0.41 ± 0.026	0.0011 ± 0.0044	0.0004 ± 0.0017
Sannohe-machi, AOMORI	0.758	0.366	3.04	0.20 ± 0.017	0.55 ± 0.046	0.025 ± 0.0060	0.0081 ± 0.0020
December, 1994							
Kumatori-machi, OSAKA	0.607	0.402	2.37	0.039 ± 0.0062	0.097 ± 0.015	0.014 ± 0.0069	0.0060 ± 0.0029
(Chinese cabbege)							
October, 1994							
Tamayama-mura, IWATE	0.565	0.511	2.13	0.14 ± 0.010	0.27 ± 0.019	0.071 ± 0.0093	0.033 ± 0.0044
November, 1994							
Utsunomiya, TOCHIGI	0.813	1.02	2.68	0.13 ± 0.008	0.13 ± 0.008	0.053 ± 0.0074	0.020 ± 0.0027
December, 1994							
Shinguu, WAKAYAMA	0.690	0.459	2.55	0.066 ± 0.012	0.14 ± 0.027	0.030 ± 0.0071	0.012 ± 0.0028
(Japanese radish)							
October, 1994							
Tamayama-mura, IWATE	0.587	0.231	3.21	0.099 ± 0.0076	0.43 ± 0.033	0.027 ± 0.0066	0.0085 ± 0.0020
Chiba, CHIBA	0.672	0.194	2.87	0.13 ± 0.015	0.68 ± 0.075	0.0000 ± 0.0038	0.0000 ± 0.0013
Takamatsu, KAGAWA	0.670	0.231	2.58	0.010 ± 0.0044	0.044 ± 0.019	0.0099 ± 0.0055	0.0038 ± 0.0021
November, 1994							
Sannohe-machi, AOMORI	0.538	0.254	2.04	0.19 ± 0.011	0.73 ± 0.045	0.035 ± 0.0068	0.017 ± 0.0033
Fukushima, FUKUSHIMA	0.483	0.283	1.55	0.054 ± 0.0060	0.19 ± 0.021	0.019 ± 0.0056	0.012 ± 0.0036
Mito, IBARAKI	0.501	0.264	2.04	0.068 ± 0.012	0.26 ± 0.046	0.031 ± 0.0064	0.015 ± 0.0031
Utsunomiya, TOCHIGI	0.538	0.241	1.96	0.070 ± 0.0075	0.29 ± 0.031	0.053 ± 0.0082	0.027 ± 0.0042
Maebashi, GUNMA	0.697	0.273	3.57	0.13 ± 0.009	0.49 ± 0.033	0.022 ± 0.0066	0.0061 ± 0.0019
Kosugi-machi, TOYAMA	0.439	0.167	1.88	0.14 ± 0.015	0.84 ± 0.092	0.0028 ± 0.0037	0.0015 ± 0.0020
Fukui, FUKUI	0.535	0.178	2.29	0.12 ± 0.011	0.69 ± 0.060	0.025 ± 0.0061	0.011 ± 0.0027

Location	Component			^{90}Sr				^{137}Cs			
	Ash(%)	Ca(g/kg)	K(g/kg)	(Bq/kgwet)		(Bq/gCa)		(Bq/kgwet)		(Bq/gK)	
Takane-machi, YAMANASHI	0.785	0.370	3.16	0.22	± 0.011	0.58	± 0.030	0.014	± 0.0064	0.0044	± 0.0020
Saku, NAGANO	0.454	0.211	1.88	0.027	± 0.0052	0.13	± 0.025	0.0057	± 0.0057	0.0030	± 0.0030
Gifu, GIFU	0.481	0.222	2.02	0.10	± 0.009	0.47	± 0.040	0.017	± 0.0063	0.0082	± 0.0031
Gotenba, SHIZUOKA	0.488	0.274	1.93	0.13	± 0.014	0.47	± 0.050	0.25	± 0.015	0.13	± 0.008
Hamamatsu, SHIZUOKA	0.528	0.145	2.32	0.066	± 0.010	0.46	± 0.070	0.0029	± 0.0034	0.0012	± 0.0015
Meiwa-machi, MIE	0.617	0.239	2.73	0.063	± 0.0069	0.26	± 0.029	0.0087	± 0.0046	0.0032	± 0.0017
Adogawa-machi, SHIGA	0.443	0.148	1.70	0.26	± 0.013	1.8	± 0.09	0.043	± 0.0078	0.025	± 0.0046
Kasai, HYOUGO	0.526	0.211	2.22	0.081	± 0.0079	0.39	± 0.037	0.0052	± 0.0049	0.0024	± 0.0022
Kashihara, NARA	0.529	0.198	2.28	0.025	± 0.0054	0.12	± 0.027	0.0048	± 0.0056	0.0021	± 0.0025
Shime-machi, FUKUOKA	0.678	0.228	2.99	0.017	± 0.0047	0.073	± 0.021	0.0059	± 0.0054	0.0020	± 0.0018
Saga, SAGA	0.643	0.252	2.76	0.055	± 0.0073	0.22	± 0.029	0.0032	± 0.0037	0.0011	± 0.0013
Usa, OOITA	0.865	0.233	4.91	0.063	± 0.0065	0.27	± 0.028	0.013	± 0.0062	0.0026	± 0.0013
Takanabe-machi, MIYAZAKI	0.502	0.201	2.08	0.24	± 0.012	1.2	± 0.06	0.090	± 0.010	0.043	± 0.0049
December, 1994											
Shinguu, WAKAYAMA	0.590	0.307	2.15	0.0061	± 0.0039	0.020	± 0.013	0.0004	± 0.0054	0.0002	± 0.0025
Kokufu-machi, TOTTORI	0.461	0.221	1.96	0.11	± 0.009	0.50	± 0.040	0.013	± 0.0066	0.0064	± 0.0034
Ishii-machi, TOKUSHIMA	1.21	0.667	4.28	0.17	± 0.010	0.26	± 0.016	0.027	± 0.0062	0.0062	± 0.0014
Kubokawa-machi, KOCHI	0.518	0.185	2.14	0.21	± 0.012	1.1	± 0.06	0.021	± 0.0069	0.0099	± 0.0032
Kaimon-machi, KAGOSHIMA	0.668	0.262	2.45	0.18	± 0.016	0.67	± 0.061	0.043	± 0.0076	0.017	± 0.0031
January, 1995											
Hiroshima, HIROSHIMA	0.500	0.156	1.73	0.0019	± 0.0038	0.012	± 0.024	0.011	± 0.0048	0.0065	± 0.0028
Yuya-machi, YAMAGUCHI	0.486	0.218	1.92	0.13	± 0.009	0.61	± 0.043	0.024	± 0.0066	0.012	± 0.0034
(Spinach)											
October, 1994											
Chiba, CHIBA	1.79	0.345	6.66	0.032	± 0.011	0.092	± 0.031	0.011	± 0.0053	0.0017	± 0.00080
Toyama, TOYAMA	1.70	0.689	7.27	0.17	± 0.010	0.25	± 0.015	0.0062	± 0.0047	0.00085	± 0.00065

Location	Component			^{90}Sr				^{137}Cs			
	Ash(%)	Ca(g/kg)	K(g/kg)	(Bq/kgwet)		(Bq/gCa)		(Bq/kgwet)		(Bq/gK)	
Takamatsu, KAGAWA	2.18	1.50	8.48	0.023	± 0.0057	0.015	± 0.0038	0.069	± 0.010	0.0081	± 0.0012
Matsumoto-machi, KAGOSHIMA	1.55	0.547	6.80	0.052	± 0.0060	0.094	± 0.011	0.035	± 0.0078	0.0052	± 0.0011
November, 1994											
Fukushima, FUKUSHIMA	1.65	0.794	6.09	0.14	± 0.009	0.18	± 0.011	0.032	± 0.0062	0.0053	± 0.0010
Mito, IBARAKI	1.62	0.596	7.03	0.15	± 0.010	0.25	± 0.017	0.049	± 0.0078	0.0070	± 0.0011
Maebashi, GUNMA	1.74	0.644	9.14	0.063	± 0.0069	0.097	± 0.011	0.064	± 0.0092	0.0070	± 0.0010
Fukui, FUKUI	1.43	0.307	5.97	0.19	± 0.012	0.63	± 0.039	0.13	± 0.010	0.021	± 0.0017
Takane-machi, YAMANASHI	2.85	2.49	9.63	0.97	± 0.023	0.39	± 0.009	0.059	± 0.0090	0.0061	± 0.00093
Saku, NAGANO	1.91	0.792	7.62	0.059	± 0.0068	0.075	± 0.0086	0.023	± 0.0076	0.0031	± 0.0010
Gifu, GIFU	1.50	0.464	6.43	0.020	± 0.0060	0.042	± 0.013	0.0055	± 0.0068	0.0009	± 0.0011
Gotenba, SHIZUOKA	1.54	1.22	5.41	0.34	± 0.022	0.28	± 0.018	0.54	± 0.022	0.10	± 0.004
Kusu-machi, MIE	1.50	0.690	6.21	0.089	± 0.0081	0.13	± 0.012	0.033	± 0.0066	0.0053	± 0.0011
Rittou-machi, SHIGA	1.81	0.485	8.13	0.049	± 0.0064	0.10	± 0.013	0.018	± 0.0065	0.0022	± 0.00080
Kasai, HYOUGO	1.89	0.492	7.73	0.091	± 0.0085	0.19	± 0.017	0.089	± 0.011	0.012	± 0.0014
Kurayoshi, TOTTORI	1.68	0.845	7.16	0.062	± 0.0069	0.073	± 0.0082	0.029	± 0.0075	0.0041	± 0.0011
Matsuyama, EHIME	1.59	0.522	6.41	0.034	± 0.0094	0.065	± 0.018	0.0000	± 0.0049	0.00000	± 0.00077
Shime-machi, FUKUOKA	2.02	0.869	9.03	0.038	± 0.0056	0.043	± 0.0064	0.016	± 0.0068	0.0017	± 0.00075
Saga, SAGA	2.14	1.12	8.22	0.020	± 0.0047	0.018	± 0.0043	0.021	± 0.0075	0.0026	± 0.00091
Takanabe-machi, MIYAZAKI	1.45	0.788	5.43	0.47	± 0.017	0.59	± 0.022	0.030	± 0.0086	0.0055	± 0.0016
December, 1994											
Kashihara, NARA	1.74	0.485	6.04	0.10	± 0.009	0.21	± 0.018	0.018	± 0.0066	0.0029	± 0.0011
Kubokawa-machi, KOCHI	1.67	0.566	7.42	0.55	± 0.018	0.97	± 0.031	0.029	± 0.0070	0.0040	± 0.00094
Usa, OOITA	2.00	0.372	9.68	0.053	± 0.0063	0.14	± 0.017	0.0091	± 0.0068	0.00094	± 0.00070
January, 1995											
Hiroshima, HIROSHIMA	1.55	0.505	5.43	0.011	± 0.0047	0.021	± 0.0094	0.016	± 0.0053	0.0029	± 0.00097
Yuya-machi, YAMAGUCHI	1.83	0.639	7.48	0.29	± 0.014	0.46	± 0.022	0.038	± 0.0081	0.0051	± 0.0011

