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RADIOACTIVITY SURVEY DATA in Japan

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Radioactivity Survey Data in Japan

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Contents

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 a sampling tray, approximately 5000 cm^2 in area, which was filled with water to a depth of 1 cm at the beginning of every month.

The sample was filtered after strontium and cesium carriers were added. The tray was washed with 5ℓ 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 of 80 mℓ/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 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 an intake of the water-treatment plant and at the tap after water was left running for five minutes. Water, to which added carriers of strontium and cesium immediately after samplIng, was vigorously stirred and filtered. The subsequent process was the same as that described in the section (1). Freshwater was treated in the same way as the service water.

(4) Soil

Soil was collected from the location in the spacious and flat area without past disturbance on the surface caused by duststorms, inflow and outflow due to precipitation, and so on. Any places located under trees in a forest, in a stony area or inside of river banks were avoided. Soil was taken from two layers of different depths, 0~5 cm and 5~20 cm. In the course of air-drying, lumps were crushed by hand, and roots of plants and pebbles were removed. The soil was then passed through a 2 mm sieve to remove small gravels.

(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 1 mℓ 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 4 kg of the sample in wet weight was spread on a large porcelain dish and dried in an electric oven at 105 to 110°C to a costant weight.

(7) Total diet

A full one day ordinary diet including three meals, water, tea and other in-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 500 °C 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 32 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 leaf 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 (June and December)	100 ℓ
2 Service water (tap water)	semiyearly (June and December)	100 ℓ
3 Freshwater	yearly (fishing season)	100 ℓ
(4) Soil		
1 0~5 cm	yearly (June or July)	4 kg
2 5~20 cm	yearly (June or July)	4 kg
(5) Sea water	yearly (July or August)	40 ℓ
(6) Sea sediments	yearly (July or August)	4 kg
=Dietary materials=		
(7) Total diet	semiyearly (June, November or December)	daily amount for 5 person
(8) Rice		
1 Producing districts	yearly (harvesting season)	5 kg (polished rice)
2 Consuming districts	yearly (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 (hervesting season)	4 kg
2 Consuming districts	yearly (harvesting season)	4 kg
(11) Tea	yearly (the first harvesting season)	500 g (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 hydrochlbric 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

Air-dried soil was passed through a 20 mesh sieve. The sieved sample was heated, in the presence of strontium and cesium carriers, together with sodium hydroxide. The sample was then heated with hydrochloric acid and the insoluble part was filtered and washed. The combined solution of the filtrate and washings was used for radiochemical analysis.

(3) Sea sedments

After removal of pebbles, shells and other foreign matters, the sediment sample was dried in a hot-air oven and ground finely with a mortar. The sample was passed through a 20 mesh sieve. The further preparation of the sample was the same as that described in the section 2-(2).

(4) Rice

The ashed sample was pulverlized with a porcelain mortar and passed through a 42 mesh sieve. The sieved sample to which both strontium and cesium carriers were added, was digested with hydrochloric 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 part was filtered and washed. The filtrate and washings were combined for subsequent radiochemical analysis.

(5) Airborne dust, diet, milk, vegetable, 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 strontiunm-90 and cesium-137

(1) Strontium-90

Sample solutions, prepared as in the foregoing sections 2-(1) through 2-(5), were neutralized with sodium hydroxide. After sodium carbonate was added, the precipitate of strontium and calcium carbonates was separated. The supernatant solution was retained for cesium-137 determination. The carbonates were dissolved in hydrochloric acid and calcium and strontium were precipitated as oxalates. The precipitate was dissolved in nitric acid and strontium was separated from calcium by successive fuming nitric acid separations. 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 the iron carrier was added. The solution was allowed to stand for two weeks for strontium-90 and yttrium-90 to attain equilibrium. The 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 in the solution was acidified with hydrochloric acid.

While stirring the solution, cesium was adsorbed on ammonium molybdophosphate.

After filtered off and washed with dilute nitric acid, the precipitate was dissolved in 2.5N sodium hydroxide solution. Ammonia was removed completely from the solution by boiling. The solution was adjusted to pH 8.2 with hydrochloric acid and allowed to cool. Molybdenum hydroxide which came out in the solution, was filtered off and washed with water. In such circumstance that contamination by rubidium-87 was not negligible for the measurement of cesium-137, the follwing ion-exchange procedure was applied. A fixed amount of ferric chloride solution was added to the solution dissolved with 2.5N sodium hydroxide. Ammonia and molybdenum hydroxide were removed as described above. Ethylenediaminetetraaceticacid tetrasodium salt was added to the filtrate and washings. Cesium and rubidium were adsorbed on a cation exchange resin. Cesium was separated from rubidium by eluting with hydrochloric acid.

To this eluate or the filtrate and washings after removing molybdenum hydroxide, chloroplatinic acid solution was added to precipitate cesium. The precipitate was filtered onto a tared paper in a demountable filter and washed with water and then ethanol.
After fixing the filter paper on a tared planchette and drying it, the chemical yield of cesium was determined by weighing the precipitate with the planchette. Radioactivity from cesium-137 was measured for this precipitate.

4. Determination of stable strontium, calcium and potassium

A weighed amount of soil or sea sediment was treated under heating with sodium hydroxide and then with hydrochloric acid for extraction. A weighed aliquot of ashed samples of total diet, vegetables, milk, fish, shellfish or seeweeds was digested using hydrochloric acid or nitric acid, hydrofluoric acid being used when necessary. 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 and potassium were determined by atomic absorption and flame emission spectrometry, respectively.

5. Counting

After the radiochemical separation, the mounted precipitates were counted for activity using low background beta counters normally for 60 min. Net sample counting rates were corrected for counter efficeiency, recovery, self-absorption and decay to obtain the content of strontium-90 and cesium-137 radioactivity 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 Jun. 1985 to Dec. 1985)

—continued from No. 73 of this publication—

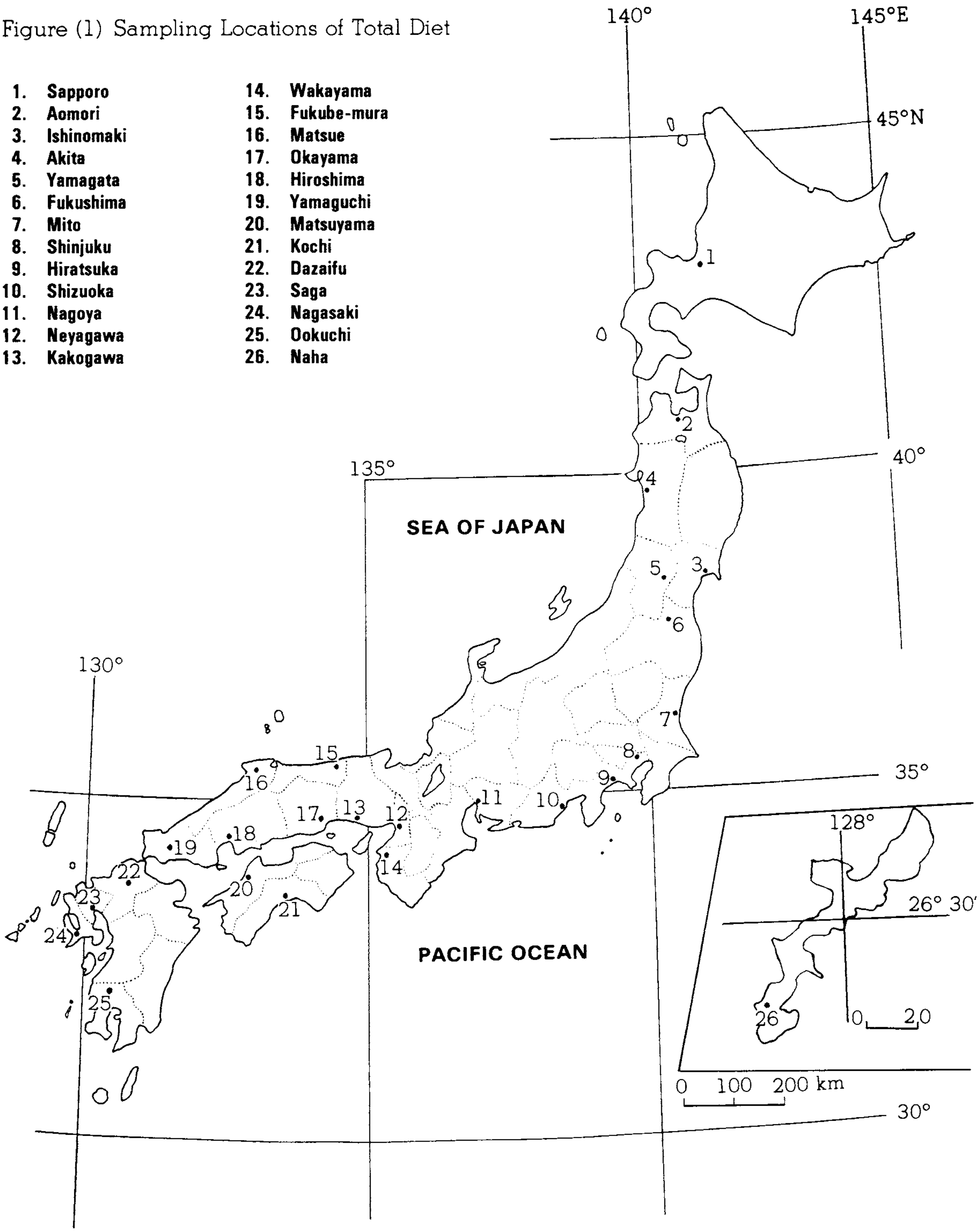
Table (1): Strontium-90 and Cesium-137 in Total Diet