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	(Bq/kgwet)	(Bq/gCa)	(Bq/kgwet)	(Bq/gK)
March, 1995							
Ishii-machi, TOKUSHIMA	2.16	0.821	6.39	0.085 ± 0.0087	0.10 ± 0.011	0.024 ± 0.0063	0.0037 ± 0.00099

(4)-2 Strontium-90 and cesium-137 in Vegetables (consuming districts)
(from Oct. 1994 to Mar. 1995)

-continued from No. 111 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)
(Cabbage)							
November, 1994							
Akita, AKITA	0.657	0.635	2.34	0.051 ± 0.0061	0.080 ± 0.0096	0.017 ± 0.0062	0.0072 ± 0.0026
(Japanese radish)							
October, 1994							
Yamagata, YAMAGATA	0.510	0.261	2.08	0.098 ± 0.0076	0.37 ± 0.029	0.014 ± 0.0055	0.0067 ± 0.0027
Kyoto, KYOTO	0.631	0.226	2.74	0.14 ± 0.010	0.61 ± 0.042	0.0017 ± 0.0053	0.0006 ± 0.0019
November, 1994							
Akita, AKITA	0.570	0.267	2.44	0.055 ± 0.0067	0.21 ± 0.025	0.0065 ± 0.0057	0.0027 ± 0.0023
Shinjuku, TOKYO	0.594	0.244	2.50	0.27 ± 0.013	1.1 ± 0.05	0.0053 ± 0.0059	0.0021 ± 0.0023
Niigata, NIIGATA	0.428	0.198	1.70	0.023 ± 0.011	0.12 ± 0.054	0.016 ± 0.0055	0.0096 ± 0.0032
Kanazawa, ISHIKAWA	0.499	0.159	2.08	0.0053 ± 0.0034	0.034 ± 0.021	0.031 ± 0.0061	0.015 ± 0.0029
Osaka, OSAKA	0.414	0.178	1.59	0.091 ± 0.0083	0.51 ± 0.046	0.062 ± 0.0084	0.039 ± 0.0053
Okayama, OKAYAMA	0.505	0.198	1.95	0.13 ± 0.015	0.64 ± 0.073	0.16 ± 0.012	0.080 ± 0.0060
December, 1994							
Yonagusuku-mura, Okinawa	0.630	0.226	2.11	0.030 ± 0.010	0.13 ± 0.046	0.024 ± 0.0066	0.012 ± 0.0031
January, 1995							
Nagasaki, NAGASAKI	0.404	0.194	1.44	0.027 ± 0.0057	0.14 ± 0.030	0.010 ± 0.0052	0.0071 ± 0.0036
Febraly, 1995							
Yokohama, KANAGAWA	0.485	0.238	1.94	0.0011 ± 0.0088	0.005 ± 0.037	0.011 ± 0.0058	0.0057 ± 0.0030
(Spinach)							
October, 1994							
Yamagata, YAMAGATA	1.91	0.465	7.88	0.014 ± 0.0044	0.030 ± 0.0095	0.0074 ± 0.0063	0.00093 ± 0.00080
November, 1994							
Shinjuku, TOKYO	1.63	0.385	7.17	0.045 ± 0.0065	0.12 ± 0.017	0.016 ± 0.0068	0.0022 ± 0.00096
Kanazawa, ISHIKAWA	1.92	1.53	5.63	0.20 ± 0.011	0.13 ± 0.007	0.079 ± 0.010	0.014 ± 0.0018

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	(Bq/kgwet)	(Bq/gCa)	(Bq/kgwet)	(Bq/gK)
Kyoto, KYOTO	1.46	0.440	5.55	0.021 ± 0.0048	0.049 ± 0.011	0.018 ± 0.0066	0.0032 ± 0.0012
Osaka, OSAKA	1.56	0.775	6.76	0.037 ± 0.0049	0.047 ± 0.0063	0.0000 ± 0.0052	0.00000 ± 0.00077
Okayama, OKAYAMA	1.70	0.530	6.98	0.064 ± 0.010	0.12 ± 0.020	0.0028 ± 0.0051	0.00041 ± 0.00072
Matsuyama, EHIME	2.31	0.552	9.15	0.13 ± 0.015	0.23 ± 0.027	0.010 ± 0.0051	0.0011 ± 0.00056
December, 1994							
Yonagusuku-mura, Okinawa	1.65	0.496	6.86	0.0000 ± 0.0094	0.000 ± 0.019	0.020 ± 0.0068	0.0029 ± 0.0010
January, 1995							
Nagasaki, NAGASAKI	1.72	0.395	7.37	0.12 ± 0.015	0.30 ± 0.037	0.026 ± 0.0061	0.0036 ± 0.00083
Febraly, 1995							
Yokohama, KANAGAWA	1.56	0.395	6.00	0.0026 ± 0.0099	0.006 ± 0.025	0.022 ± 0.0074	0.0037 ± 0.0012

(5) Strontium-90 and cesium-137 in Sea Fish
(from Oct. 1994 to Mar. 1995)

-continued from No. 111 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)
(Branchiostegus sp)							
November, 1994							
Nagasaki, NAGASAKI	1.28	0.886	3.52	0.0031 ± 0.0033	0.0035 ± 0.0037	0.23 ± 0.014	0.064 ± 0.0040
(Hexagrammos otakii)							
October, 1994							
Souma, FUKUSHIMA	2.00	2.57	4.18	0.0000 ± 0.0085	0.0000 ± 0.0033	0.13 ± 0.011	0.030 ± 0.0026
(Limanda herzensteini)							
November, 1994							
Mutsu, AOMORI	1.48	0.894	3.96	0.0043 ± 0.0041	0.0048 ± 0.0045	0.10 ± 0.011	0.026 ± 0.0027
Niigata, NIIGATA	2.52	2.12	5.99	0.0009 ± 0.0038	0.0004 ± 0.0018	0.13 ± 0.012	0.022 ± 0.0020
Mikuni-machi, FUKUI	2.84	6.19	3.45	0.012 ± 0.010	0.0019 ± 0.0017	0.10 ± 0.010	0.030 ± 0.0028
Aji-machi, KAGAWA	1.57	1.95	3.38	0.0030 ± 0.0031	0.0015 ± 0.0016	0.051 ± 0.0076	0.015 ± 0.0022
Febraly, 1995							
Ootake, HIROSHIMA	2.07	3.15	3.73	0.0073 ± 0.0039	0.0023 ± 0.0012	0.085 ± 0.010	0.023 ± 0.0027
(Mugil cephalus)							
November, 1994							
Ushimado-machi, OKAYAMA	1.30	0.335	3.93	0.0039 ± 0.0095	0.012 ± 0.028	0.18 ± 0.013	0.045 ± 0.0032
(Pagrus sp)							
October, 1994							
Owase, MIE	1.57	0.993	4.43	0.0000 ± 0.0079	0.0000 ± 0.0079	0.19 ± 0.013	0.043 ± 0.0028
(Pterocaesio diagramma)							
December, 1994							
Yonagusuku-mura, Okinawa	3.55	8.35	4.50	0.0078 ± 0.0044	0.00093 ± 0.00053	0.15 ± 0.014	0.034 ± 0.0030
(Sardinops melanostictus)							
Febraly, 1995							
Nagano, NAGANO	3.35	7.26	3.14	0.015 ± 0.010	0.0020 ± 0.0014	0.088 ± 0.011	0.028 ± 0.0036

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	(Bq/kgwet)	(Bq/gCa)	(Bq/kgwet)	(Bq/gK)
(Scomber australasicus)							
Febraly, 1995							
Chikura-machi, CHIBA	1.04	0.409	2.95	0.011 ± 0.010	0.027 ± 0.025	0.12 ± 0.011	0.042 ± 0.0038
(Scomber sp)							
November, 1994							
Kyoto, KYOTO	1.12	0.245	2.37	0.0000 ± 0.0036	0.000 ± 0.015	0.087 ± 0.0094	0.037 ± 0.0040
Osaka, OSAKA	1.05	9.29	3.48	0.0043 ± 0.0089	0.046 ± 0.096	0.14 ± 0.011	0.041 ± 0.0031
Febraly, 1995							
Oki-abjacent seas, TOTTRI	0.994	0.239	2.73	0.0054 ± 0.0038	0.023 ± 0.016	0.13 ± 0.011	0.046 ± 0.0041
(Sebastes inermis)							
January, 1995							
Yamaguchi, YAMAGUCHI	4.76	12.5	3.66	0.023 ± 0.012	0.0018 ± 0.00098	0.14 ± 0.012	0.038 ± 0.0034
(Seriola quinqueradiata)							
October, 1994							
Togi-machi, ISHIKAWA	1.39	0.891	4.03	0.0071 ± 0.0068	0.0080 ± 0.0077	0.22 ± 0.014	0.054 ± 0.0035
(Spratelloides gracilis)							
November, 1994							
Akune, KAGOSHIMA	3.01	6.04	4.26	0.0097 ± 0.0036	0.0016 ± 0.00059	0.17 ± 0.013	0.040 ± 0.0030
(Trachurus sp)							
November, 1994							
Shizuoka, SHIZUOKA	3.36	7.55	3.61	0.0027 ± 0.0090	0.0004 ± 0.0012	0.21 ± 0.015	0.057 ± 0.0041
Shinguu, WAKAYAMA	3.24	7.98	3.02	0.012 ± 0.0092	0.0015 ± 0.0012	0.11 ± 0.010	0.036 ± 0.0034
December, 1994							
Odawara, KANAGAWA	1.65	0.870	4.69	0.0012 ± 0.0035	0.0014 ± 0.0040	0.19 ± 0.013	0.041 ± 0.0028

Sea Fish

Japanese name	English name	Scientific name
Amadai	Tilefish	Branchiostegus sp
Magarei	Brown sole	Limanda herzensteini
Bora	Gray mullet	Mugil cephalus
Takasago	Golden banded fusilier	Pterocaesio diagramma
Maiwashi	Japanese pilchard	Sardinops melanostictus
Gomasaba	Spotted chub mackerel	Scomber australasicus
Saba	Mackerel	Scomber sp
Ainame	Fat greenling	Hexagrammos otakii
Tai	Sea bream	Pagrus sp
Mebaru	Black rockfish	Sebastes inermis
Buri	Yellow-tail	Seriola quinqueradiata
Kibinago	Blue sprat	Spratelloides gracilis
Aji	Horse mackerel	Trachurus sp

(6) Strontium-90 and cesium-137 in Freshwater Fish
(from Oct. 1994 to Mar. 1995)

-continued from No. 111 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)	
(Carassius auratus)											
November, 1994											
Niigata, NIIGATA	1.21	0.987	3.24	0.099	± 0.0087	0.10	± 0.009	0.14	± 0.012	0.044	± 0.0037
December, 1994											
Mikata-machi, FUKUI	1.13	0.807	3.44	0.066	± 0.0067	0.082	± 0.0083	0.16	± 0.011	0.046	± 0.0033
Uji, KYOTO	4.51	12.9	2.75	0.68	± 0.022	0.053	± 0.0017	0.026	± 0.0072	0.0094	± 0.0026
(Cyprinus carpio)											
October, 1994											
Fukushima, FUKUSHIMA	3.86	10.1	3.23	0.58	± 0.026	0.057	± 0.0025	0.060	± 0.0081	0.019	± 0.0025
December, 1994											
Shobara, HIROSHIMA	1.01	0.265	3.12	0.025	± 0.011	0.094	± 0.041	0.096	± 0.010	0.031	± 0.0032
(Hypomesus nipponensis)											
January, 1995											
Suwa, NAGANO	2.44	5.73	2.27	0.10	± 0.017	0.018	± 0.0030	0.13	± 0.013	0.059	± 0.0056
(Salmo gairdneri)											
November, 1994											
Kumagaya, SAITAMA	1.26	0.147	4.32	0.0000	± 0.0082	0.000	± 0.056	0.21	± 0.013	0.050	± 0.0031

Freshwater Fish

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

(7) Strontium-90 and cesium-137 in Shellfish
(from Oct. 1994 to Mar. 1995)

-continued from No. 111 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)							
Febraly, 1995							
Hatsukaichi, HIROSHIMA	1.41	0.262	2.23	0.0000 ± 0.0054	0.000 ± 0.021	0.034 ± 0.0085	0.015 ± 0.0038
(Patinopecten yessoensis)							
November, 1994							
Mutsu, AOMORI	1.65	0.258	2.47	0.0029 ± 0.0047	0.011 ± 0.018	0.045 ± 0.0083	0.018 ± 0.0034
Febraly, 1995							
Yamada-machi, IWATE	2.02	0.262	2.70	0.0014 ± 0.0044	0.005 ± 0.017	0.034 ± 0.0077	0.013 ± 0.0029

Shellfish

Japanese name	English name	Scientific name
Magaki	Giant Pacific oyster	Crassostrea gigas
Hotategai	Yesso scallop	Patinopecten yessoensis

(8) Strontium-90 and cesium-137 in Seaweeds
(from Oct. 1994 to Mar. 1995)

-continued from No. 111 of this publication-

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

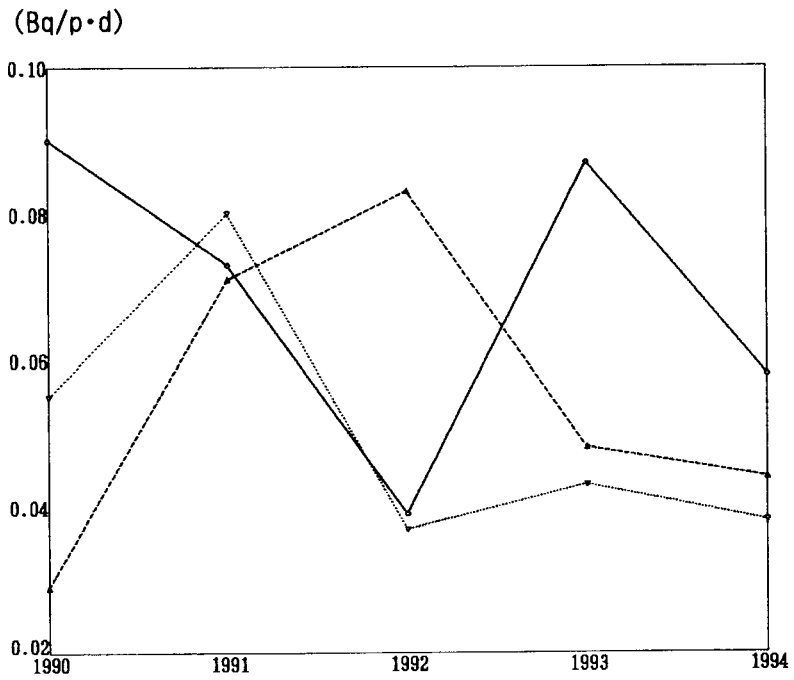
Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	(Bq/kgwet)	(Bq/gCa)	(Bq/kgwet)	(Bq/gK)
(Undaria pinnatifida)							
Febraly, 1995							
Minamichita-machi, AICHI	2.35	0.625	8.17	0.052 ± 0.012	0.083 ± 0.019	0.032 ± 0.0077	0.0039 ± 0.00094
Hiroshima, HIROSHIMA	2.23	0.546	7.05	0.018 ± 0.0048	0.034 ± 0.0087	0.022 ± 0.0062	0.0032 ± 0.00088
Shimabara, NAGASAKI	2.88	0.626	10.2	0.015 ± 0.0097	0.024 ± 0.016	0.042 ± 0.0086	0.0042 ± 0.00084

Seaweeds

Japanese name	English name	Scientific name
Wakame	**Wakame seaweed**	Undaria pinnatifida

＊ ＊ Total Diet ＊ ＊

<Strontium-90>



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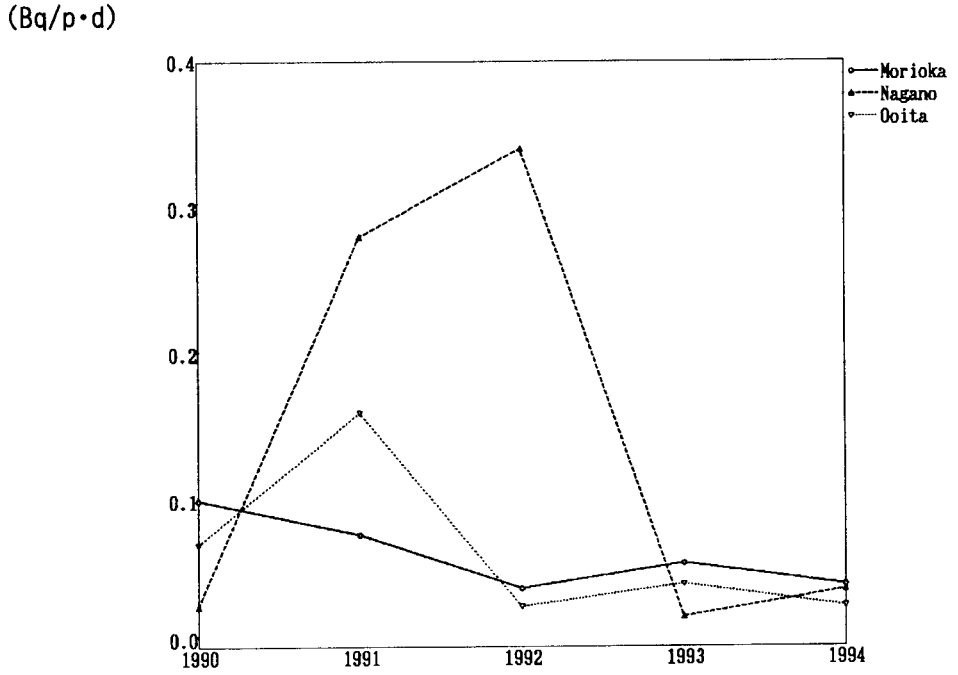