Location	Ash	Ca	K	^{90}Sr		^{137}Cs	
	$(g \cdot p^{-1} \cdot d^{-1})$	$(mg \cdot p^{-1} \cdot d^{-1})$	$(mg \cdot p^{-1} \cdot d^{-1})$	$(pCi \cdot p^{-1} \cdot d^{-1})$	S.U.	$(pCi \cdot p^{-1} \cdot d^{-1})$	C.U.
June, 1985							
Aomori, AOMORI	16.3	439	2010	3.1±0.36	7.0±0.81	1.0±0.18	0.5±0.09
Fukushima, FUKUSHIMA	13.3	397	1960	2.1±0.26	5.4±0.66	1.2±0.17	0.6±0.08
Shinjuku, TOKYO	12.0	356	1310	1.4±0.21	3.9±0.60	1.6±0.16	1.2±0.13
Hiratsuka, KANAGAWA	14.4	477	1710	1.7±0.27	3.5±0.56	1.2±0.17	0.7±0.10
Nagoya, AICHI	15.6	498	2260	2.9±0.33	5.8±0.66	1.7±0.20	0.8±0.09
Neyagawa, OSAKA	13.5	447	1590	2.1±0.27	4.7±0.61	1.4±0.17	0.9±0.10
Matsue, SHIMANE	20.6	968	2600	4.0±0.38	4.1±0.39	2.6±0.25	1.0±0.10
Yamaguchi, YAMAGUCHI	15.6	476	1930	0.8±0.27	1.6±0.56	1.6±0.23	0.8±0.12
Dazaifu, FUKUOKA	11.8	339	1650	1.1±0.22	3.3±0.64	1.0±0.15	0.6±0.09
Nagasaki, NAGASAKI	13.0	395	1690	1.7±0.23	4.2±0.59	1.2±0.19	0.7±0.11
Ookuchi, KAGOSHIMA	10.1	241	1050	1.4±0.19	5.8±0.78	2.4±0.19	2.3±0.18
July, 1985							
Ishinomaki, MIYAGI	17.1	675	2080	1.8±0.32	2.7±0.47	1.7±0.25	0.8±0.12
Akita, AKITA	18.8	534	2260	2.6±0.38	4.9±0.71	5.0±0.36	2.2±0.16
Naha, OKINAWA	13.3	541	1780	1.6±0.24	3.0±0.44	0.9±0.17	0.5±0.10
August, 1985							
Hiroshima, HIROSHIMA	9.90	581	1340	1.1±0.17	1.8±0.30	1.2±0.15	0.9±0.11
November, 1985							
Akita, AKITA	18.9	655	2330	4.8±0.43	7.3±0.66	8.9±0.47	3.8±0.20
Hiratsuka, KANAGAWA	16.7	566	2340	3.2±0.36	5.6±0.64	1.7±0.21	0.7±0.09
Shizuoka, SHIZUOKA	17.2	635	2750	3.1±0.36	4.8±0.57	2.3±0.24	0.9±0.09
Nagoya, AICHI	14.7	598	2090	3.0±0.39	5.0±0.65	1.2±0.21	0.6±0.10
Wakayama, WAKAYAMA	14.1	585	1850	1.2±0.22	2.0±0.38	1.3±0.18	0.7±0.10
Fukube-mura, TOTTORI	16.4	522	2610	5.9±0.42	11 ±0.8	3.1±0.27	1.2±0.10
Okayama, OKAYAMA	17.7	580	2370	2.6±0.33	4.5±0.57	2.3±0.25	1.0±0.10

Location	Ash	Ca	K	^{90}Sr		^{137}Cs	
	($g \cdot p^{-1} \cdot d^{-1}$)	($mg \cdot p^{-1} \cdot d^{-1}$)	($mg \cdot p^{-1} \cdot d^{-1}$)	($pCi \cdot p^{-1} \cdot d^{-1}$)	S.U.	($pCi \cdot p^{-1} \cdot d^{-1}$)	C.U.
Matsuyama, EHIME	14.3	616	1830	1.9±0.26	3.2±0.43	1.4±0.21	0.8±0.11
Kochi, KOCHI	13.3	488	1700	3.2±0.30	6.5±0.62	1.8±0.19	1.1±0.11
Dazaifu, FUKUOKA	14.0	483	1990	2.7±0.30	5.6±0.61	1.7±0.19	0.9±0.10
Saga, SAGA	17.8	754	2470	2.0±0.31	2.6±0.42	1.2±0.21	0.5±0.08
Ookuchi, KAGOSHIMA	15.2	704	1720	3.0±0.32	4.2±0.46	2.2±0.23	1.3±0.13
December, 1985							
Sapporo, HOKKAIDO	18.0	587	2320	2.8±0.34	4.8±0.58	2.1±0.24	0.9±0.11
Ishinomaki, MIYAGI	22.1	1260	2820	3.3±0.36	2.6±0.29	1.6±0.22	0.6±0.08
Yamagata, YAMAGATA	19.0	679	2010	1.7±0.31	2.5±0.46	2.3±0.27	1.2±0.13
Mito, IBARAGI	15.6	487	2230	3.1±0.33	6.4±0.68	1.1±0.18	0.5±0.08
Kakogawa, HYOGO	13.5	652	1960	2.6±0.27	4.0±0.42	1.9±0.20	1.0±0.10

Figure (1) Sampling Locations of Total Diet

1.	**Sapporo**	14.	**Wakayama**
2.	**Aomori**	15.	**Fukube-mura**
3.	**Ishinomaki**	16.	**Matsue**
4.	**Akita**	17.	**Okayama**
5.	**Yamagata**	18.	**Hiroshima**
6.	**Fukushima**	19.	**Yamaguchi**
7.	**Mito**	20.	**Matsuyama**
8.	**Shinjuku**	21.	**Kochi**
9.	**Hiratsuka**	22.	**Dazaifu**
10.	**Shizuoka**	23.	**Saga**
11.	**Nagoya**	24.	**Nagasaki**
12.	**Neyagawa**	25.	**Ookuchi**
13.	**Kakogawa**	26.	**Naha**



(2)-1 Strontium-90 and Cesium-137 in Rice (producing districts) (from Oct. 1985 to Dec. 1985)

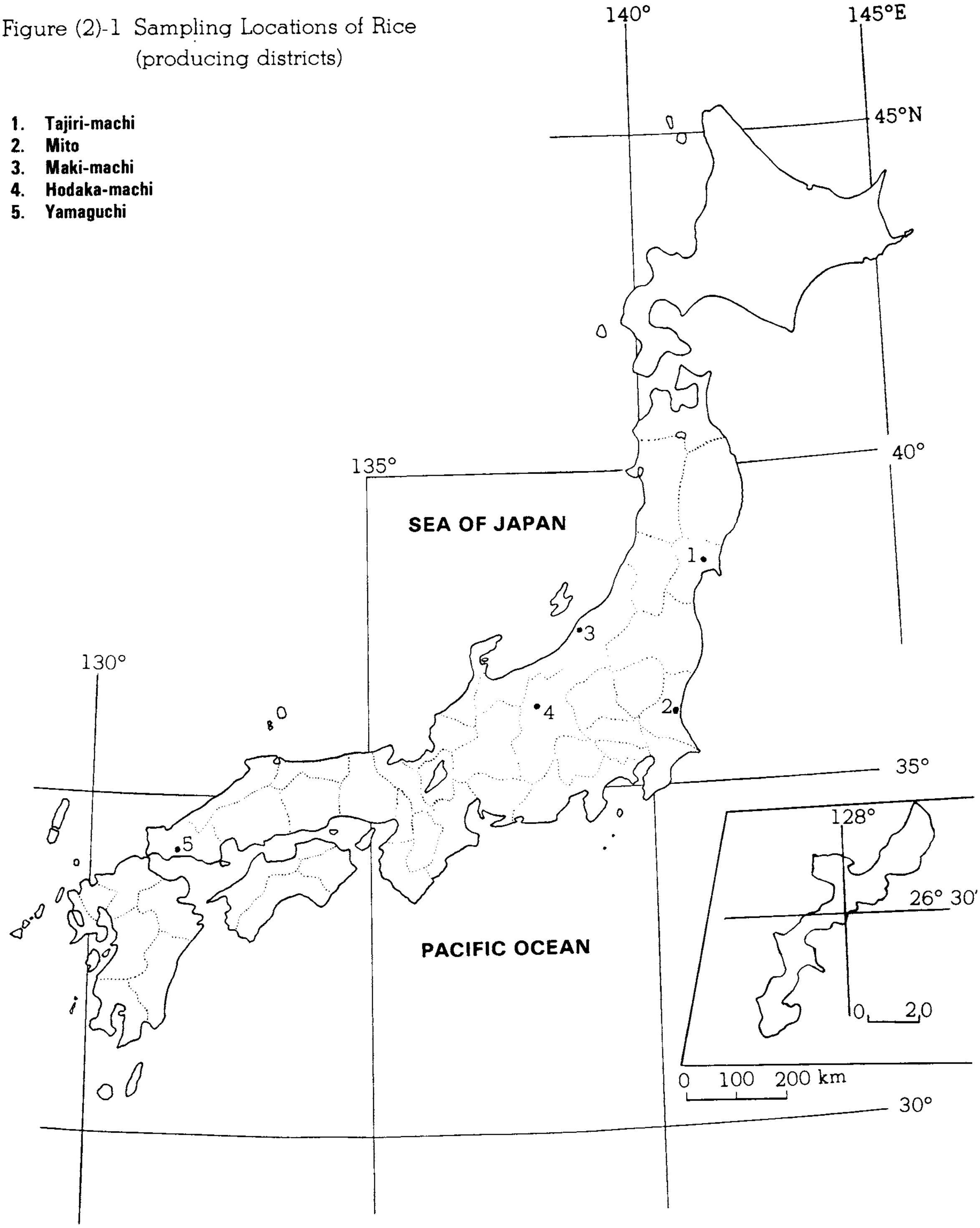
—continued from No. 73 of this publication—

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

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	pCi/kg	S.U.	pCi/kg	C.U.
October, 1985							
Maki-machi, NIIGATA	0.500	0.040	0.795	0.6±0.25	15±6.3	0.2±0.14	0.2±0.17
Hodaka-machi, NAGANO	0.655	0.053	1.04	0.0±0.18	0±3.3	0.1±0.14	0.1±0.13
November, 1985							
Mito, IBARAGI	0.523	0.048	0.847	0.4±0.21	9±4.4	7.4±0.40	8.7±0.47
Yamaguchi, YAMAGUCHI	0.649	0.054	0.713	0.7±0.19	13±3.5	0.1±0.10	0.1±0.15
December, 1985							
Tajiri-machi, MIYAGI	0.643	0.047	0.945	0.0±0.16	0±3.3	0.7±0.17	0.7±0.18

Figure (2)-1 Sampling Locations of Rice
(producing districts)

1. **Tajiri-machi**
2. **Mito**
3. **Maki-machi**
4. **Hodaka-machi**
5. **Yamaguchi**



(2)-2 Strontium-90 and Cesium-137 in Rice (consuming districts) (from Sep. 1985 to Dec. 1985)