Fig. 1

＊ ＊ Rice (producing districts) ＊ ＊

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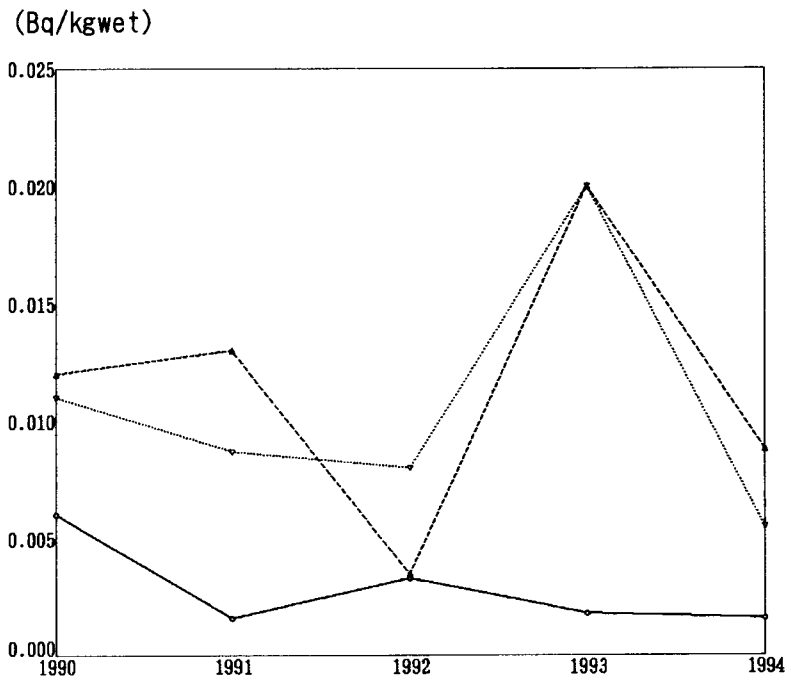

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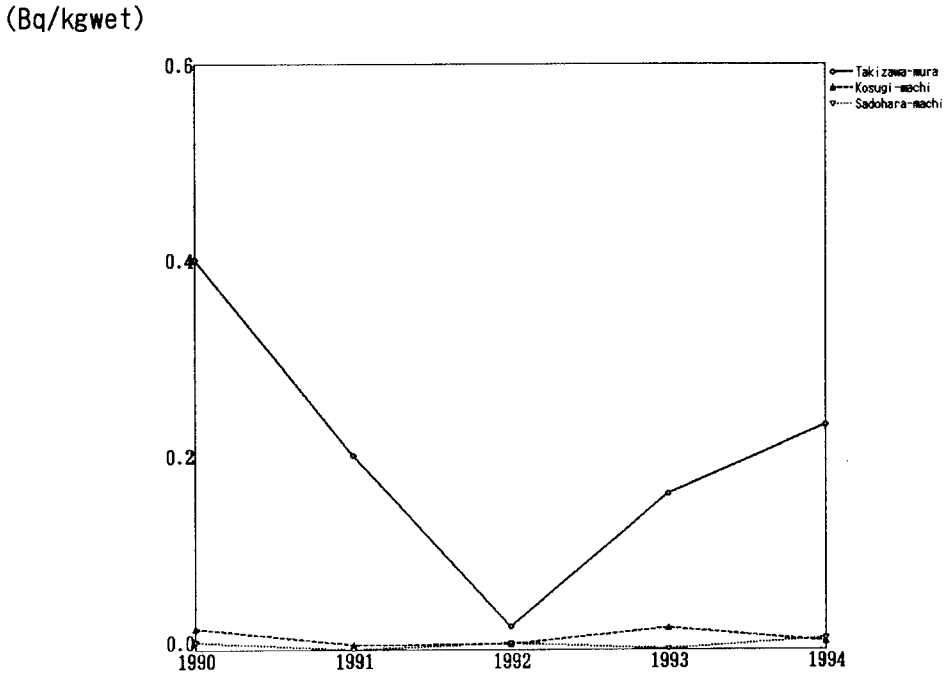

Fig. 2—1

＊ ＊ Rice (consuming districts) ＊ ＊

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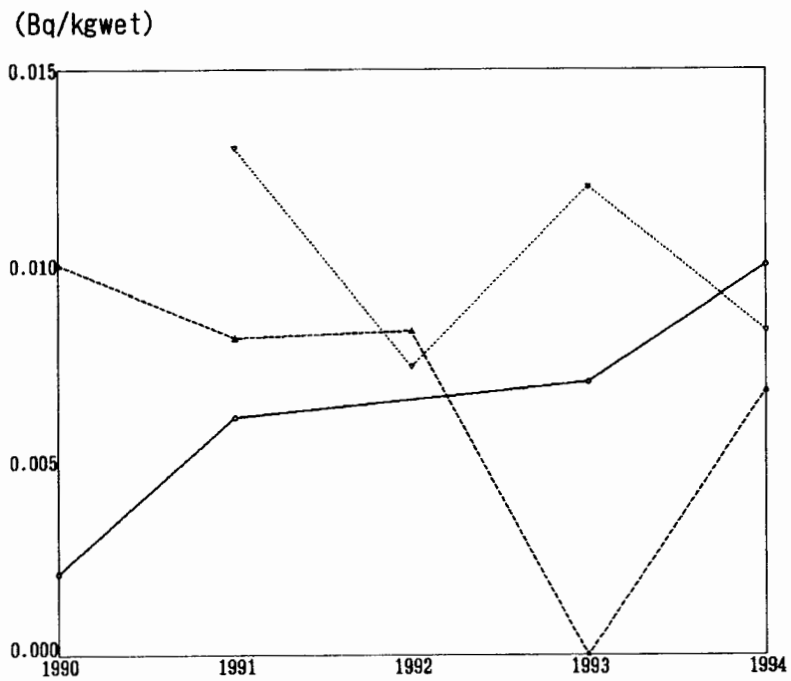

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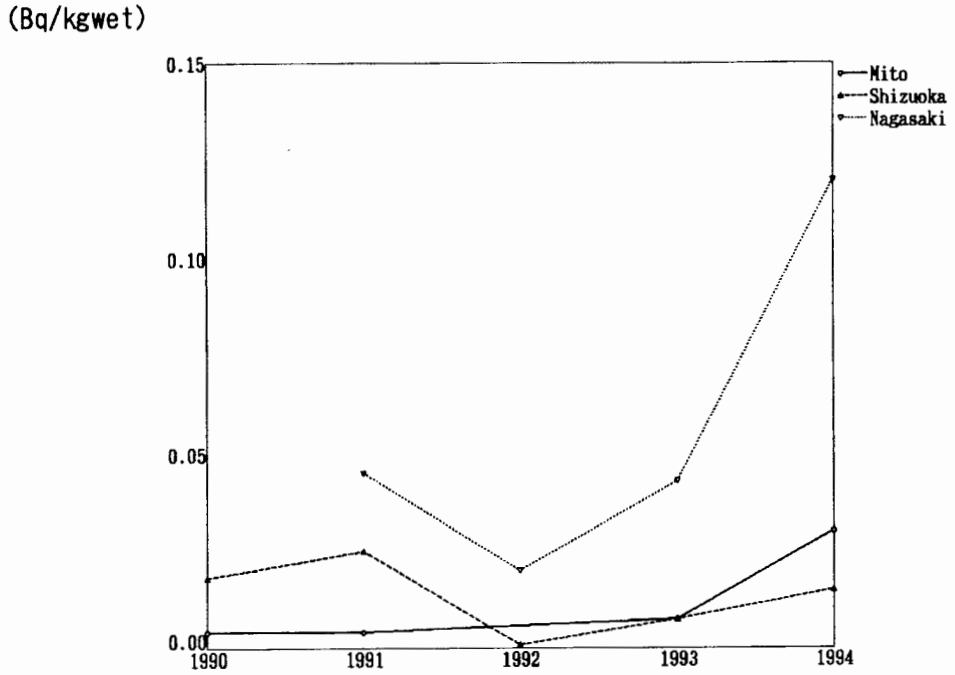
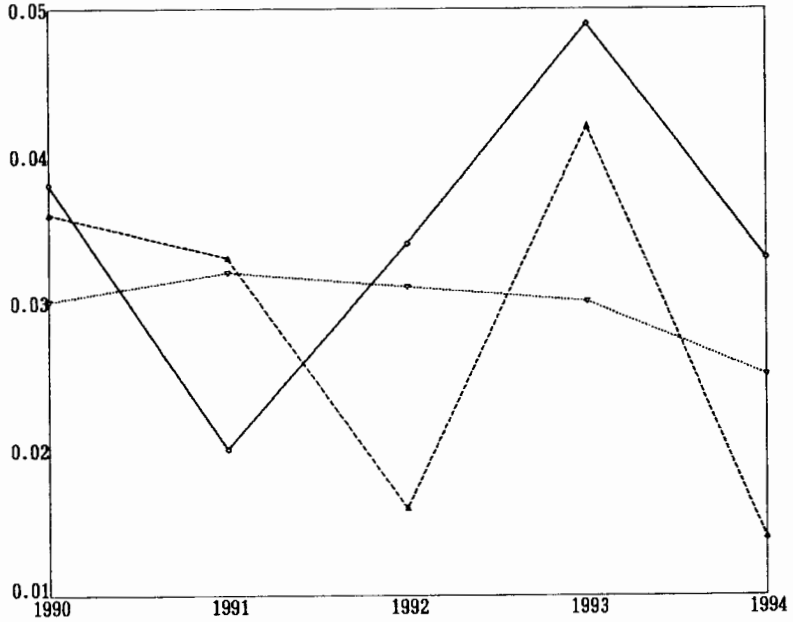


Fig. 2—2

＊＊ Milk (producing districts for domestic program)

<Strontium-90>

(Bq/ ℓ)



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(Bq/ ℓ)

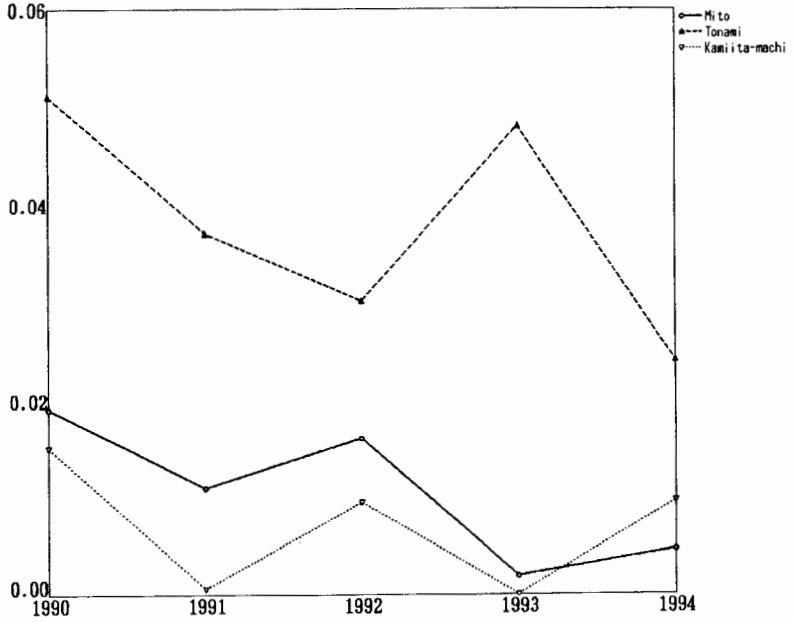

Fig. 3—1

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

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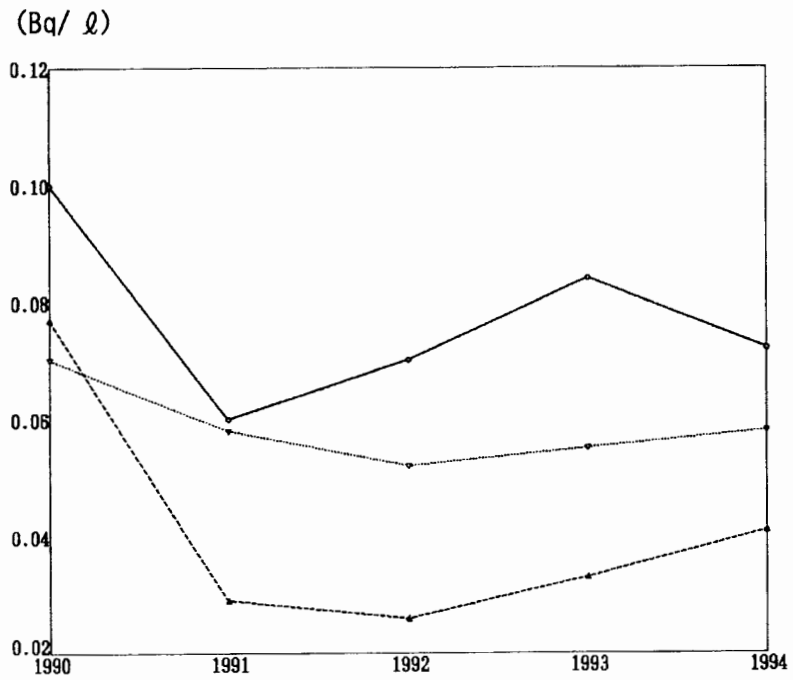

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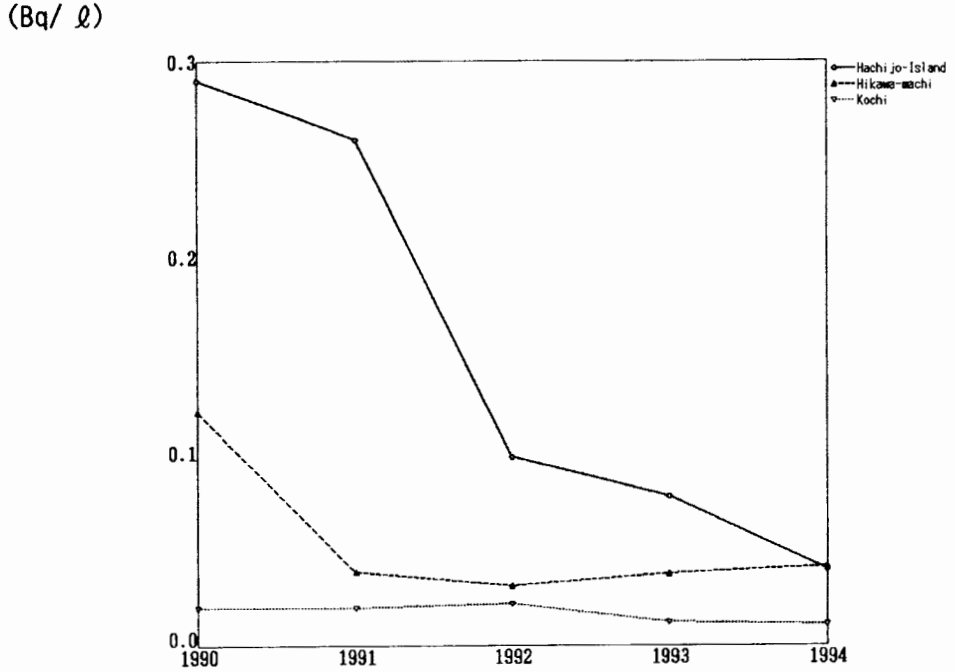

Fig. 3—2

＊ ＊ Milk (consuming districts) ＊ ＊

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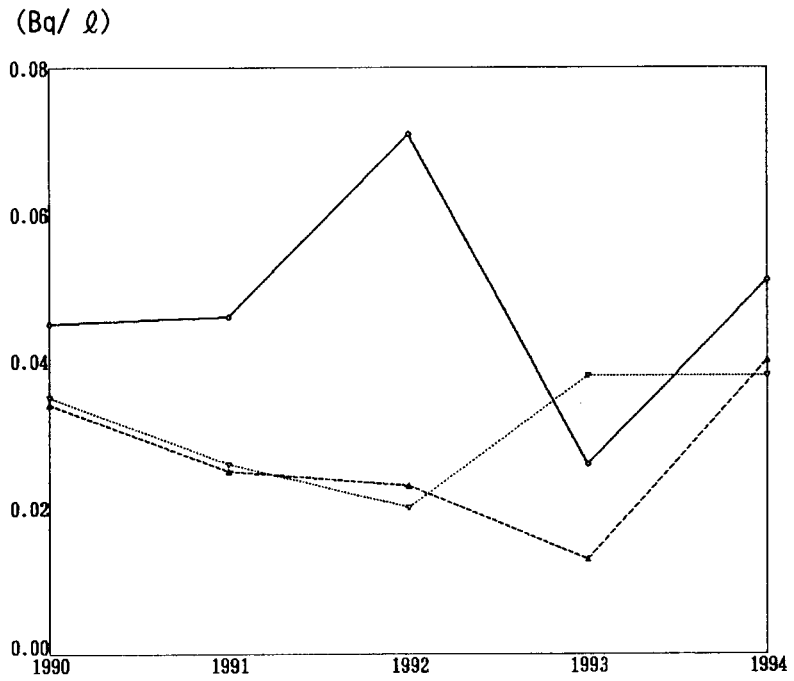