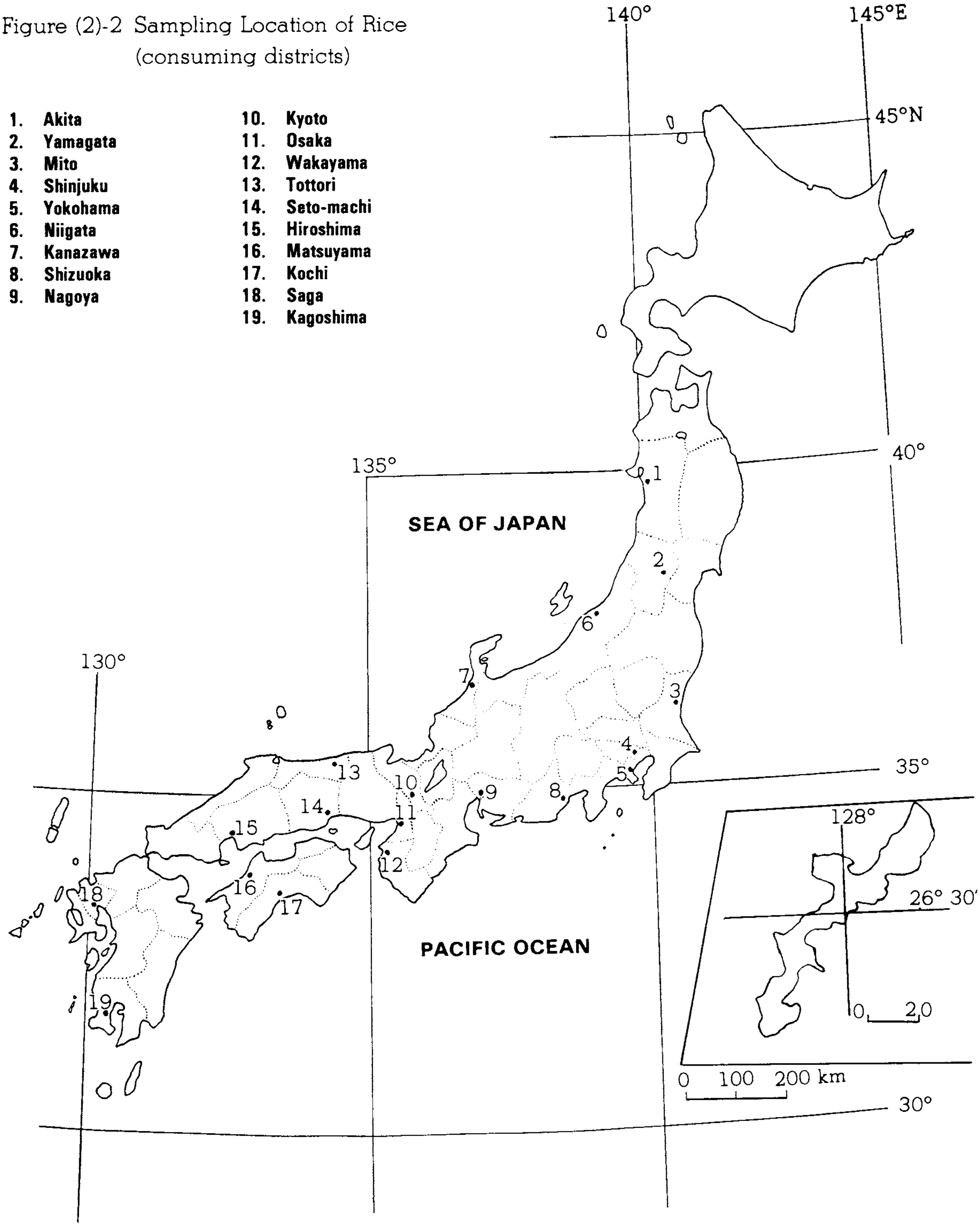
—continued from No. 73 of this publication—

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

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	pCi/kg	S.U.	pCi/kg	C.U.
September, 1985							
Kanazawa, ISHIKAWA	0.644	0.061	1.43	0.8 ±0.25	13±4.1	0.8±0.18	0.6 ±0.13
October, 1985							
Akita, AKITA	0.668	0.041	1.06	1.0 ±0.21	23±5.2	8.6±0.38	8.1 ±0.36
Shinjuku, TOKYO	0.579	0.044	0.619	0.03±0.21	1±4.7	0.7±0.18	1.2 ±0.29
Niigata, NIIGATA	0.488	0.038	0.600	0.6 ±0.24	16±6.4	0.9±0.19	1.5 ±0.32
November, 1985							
Mito, IBARAGI	0.579	0.042	0.793	0.1 ±0.15	2±3.6	1.1±0.16	1.4 ±0.21
Shizuoka, SHIZUOKA	0.540	0.044	0.955	0.3 ±0.15	7±3.5	0.9±0.15	1.0 ±0.16
Kyoto, KYOTO	0.498	0.051	1.22	0.03±0.21	1±4.2	0.1±0.14	0.05±0.12
Osaka, OSAKA	0.551	0.047	0.964	0.6 ±0.24	14±5.1	3.2±0.28	3.3 ±0.29
Hiroshima, HIROSHIMA	0.552	0.046	0.728	0.3 ±0.14	7±3.1	1.0±0.14	1.3 ±0.19
Matsuyama, EHIME	0.676	0.049	0.986	0.6 ±0.18	13±3.7	0.4±0.13	0.5 ±0.13
Saga, SAGA	0.656	0.048	0.859	0.6 ±0.17	13±3.6	0.3±0.12	0.3 ±0.14
Kagoshima, KAGOSHIMA	0.513	0.047	1.00	0.7 ±0.23	15±4.9	2.8±0.26	2.8 ±0.26
December, 1985							
Yamagata, YAMAGATA	0.668	0.050	1.15	0.4 ±0.19	8±3.8	1.5±0.20	1.3 ±0.18
Yokohama, KANAGAWA	0.549	0.044	0.779	0.2 ±0.15	5±3.3	2.1±0.19	2.7 ±0.24
Nagoya, AICHI	0.597	0.056	0.829	0.04±0.17	1±3.0	0.2±0.13	0.2 ±0.16
Wakayama, WAKAYAMA	0.593	0.045	0.824	0.3 ±0.14	7±3.2	0.5±0.12	0.6 ±0.15
Tottori, TOTTORI	0.621	0.047	0.770	0.5 ±0.16	10±3.4	1.0±0.15	1.3 ±0.20
Seto-machi, OKAYAMA	0.651	0.056	1.27	0.0 ±0.14	0±2.5	0.0±0.10	0.0 ±0.08
Kochi, KOCHI	0.581	0.054	0.947	0.6 ±0.16	10±2.9	0.8±0.13	0.8 ±0.14

Figure (2)-2 Sampling Location of Rice
(consuming districts)

1. **Akita**
2. **Yamagata**
3. **Mito**
4. **Shinjuku**
5. **Yokohama**
6. **Niigata**
7. **Kanazawa**
8. **Shizuoka**
9. **Nagoya**
10. **Kyoto**
11. **Osaka**
12. **Wakayama**
13. **Tottori**
14. **Seto-machi**
15. **Hiroshima**
16. **Matsuyama**
17. **Kochi**
18. **Saga**
19. **Kagoshima**



(3)-1 Strontium-90 and Cesium-137 in Milk (producing districts for WHO program) (from Aug. 1985 to Nov. 1985)

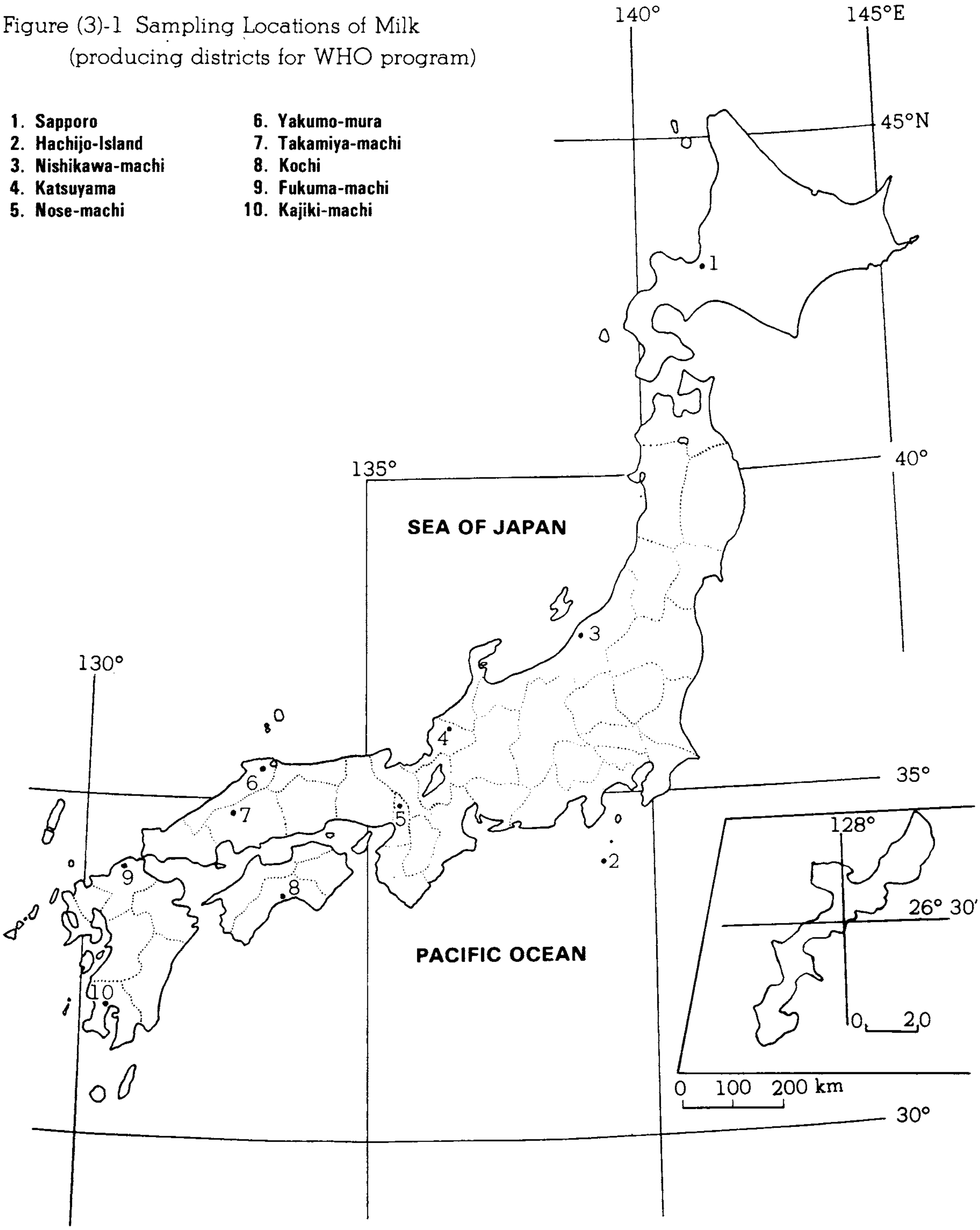
—continued from No. 73 of this publication—

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)	pCi/ℓ	S.U.	pCi/ℓ	C.U.
August, 1985							
Sapporo, HOKKAIDO	7.36	1.17	1.66	1.1±0.21	0.9±0.18	1.2±0.19	0.7±0.12
Hachijo-Island, TOKYO	6.86	0.996	1.40	7.6±0.41	7.6±0.41	20 ±0.6	14 ±0.4
Nishikawa-machi, NIIGATA	7.32	1.05	1.58	1.3±0.24	1.2±0.23	3.2±0.27	2.0±0.17
Katsuyama, FUKUI	7.57	1.11	1.67	1.6±0.25	1.4±0.23	3.1±0.26	1.8±0.16
Nose-machi, OSAKA	7.21	1.03	1.59	0.9±0.20	0.9±0.19	0.9±0.19	0.6±0.12
Yakumo-mura, SHIMANE	7.39	1.01	1.62	2.5±0.28	2.4±0.28	5.8±0.33	3.6±0.20
Takamiya-machi, HIROSHIMA	6.47	0.939	1.45	0.7±0.18	0.8±0.19	0.7±0.16	0.5±0.11
Kochi, KOCHI	7.38	1.11	1.60	2.3±0.27	2.1±0.25	2.2±0.24	1.4±0.15
Fukuma-machi, FUKUOKA	7.70	1.30	1.54	0.7±0.21	0.5±0.16	2.4±0.26	1.5±0.17
Kajiki-machi, KAGOSHIMA	7.34	1.11	1.61	0.9±0.21	0.9±0.19	3.3±0.26	2.1±0.16
November, 1985							
Sapporo, HOKKAIDO	7.50	1.29	1.54	1.4±0.23	1.1±0.18	4.3±0.29	2.8±0.19
Hachijo-Island, TOKYO	7.46	1.16	1.50	8.8±0.44	7.6±0.38	30 ±0.7	20 ±0.5
Nishikawa-machi, NIIGATA	7.60	1.23	1.73	1.3±0.23	1.0±0.19	1.2±0.19	0.7±0.11
Katsuyama, FUKUI	7.83	1.19	1.59	1.6±0.25	1.4±0.21	1.4±0.23	0.9±0.14
Nose-machi, OSAKA	7.52	1.16	1.55	0.7±0.20	0.6±0.17	0.6±0.17	0.4±0.11
Takamiya-machi, HIROSHIMA	6.96	1.08	1.48	1.0±0.22	0.9±0.20	0.4±0.15	0.3±0.10
Kochi, KOCHI	7.45	1.13	1.64	1.6±0.26	1.4±0.23	1.0±0.18	0.6±0.11
Fukuma-machi, FUKUOKA	7.95	1.33	1.58	0.8±0.21	0.6±0.16	3.1±0.27	2.0±0.17
Kajiki-machi, KAGOSHIMA	7.50	1.17	1.60	1.2±0.23	1.1±0.19	1.4±0.19	0.9±0.12

Figure (3)-1 Sampling Locations of Milk
(producing districts for WHO program)

1. Sapporo
2. Hachijo-Island
3. Nishikawa-machi
4. Katsuyama
5. Nose-machi
6. Yakumo-mura
7. Takamiya-machi
8. Kochi
9. Fukuma-machi
10. Kajiki-machi



(3)-2 Strontium-90 and Cesium-137 in Mik (producing districts for domestic program) (from Aug. 1985 to Oct. 1985)

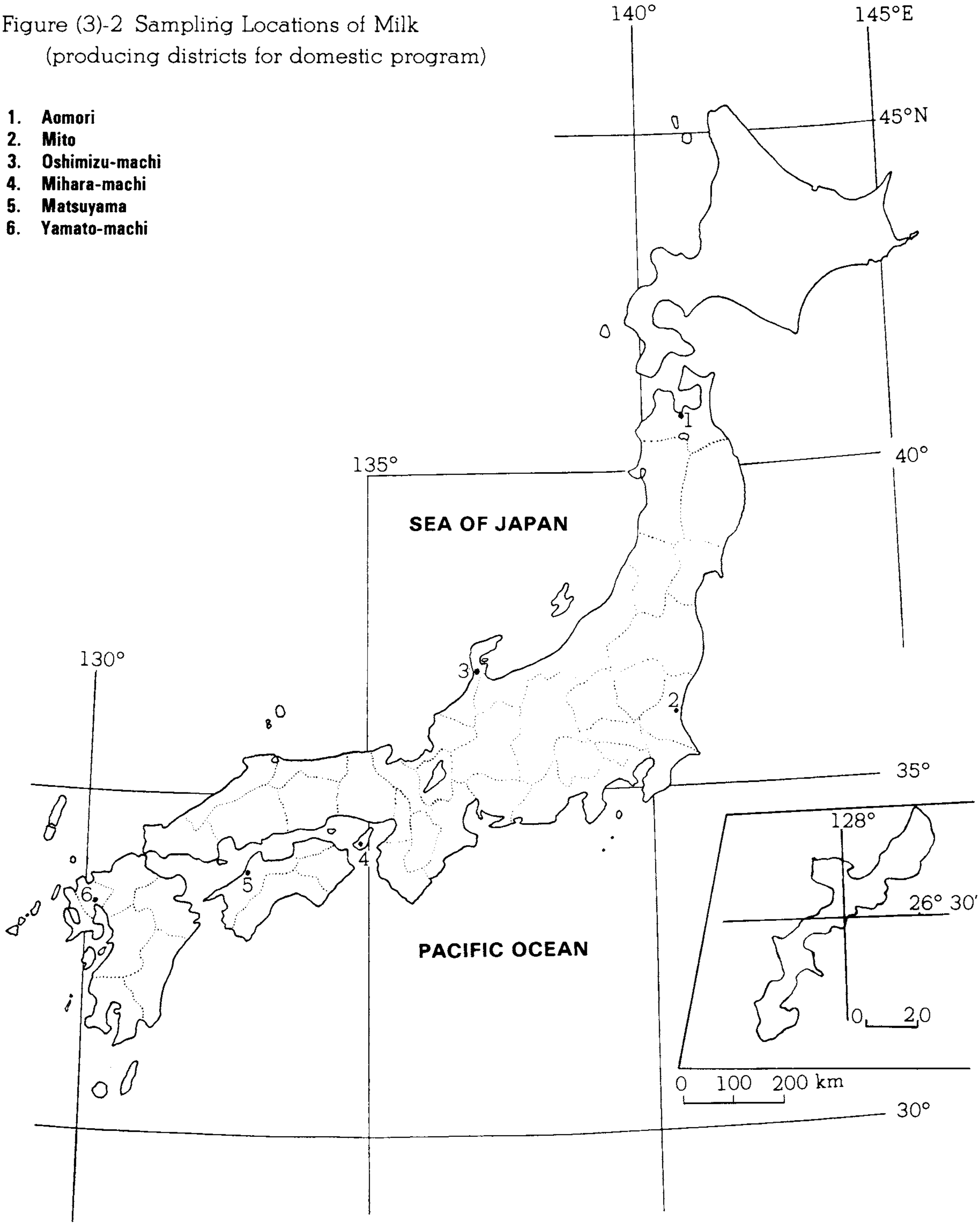
—continued from No. 73 of this publication—

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)	pCi/ℓ	S.U.	pCi/ℓ	C.U.
August, 1985							
Aomori, AOMORI	7.73	1.18	1.62	7.0±0.41	5.9±0.35	6.9±0.37	4.2±0.23
Mito, IBARAGI	7.36	1.08	1.70	1.0±0.21	0.9±0.20	0.7±0.17	0.4±0.10
Oshimizu-machi, ISHIKAWA	7.20	1.12	1.61	1.9±0.28	1.7±0.25	0.6±0.17	0.4±0.11
Mihara-machi, HYOGO	7.19	1.07	1.66	0.6±0.19	0.6±0.18	0.6±0.16	0.4±0.10
Matsuyama, EHIME	7.42	1.08	1.44	0.3±0.18	0.3±0.17	0.7±0.18	0.5±0.13
October, 1985							
Yamato-machi, SAGA	7.43	1.20	1.59	1.0±0.23	0.8±0.19	1.3±0.19	0.8±0.12

Figure (3)-2 Sampling Locations of Milk
(producing districts for domestic program)

1. **Aomori**
2. **Mito**
3. **Oshimizu-machi**
4. **Mihara-machi**
5. **Matsuyama**
6. **Yamato-machi**



(3)-3 Strontium-90 and Cesium-137 in Milk (consuming districts) (from Jul. 1985 to Dec. 1985)