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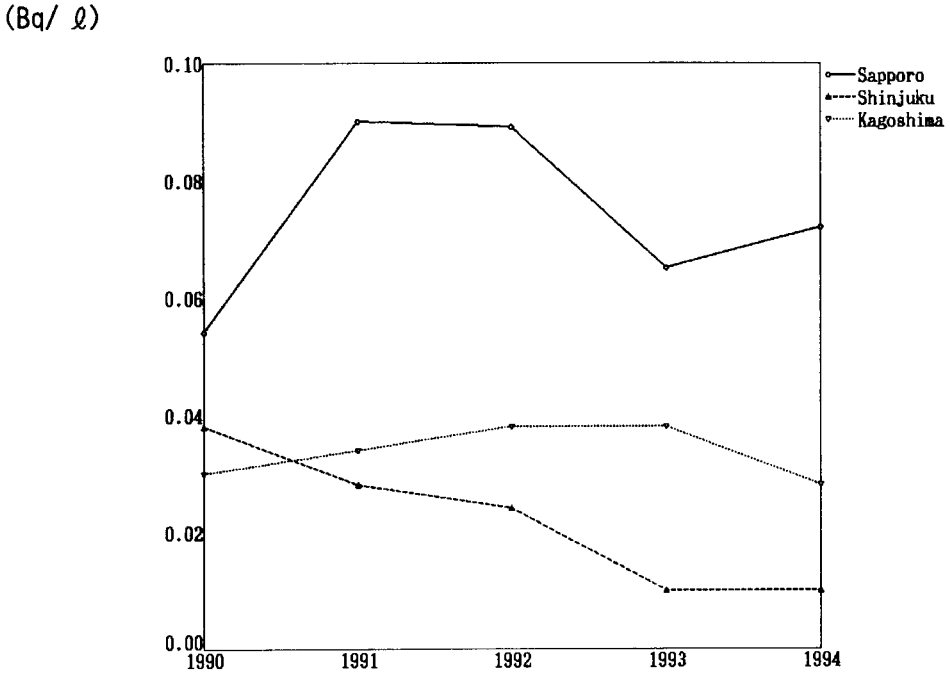

Fig. 3—3

* * Powdered Milk * *

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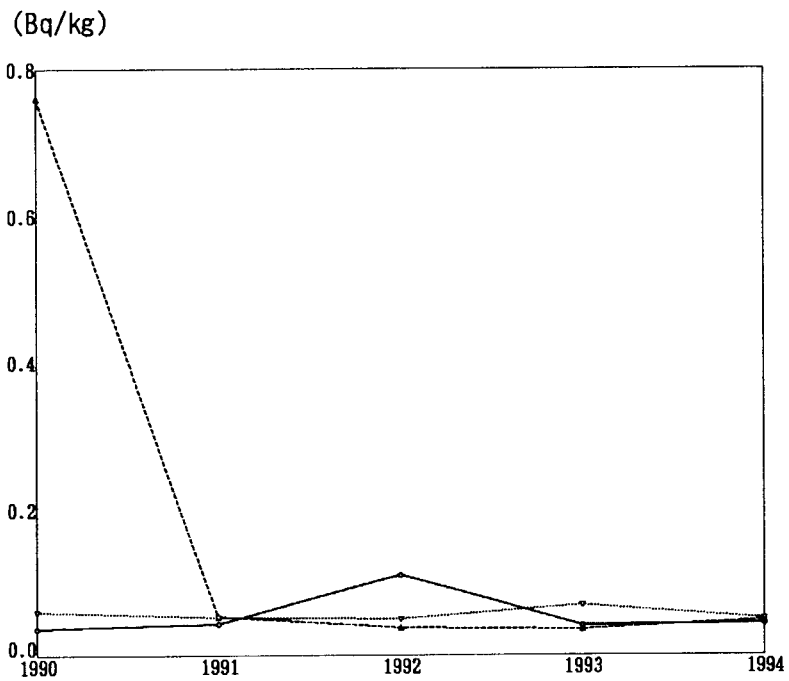

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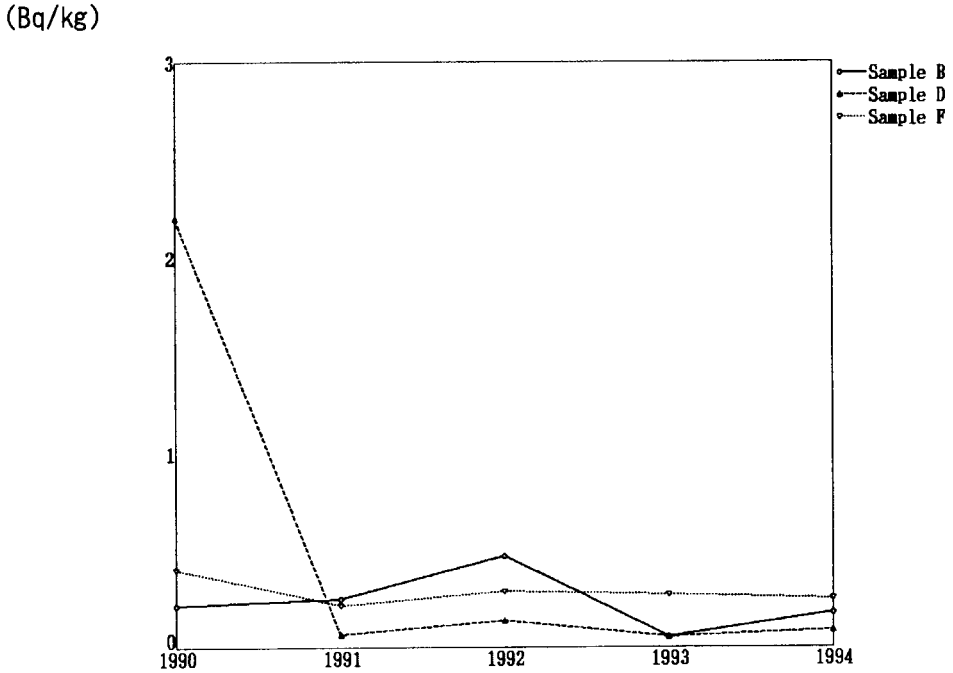

Fig. 3—4

＊ ＊ Vegetables (producing districts) ＊ ＊

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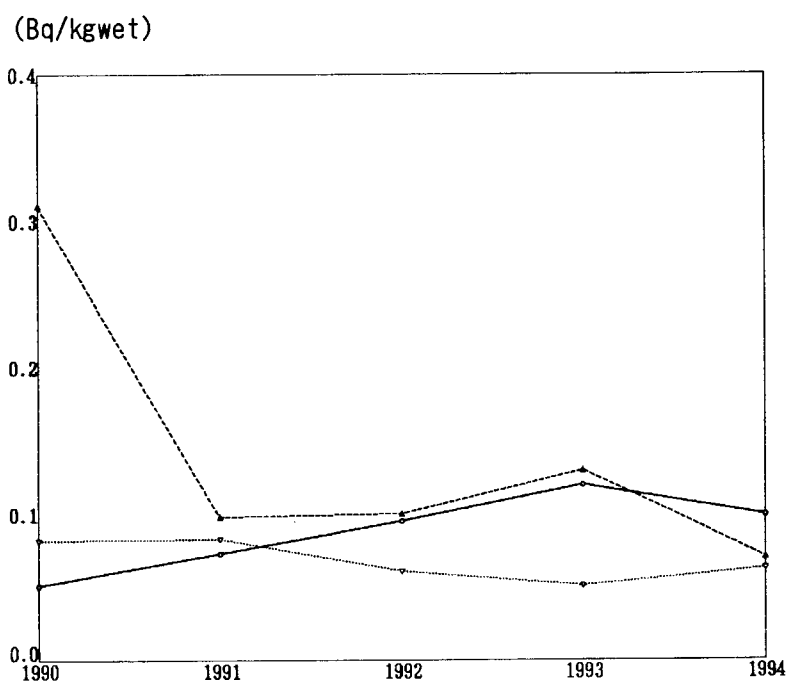

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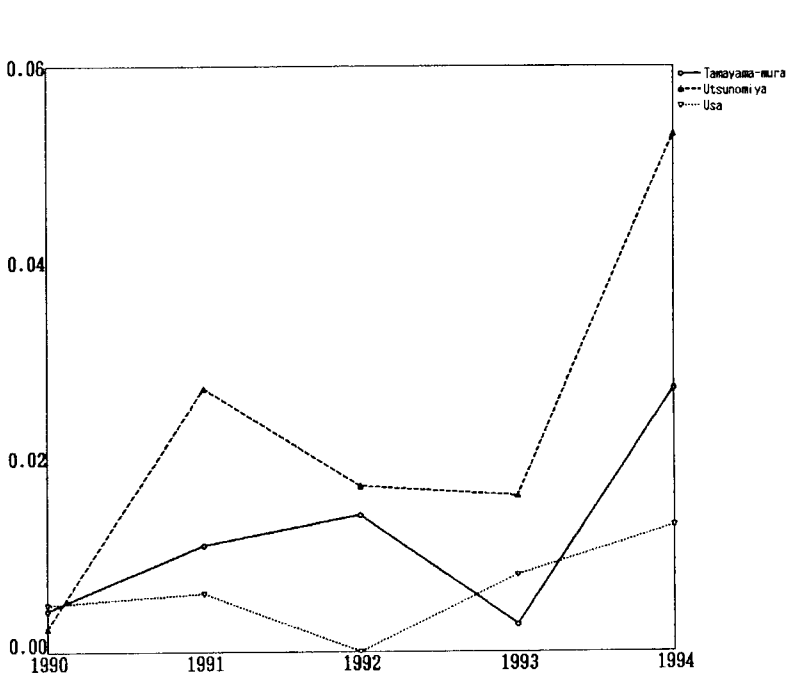
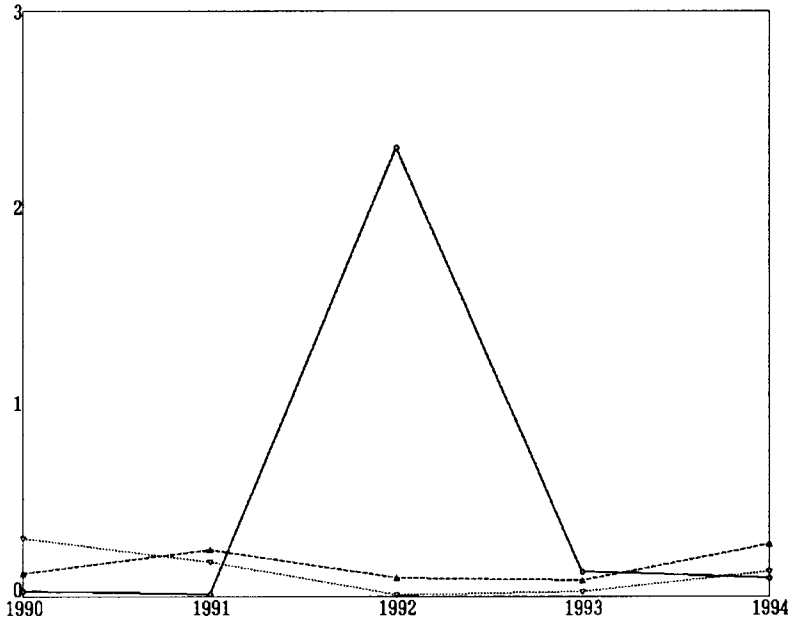