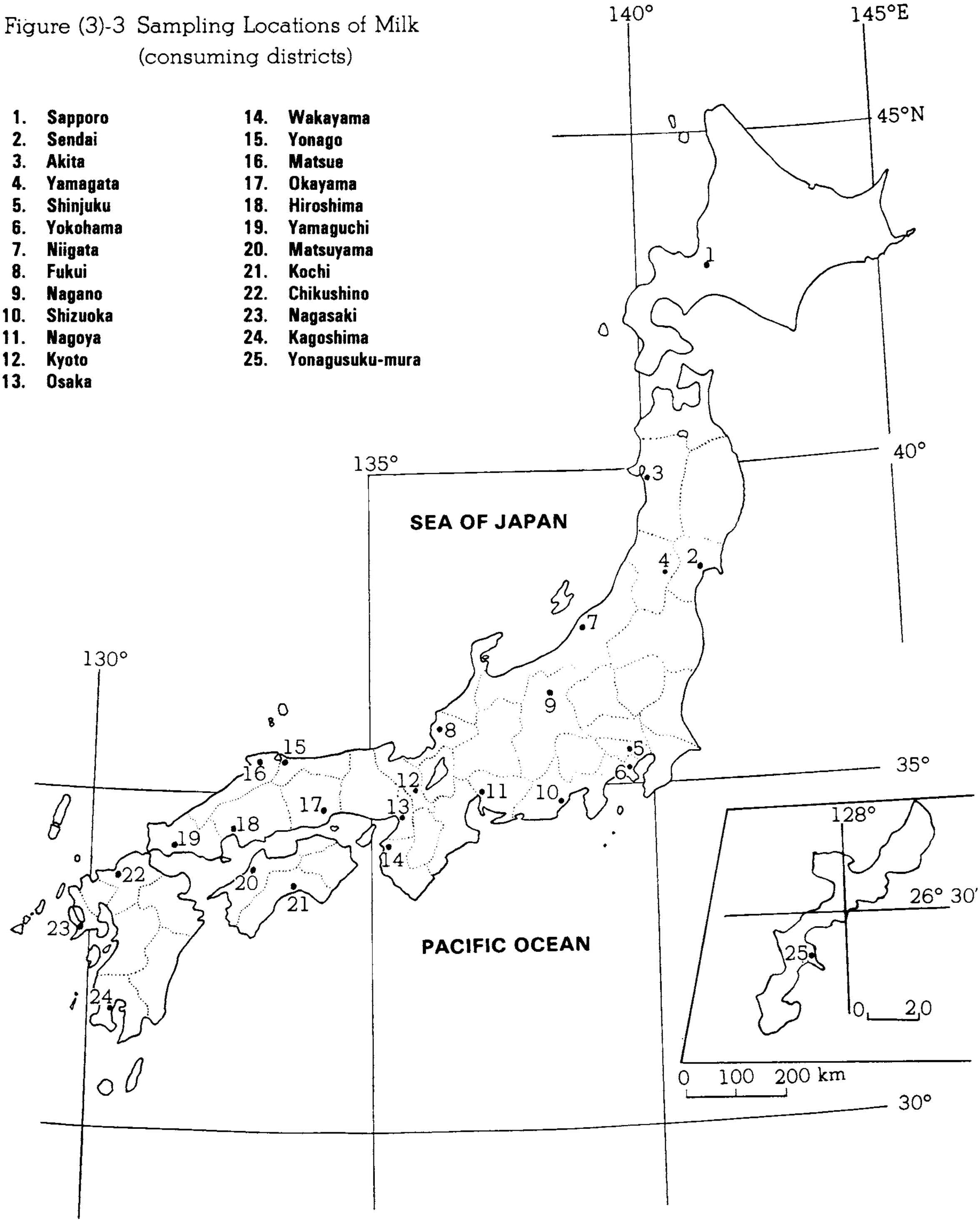
—continued from No. 73 of this publication—

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)	pCi/ℓ	S.U.	pCi/ℓ	C.U.
July, 1985							
Yokohama, KANAGAWA	7.41	1.02	1.56	0.9±0.24	0.9±0.23	1.3±0.20	0.9±0.13
Yonagusuku-mura, OKINAWA	7.04	1.07	1.56	0.4±0.19	0.4±0.18	1.1±0.19	0.7±0.12
August, 1985							
Sapporo, HOKKAIDO	7.33	1.13	1.59	1.6±0.24	1.5±0.21	2.8±0.24	1.8±0.15
Akita, AKITA	6.92	1.04	1.55	2.1±0.25	2.0±0.24	1.7±0.20	1.1±0.13
Yamagata, YAMAGATA	6.72	0.960	1.44	1.4±0.21	1.4±0.22	0.4±0.14	0.3±0.10
Shinjuku, TOKYO	6.81	0.991	1.48	0.5±0.20	0.5±0.20	0.8±0.18	0.6±0.12
Niigata, NIIGATA	7.53	1.08	1.65	1.5±0.26	1.4±0.24	1.4±0.22	0.8±0.13
Fukui, FUKUI	7.00	1.03	1.51	1.6±0.21	1.5±0.21	1.7±0.21	1.1±0.14
Nagano, NAGANO	7.27	1.02	1.49	1.4±0.22	1.3±0.21	1.2±0.21	0.8±0.14
Shizuoka, SHIZUOKA	7.28	1.11	1.50	1.4±0.23	1.2±0.20	1.7±0.21	1.1±0.14
Nagoya, AICHI	7.31	1.11	1.60	0.7±0.20	0.7±0.18	0.8±0.17	0.5±0.11
Osaka, OSAKA	6.57	0.961	1.43	1.0±0.19	1.0±0.20	0.5±0.16	0.4±0.11
Wakayama, WAKAYAMA	7.06	1.08	1.56	1.0±0.22	1.0±0.20	0.7±0.17	0.5±0.11
Yonago, TOTTORI	7.11	0.989	1.37	0.7±0.21	0.7±0.21	3.8±0.29	2.8±0.21
Matsue, SHIMANE	7.09	1.07	1.52	1.3±0.22	1.2±0.21	3.0±0.26	2.0±0.17
Okayama, OKAYAMA	6.78	1.02	1.46	1.2±0.21	1.1±0.21	1.2±0.19	0.8±0.13
Hiroshima, HIROSHIMA	7.00	1.00	1.54	0.5±0.19	0.5±0.19	0.6±0.19	0.4±0.12
Yamaguchi, YAMAGUCHI	7.12	1.05	1.56	0.8±0.20	1.8±0.19	1.2±0.20	0.8±0.13
Matsuyama, EHIME	7.64	1.07	1.52	0.7±0.22	0.6±0.20	1.3±0.19	0.9±0.13
Kochi, KOCHI	7.14	1.06	1.55	1.2±0.21	1.1±0.20	1.3±0.19	0.8±0.13
Chikushino, FUKUOKA	7.32	1.08	1.61	1.0±0.22	1.0±0.20	2.5±0.24	1.5±0.15
Nagasaki, NAGASAKI	6.84	1.02	1.50	0.6±0.23	0.6±0.22	0.8±0.18	0.5±0.12
Kagoshima, KAGOSHIMA	7.31	1.09	1.61	0.8±0.19	0.7±0.18	3.1±0.26	1.9±0.16
September, 1985							
Sendai, MIYAGI	7.13	1.05	1.58	0.9±0.21	0.8±0.20	1.0±0.20	0.7±0.12
October, 1985							
Kyoto, KYOTO	7.08	1.09	1.59	0.7±0.18	0.7±0.17	0.5±0.14	0.3±0.09
December, 1985							
Akita, AKITA	7.32	1.18	1.61	1.4±0.22	1.2±0.19	1.9±0.21	1.2±0.13
Yokohama, KANAGAWA	7.44	1.16	1.62	0.8±0.20	0.7±0.17	1.6±0.20	1.0±0.13

Figure (3)-3 Sampling Locations of Milk
(consuming districts)

1. Sapporo
2. Sendai
3. Akita
4. Yamagata
5. Shinjuku
6. Yokohama
7. Niigata
8. Fukui
9. Nagano
10. Shizuoka
11. Nagoya
12. Kyoto
13. Osaka
14. Wakayama
15. Yonago
16. Matsue
17. Okayama
18. Hiroshima
19. Yamaguchi
20. Matsuyama
21. Kochi
22. Chikushino
23. Nagasaki
24. Kagoshima
25. Yonagusuku-mura



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

—continued from No. 73 of this publication—

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

Market Milk	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	pCi/kg	S.U.	pCi/kg	C.U.
October, 1985							
Meiji	2.51	3.94	5.92	5.3±0.45	1.3±0.11	21 ±0.7	3.5±0.12
Yukijirushi	2.63	3.68	5.92	2.7±0.38	0.7±0.10	11 ±0.5	1.8±0.09
Wakodo	2.57	4.09	5.35	3.5±0.39	0.9±0.10	6.1±0.41	1.1±0.08
Morinaga	2.42	3.44	5.66	4.1±0.41	1.2±0.12	9.1±0.48	1.6±0.08
*Meiji	8.12	13.2	16.6	31 ±1.3	2.3±0.10	110 ±2	6.7±0.12
*Morinaga	8.17	13.0	17.6	18 ±1.0	1.4±0.08	26 ±1.0	1.5±0.06

*Skim milk.

(4)-1 Strontium-90 and Cesium-137 in Vegetables (producing districts) (from May 1985 to Dec. 1985)

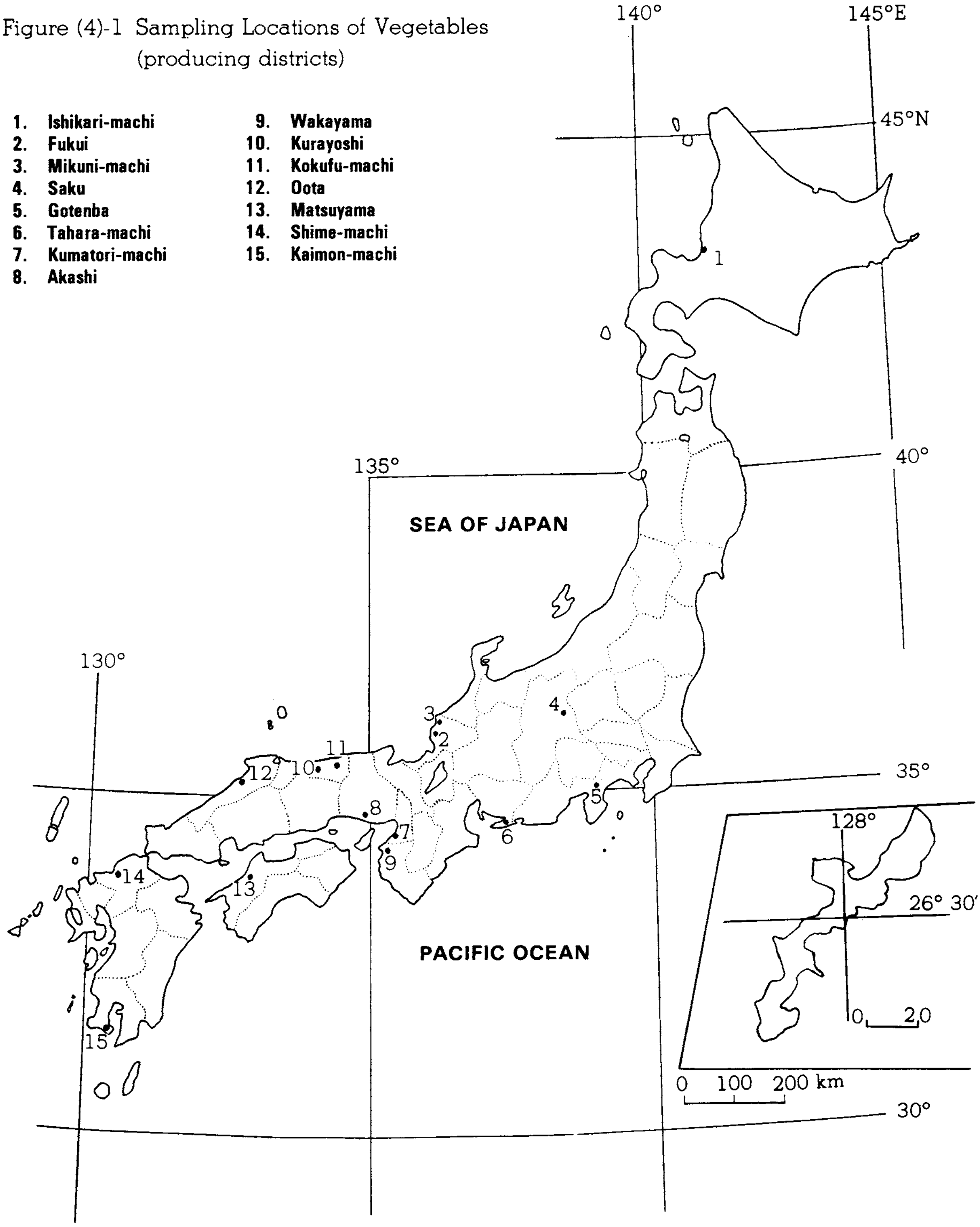
—continued from No. 73 of this publication—