Fig. 4—1

＊ ＊ Vegetables (consuming districts) ＊ ＊

<Strontium-90>

(Bq/kgwet)



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(Bq/kgwet)

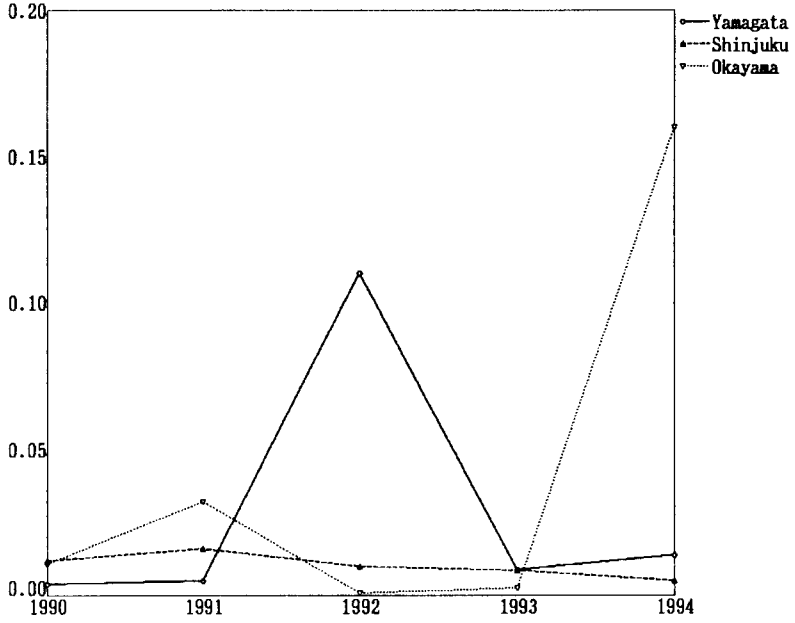
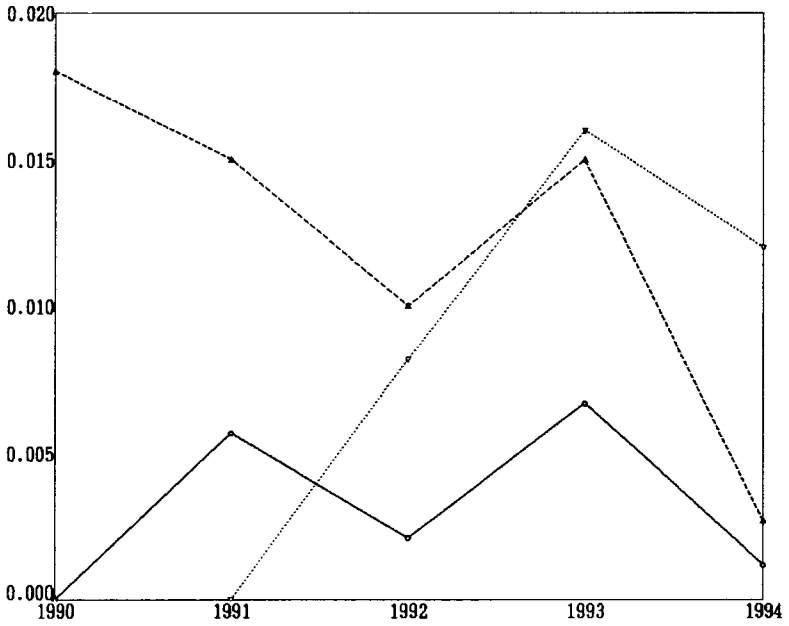


Fig. 4—2

* * Sea Fish * *

<Strontium-90>



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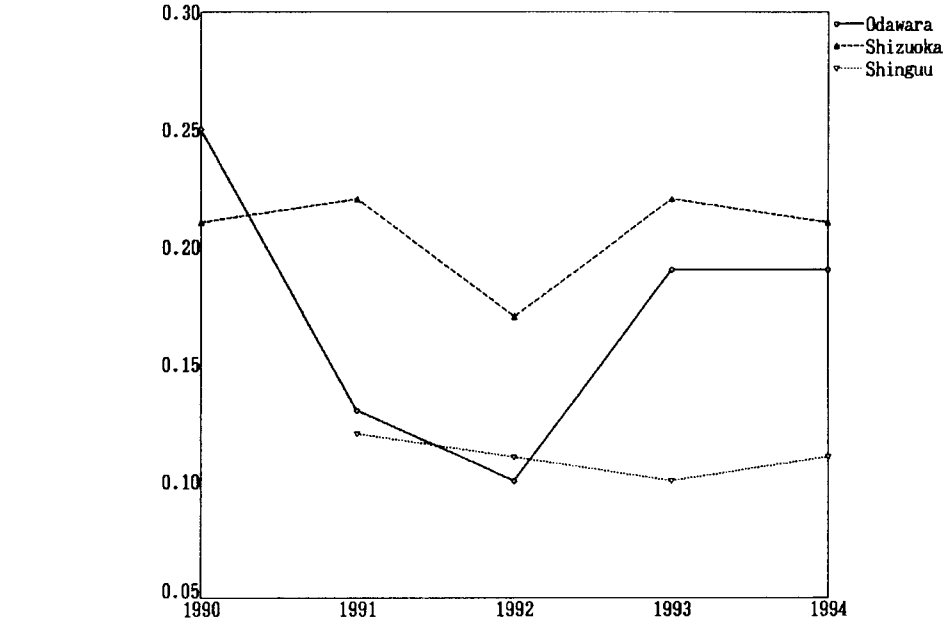

Fig. 5

* * Freshwater Fish * *

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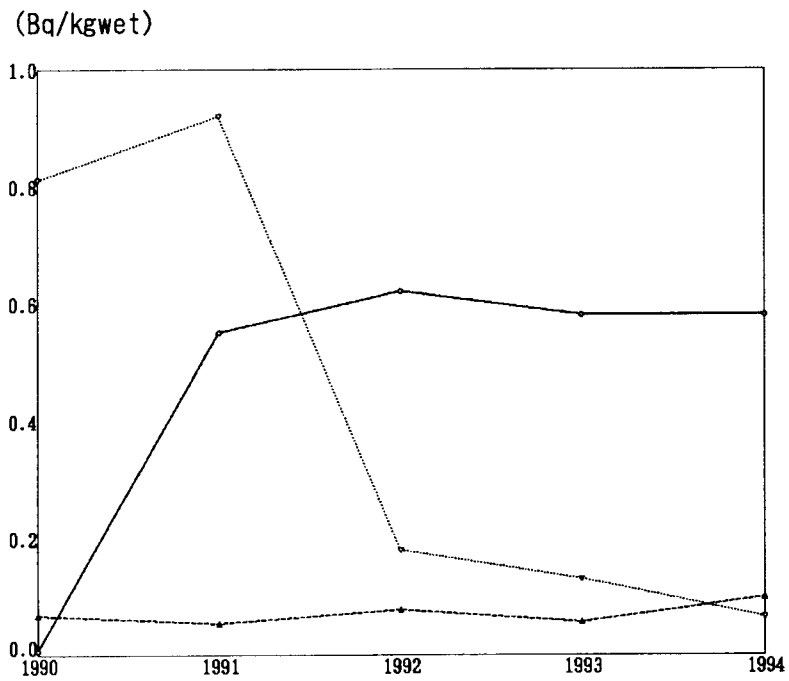