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

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	pCi/kg	S.U.	pCi/kg	C.U.
(Japanese radish)							
May, 1985							
Tahara-machi, AICHI	0.798	0.248	3.66	0.6±0.28	2.0±1.1	0.02±0.14	0.01±0.04
July, 1985							
Oota, SHIMANE	0.565	0.233	2.33	38 ±0.8	160 ±4	9.5 ±0.36	4.1 ±0.15
August, 1985							
Ishikari-machi, HOKKAIDO	0.558	0.265	1.61	19 ±0.6	72 ±2.2	2.0 ±0.17	1.2 ±0.11
October, 1985							
Saku, NAGANO	0.450	0.286	1.52	1.6±0.29	5.6 ±1.0	0.2 ±0.18	0.1 ±0.12
November, 1985							
Fukui, FUKUI	0.479	0.224	1.88	13 ±0.7	56 ±3.0	0.6 ±0.19	0.3 ±0.10
Gotenba, SHIZUOKA	0.599	0.241	2.61	2.8±0.26	12 ±1.1	0.9 ±0.16	0.3 ±0.06
Akashi, HYOGO	0.607	0.284	2.53	2.9±0.29	10 ±1.0	0.2 ±0.11	0.1 ±0.04
Shime-machi, FUKUOKA	0.579	0.276	2.37	2.2±0.40	8.0±1.4	0.5 ±0.19	0.2 ±0.08
Kaimon-machi, KAGOSHIMA	0.754	0.245	3.29	4.7±0.39	19 ±1.6	0.7 ±0.14	0.2 ±0.04
December, 1985							
Wakayama, WAKAYAMA	0.524	0.241	1.93	0.6±0.25	2.4±1.0	0.2 ±0.19	0.1 ±0.10
Kokufu-machi, TOTTORI	0.673	0.225	2.40	8.3±0.46	37 ±2.0	0.2 ±0.13	0.1 ±0.05
(Spinach)							
May, 1985							
Tahara-machi, AICHI	1.01	0.391	4.31	0.4±0.28	1.1±0.71	0.1 ±0.15	0.03±0.03
July, 1985							
Oota, SHIMANE	1.46	0.734	5.80	9.0±0.52	12 ±0.7	1.4± 0.19	0.2 ±0.03
August, 1985							
Ishikari-machi, HOKKAIDO	1.91	0.423	8.81	4.6±0.44	11 ±1.0	0.4 ±0.18	0.04±0.02
October, 1985							
Saku, NAGANO	2.05	1.33	7.29	10 ±0.6	7.8±0.45	1.8 ±0.28	0.2 ±0.04

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	pCi/kg	S.U.	pCi/kg	C.U.
November, 1985							
Mikuni-machi, FUKUI	1.62	0.413	5.95	2.5±0.31	6.2±0.75	0.03±0.14	0.0 ±0.02
Gotenba, SHIZUOKA	1.50	0.536	6.19	2.7±0.37	5.1±0.69	3.7 ±0.33	0.6 ±0.05
Akashi, HYOGO	1.50	0.446	5.85	2.8±0.31	6.2±0.69	0.5 ±0.14	0.1 ±0.02
Kurayoshi, TOTTORI	1.76	0.901	6.05	6.9±0.48	7.7±0.53	3.4 ±0.28	0.6 ±0.05
Shime-machi, FUKUOKA	1.75	1.02	6.55	8.0±0.51	7.8±0.50	0.7 ±0.17	0.1 ±0.03
Kaimon-machi, KAGOSHIMA	1.76	0.545	7.36	8.7±0.54	16 ±1.0	0.9 ±0.18	0.1 ±0.02
December, 1985							
Matsuyama, EHIME	1.87	0.790	5.41	1.8±0.32	2.3±0.41	0.2 ±0.16	0.04±0.03
(Onion)							
July, 1985							
Kumatori-machi, OSAKA	0.323	0.136	1.28	1.7±0.28	12 ±2.0	0.4 ±0.13	0.3 ±0.10
(Chinese cabbage)							
December, 1985							
Wakayama, WAKAYAMA	0.622	0.644	1.77	0.6±0.18	1.0±0.27	0.2 ±0.15	0.1 ±0.08

Figure (4)-1 Sampling Locations of Vegetables (producing districts)



(4)-2 Strontium-90 and Cesium-137 in Vegetables (consuming districts) (from May 1985 to Dec. 1985)

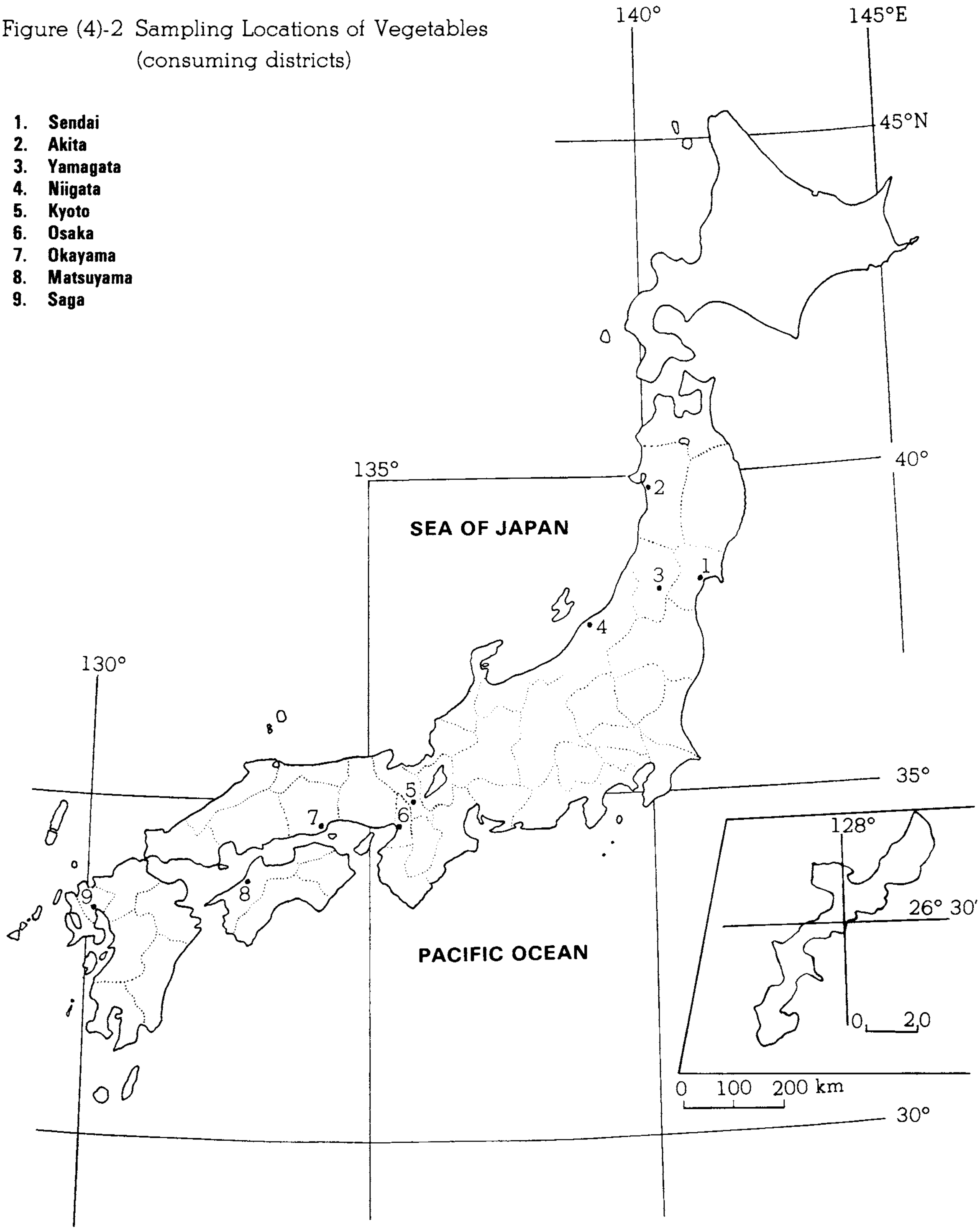
—continued from No. 73 of this publication—

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

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	pCi/kg	S.U.	pCi/kg	C.U.
(Japanese radish)							
September, 1985							
Sendai, MIYAGI	0.597	0.239	2.52	12 ±0.5	50 ±2.0	0.4±0.12	0.2 ±0.05
October, 1985							
Yamagata, YAMAGATA	0.619	0.345	2.43	14 ±0.5	42 ±1.6	2.6±0.21	1.1 ±0.09
Kyoto, KYOTO	0.786	0.209	3.54	14 ±0.6	69 ±3.0	1.1±0.20	0.3 ±0.06
November, 1985							
Akita, AKITA	0.602	0.304	2.52	13 ±0.5	44 ±1.7	0.3±0.11	0.1 ±0.04
Niigata, NIIGATA	0.381	0.160	1.56	3.2±0.36	20 ±2.2	0.3±0.15	0.2 ±0.10
Osaka, OSAKA	0.429	0.267	1.70	2.0±0.35	8.0±1.3	0.6±0.18	0.4 ±0.11
Okayama, OKAYAMA	0.548	0.226	2.45	3.8±0.40	17 ±1.8	1.2±0.19	0.5 ±0.08
Saga, SAGA	0.619	0.191	2.84	1.9±0.25	10 ±1.3	0.1±0.09	0.03±0.03
(Spinach)							
May, 1985							
Sendai, MIYAGI	1.70	0.718	6.46	2.9±0.33	4.0±0.45	0.2±0.15	0.04±0.02
July, 1985							
Niigata, NIIGATA	1.23	0.427	5.54	5.9±0.42	14 ±1.0	0.1±0.12	0.02±0.02
October, 1985							
Yamagata, YAMAGATA	1.57	0.384	7.07	3.2±0.35	8.4±0.90	0.1±0.13	0.02±0.02
November, 1985							
Kyoto, KYOTO	1.45	1.09	4.42	3.8±0.42	3.5±0.38	1.0±0.26	0.2 ±0.06
Okayama, OKAYAMA	1.69	1.78	5.28	12 ±0.6	6.6±0.32	1.3±0.20	0.2 ±0.04
Saga, SAGA	1.87	0.992	7.58	1.2±0.31	1.3±0.31	0.8±0.19	0.1 ±0.02
December, 1985							
Matsuyama, EHIME	1.70	0.574	7.36	0.9±0.26	1.6±0.45	0.1±0.14	0.02±0.02
(Cabbage)							
November, 1985							
Akita, AKITA	0.611	0.497	2.35	15 ±0.5	31 ±1.1	3.2±0.23	1.4 ±0.10

Figure (4)-2 Sampling Locations of Vegetables
(consuming districts)

1. Sendai
2. Akita
3. Yamagata
4. Niigata
5. Kyoto
6. Osaka
7. Okayama
8. Matsuyama
9. Saga



(5) Strontium-90 and Cesium-137 in Sea Fish (from Jun. 1985 to Dec. 1985)

—continued from No. 73 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)	pCi/kg	S.U.	pCi/kg	C.U.
(Hexagrammos otakii)							
August, 1985							
Souma, FUKUSHIMA	1.74	2.32	3.84	0.3±0.36	0.1 ±0.16	5.5±0.36	1.4±0.09
(Trachurus japonicus)							
July, 1985							
Kobe, HYOGO	3.14	7.59	4.15	0.7±0.23	0.1 ±0.03	7.7±0.43	1.9±0.10
October, 1985							
Wakayama, WAKAYAMA	3.56	8.92	3.63	0.7±0.24	0.1 ±0.03	5.0±0.36	1.4±0.10
November, 1985							
Odawara, KANAGAWA	3.33	8.10	3.52	0.1±0.24	0.01±0.03	5.8±0.41	1.7±0.12
Shizuoka, SHIZUOKA	3.20	8.16	3.26	0.9±0.24	0.1 ±0.03	6.8±0.39	2.1±0.12
(Sardinops melanosticta)							
September, 1985							
Yamagata, YAMAGATA	2.93	7.34	3.18	0.1±0.26	0.01±0.03	2.4±0.30	0.8±0.09
December, 1985							
Nagano, NAGANO	3.00	7.71	3.28	0.1±0.24	0.01±0.03	1.6±0.25	0.5±0.08
(Sebastiscus marmoratus)							
June, 1985							
Hamada, SIMANE	4.72	16.0	1.91	1.1±0.27	0.1 ±0.02	1.2±0.22	0.6±0.12
(Limanda herzensteini)							
November, 1985							
Fukui, FUKUI	3.02	7.73	3.33	0.3±0.26	0.04±0.03	6.1±0.43	1.8±0.13
(Spratelloides gracilis)							
December, 1985							
Akune, KAGOSHIMA	2.87	6.25	3.33	0.3±0.24	0.05±0.04	8.1±0.44	2.2±0.12

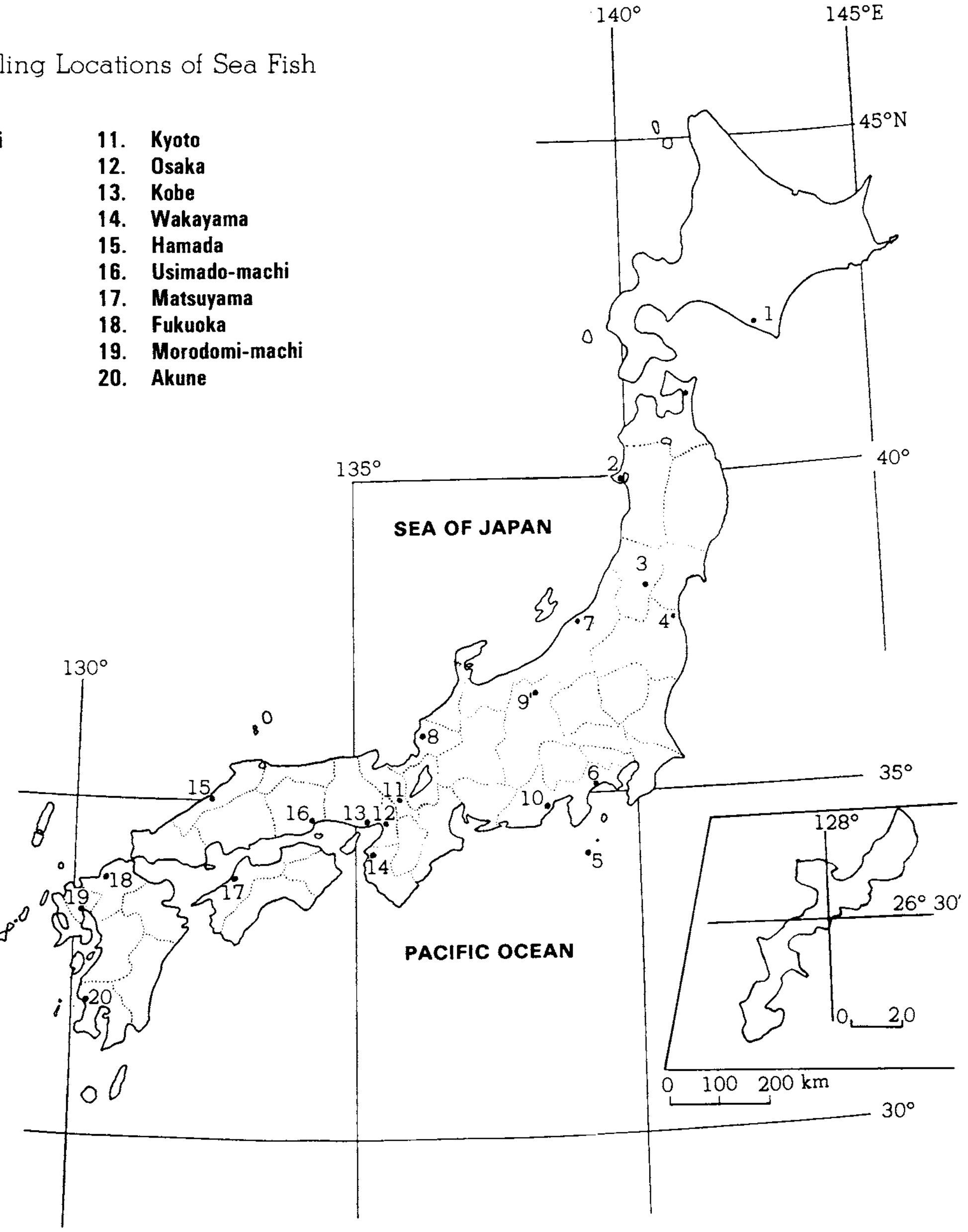
Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	pCi/kg	S.U.	pCi/kg	C.U.
(Oncorhynchus keta)							
November, 1985							
Urakawa-machi HOKKAIDO	1.35	0.652	3.94	0.3±0.23	0.5±0.35	6.1±0.37	1.5±0.09
(Scomber japonicus)							
September, 1985							
Matsuyama, EHIME	1.30	0.448	3.74	0.1±0.27	0.2±0.61	6.5±0.39	1.7±0.10
November, 1985							
Kyoto, KYOTO	1.28	0.743	3.77	0.7±0.24	0.9±0.33	5.5±0.38	1.5±0.10
Osaka, OSAKA	1.04	0.120	3.08	0.4±0.27	3.0±2.30	6.4±0.43	2.1±0.14
(Chrysophrys major)							
July, 1985							
Fukuoka FUKUOKA	1.46	0.436	4.66	0.0±0.22	0.0±0.50	8.0±0.40	1.7±0.09
August, 1985							
Oga, AKITA	5.80	18.5	4.27	1.7±0.36	0.1±0.02	5.5±0.42	1.3±0.10
(Mugil cephalus)							
August, 1985							
Morodomo-machi, SAGA	1.23	0.820	3.53	0.2±0.24	0.2±0.30	3.1±0.28	0.9±0.08
November, 1985							
Ushimado-machi, OKAYAMA	1.82	0.796	5.55	0.9±0.29	1.1±0.36	3.9±0.36	0.7±0.06
(Limanda yokohamae)							
November, 1985							
Niigata, NIIGATA	1.50	0.819	3.73	0.0±0.16	0.0±0.20	2.8±0.26	0.7±0.07
(Decapterus muroadsi)							
September, 1985							
Miyake-Island, TOKYO	1.59	1.90	3.52	0.0±0.16	0.0±0.09	8.2±0.39	2.3±0.11

Sea Fish

Japanese name	English name	Scientific name
Ainame	Greenling	Hexagrammos otakii
Aji	Horse mackerel	Trachurus japonicus
Iwashi	Sardine	Sardinops melanosticta
Kasago	Scorpion-fish	Sebastiscus marmoratus
Karei	Flatfish	Limanda herzensteini
Kibinago	Banded blue-sprat	Spratelloides gracilis
Sake	Salmon	Oncorhynchus keta
Saba	Common mackerel	Scomber japonicus
Tai	Sea bream	Chrysophrys major
Bora	Gray mullet	Mugil cephalus
Makogarei	Flatfish masbled sole	Limanda yokohamae
Muroajii	Horse-scad mackerel	Decapterus muroadsi

Figure (5) Sampling Locations of Sea Fish

1. **Urakawa-machi**
2. **Oga**
3. **Yamagata**
4. **Souma**
5. **Mayake-mura**
6. **Odawara**
7. **Niigata**
8. **Fukui**
9. **Nagano**
10. **Shizuoka**
11. **Kyoto**
12. **Osaka**
13. **Kobe**
14. **Wakayama**
15. **Hamada**
16. **Usimado-machi**
17. **Matsuyama**
18. **Fukuoka**
19. **Morodomi-machi**
20. **Akune**



(6) Strontium-90 and Cesium-137 in Freshwater Fish (from Jul. 1985 to Dec. 1985)