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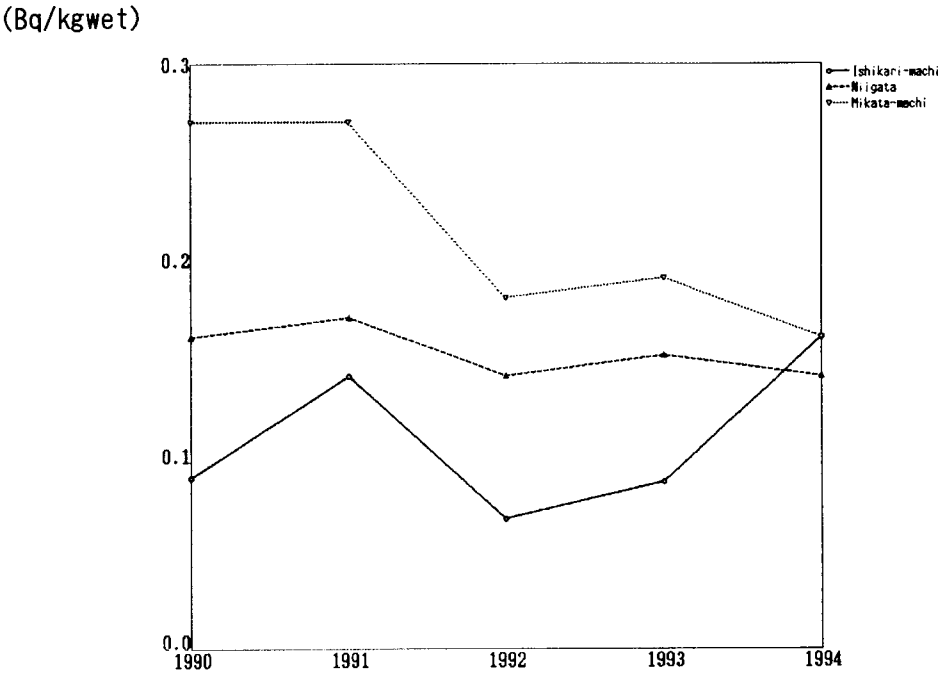
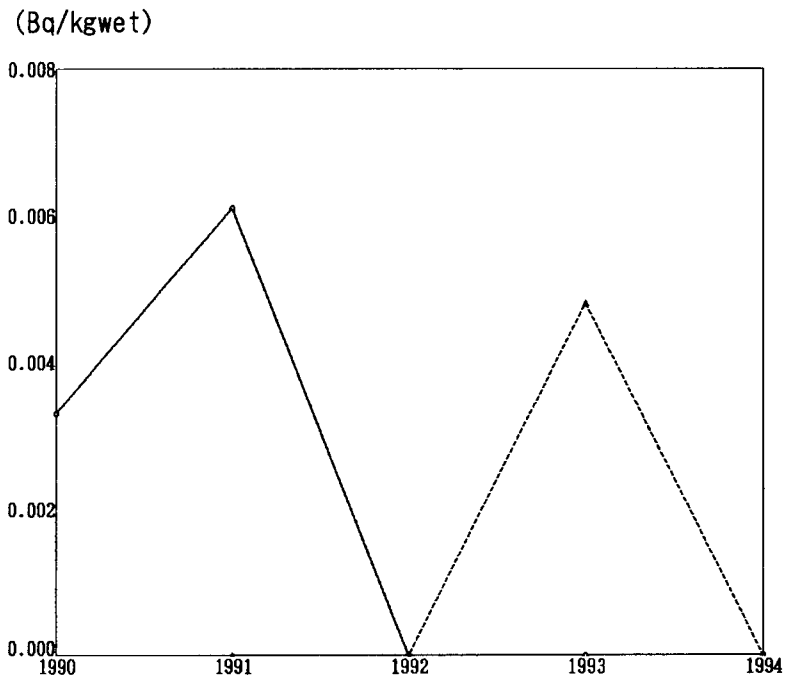


Fig. 6

* * Shellfish * *

<Strontium-90>



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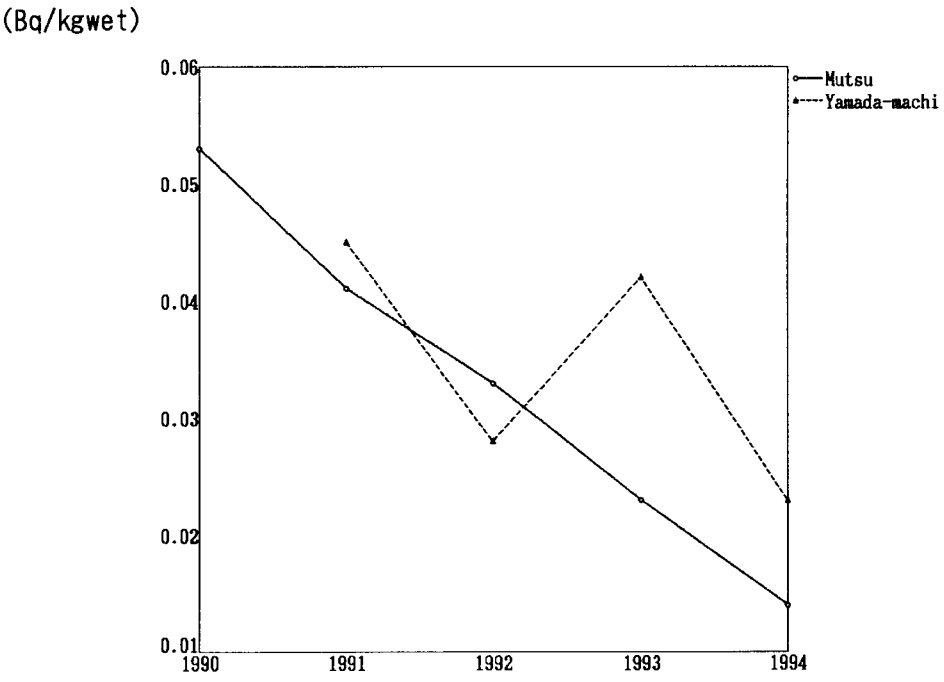
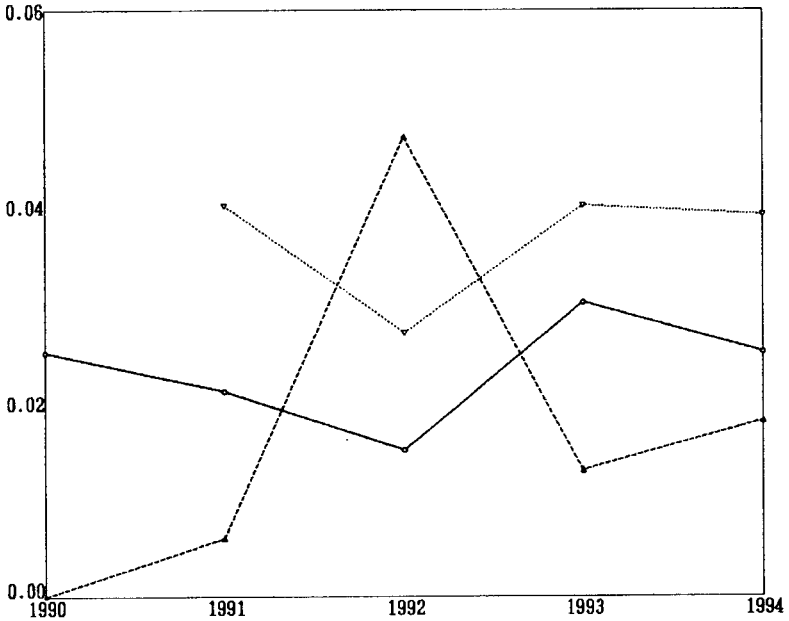


Fig. 7

* * Seaweeds * *

<Strontium-90>

(Bq/kgwet)



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(Bq/kgwet)

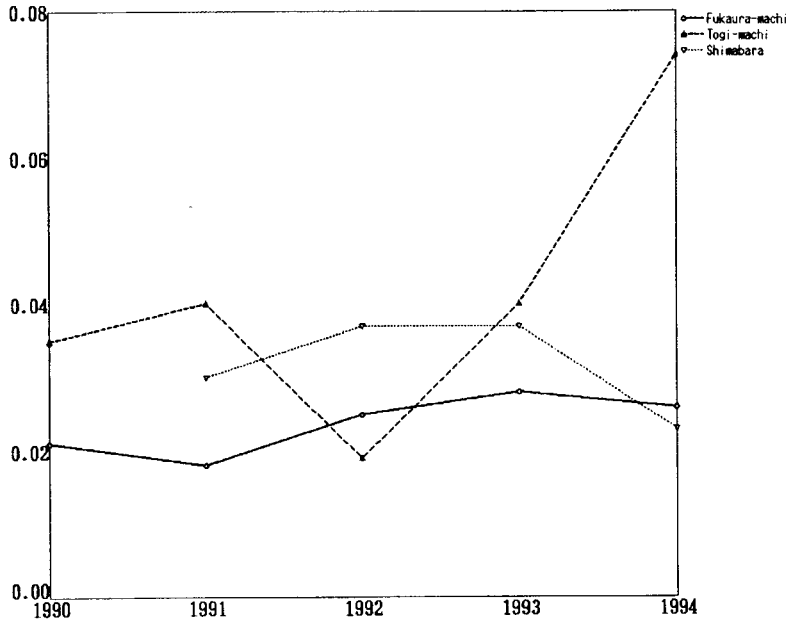

Fig. 8

* * 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: Shinjuku
14: Maebashi
15: Nagano
16: Yokohama
17: Toyama
18: Kouhu
19: Kanazawa
20: Shizuoka
21: Gifu
22: Fukui
23: Nagoya
24: Tsu
25: Ootsu
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