—continued from No. 71 of this publication—

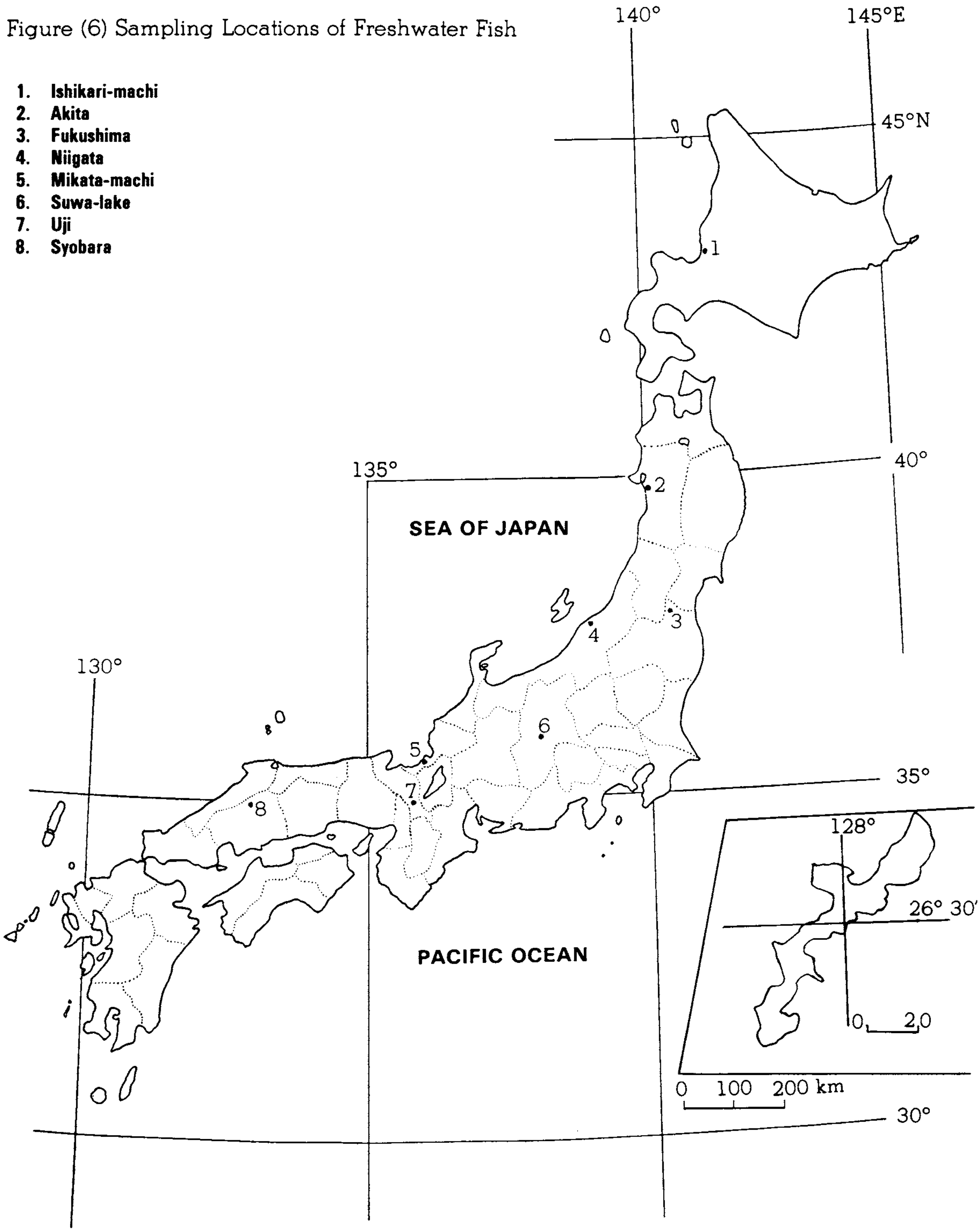
Table (6): Strontium-90 and Cesium-137 in Freshwater Fish

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	pCi/kg	S.U.	pCi/kg	C.U.
(Cyprinus carpio)							
August, 1985							
Akita, AKITA	3.06	8.81	2.82	110 ±2	12 ±0.2	4.0±0.33	1.4±0.12
Fukushima, FUKUSHIMA	3.28	9.59	3.19	38 ±1.3	4.0±0.13	2.7±0.35	0.8±0.11
October, 1985							
Shobara, HIROSHIMA	0.909	0.335	2.90	1.4±0.43	4.0±1.3	4.6±0.46	1.6±0.16
(Carassius auratus)							
July, 1985							
Barato-lake, HOKKAIDO	4.51	13.8	3.20	33 ±1.0	2.4±0.07	3.4±0.32	1.1±0.10
November, 1985							
Toyanogata, NIIGATA	1.16	0.63	3.47	2.8±0.32	4.5±0.51	4.9±0.31	1.4±0.09
December, 1985							
Mikata-lake, FUKUI	1.21	1.031	3.31	3.7±0.54	3.5±0.52	9.2±0.61	2.8±0.18
Uji, KYOTO	4.68	15.3	3.20	40 ±1.1	2.6±0.07	1.2±0.21	0.4±0.07
(Hypomesus transpacificus nipponensis)							
December, 1985							
Suwa-lake, NAGANO	2.32	5.73	2.49	4.2 ±0.38	0.7±0.07	2.8±0.27	1.1±0.11

Freshwater Fish

Japanese name	English name	Scientific name
Koi	Carp	Cyprinus carpio
Funa	A crucian carp	Carassius auratus
Wakasagi	Pond-smelt	Hypomesus transpacificus nipponensis

Figure (6) Sampling Locations of Freshwater Fish



(7) Strontium-90 and Cesium-137 in Shellfish (from May 1985 to Jul. 1985)

—continued from No. 73 of this publication—

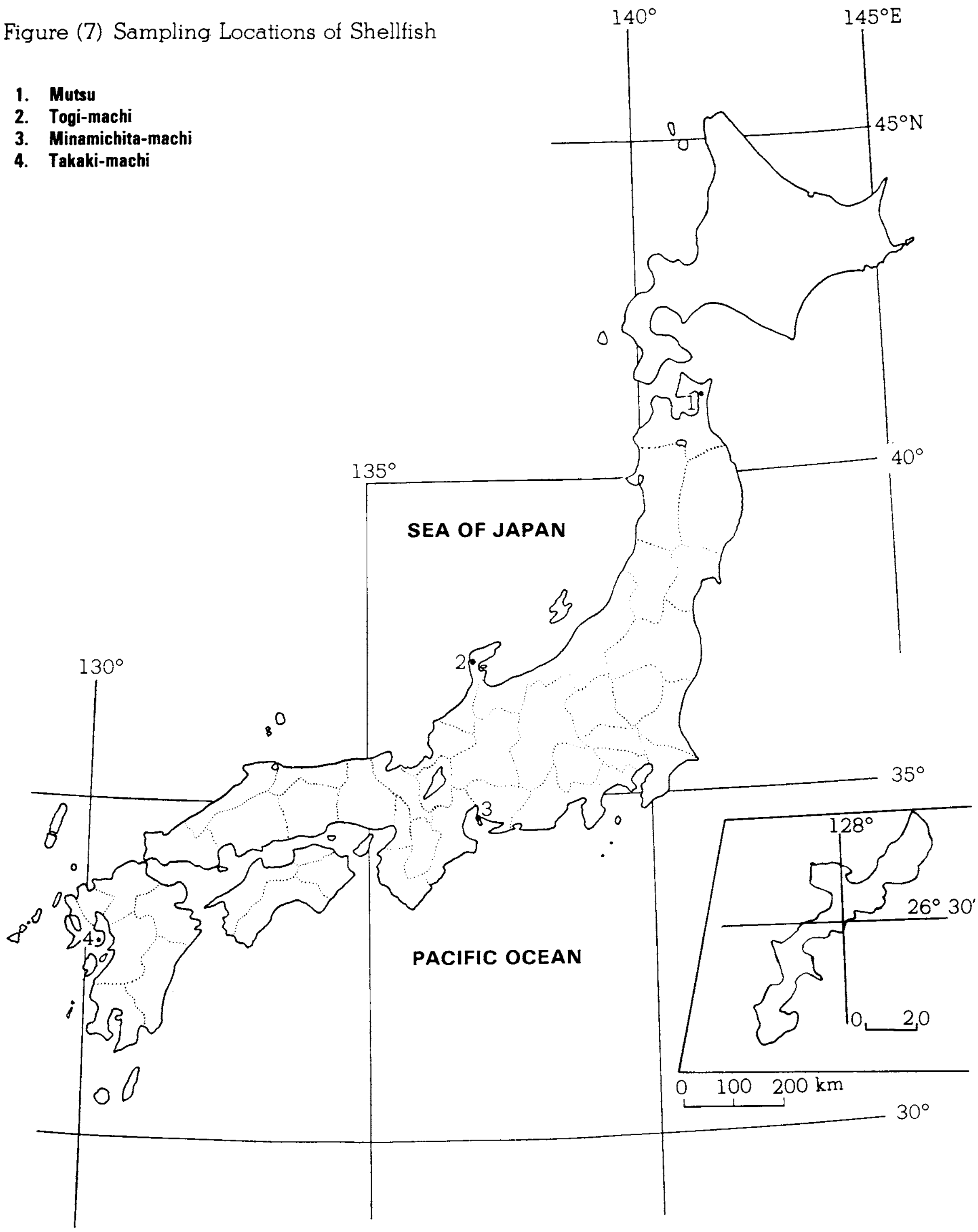
Table (7): Strontium-90 and Cesium-137 in Shellfish

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	pCi/kg	S.U.	pCi/kg	C.U.
(Venerupis phillipinarum) May, 1985 Takaki-machi, NAGASAKI	2.27	0.993	2.24	0.0±0.63	0.0±0.64	1.8±0.53	0.8±0.24
(Saxidomuspurpuratus) June, 1985 Minamichita-machi, AICHI	1.59	0.334	3.02	0.3±0.57	1.0±1.7	0.9±0.41	0.3±0.14
(Turbo cornutus) July, 1985 Togi-machi, ISHIKAWA	2.72	1.53	2.27	0.5±0.66	0.3±0.43	2.5±0.55	1.1±0.24
(Mytilus edulis) June, 1985 Mutsu, AOMORI	2.15	0.712	3.04	0.2±0.20	0.2±0.28	1.5±0.24	0.5±0.08

Shellfish

Japanese name	English name	Scientific name
Asari	Short-necked clam	Venerupis phillipinarum
Ohasari		Saxidomuspurpuratus
Sazae	Wreath shell	Turbo cornutus
Murasakiigai	Mussuel	Mytilus

Figure (7) Sampling Locations of Shellfish



(8) Strontium-90 and Cesium-137 in Seaweeds (from May 1985 to Jun. 1985)

—continued from No. 73 of this publication—

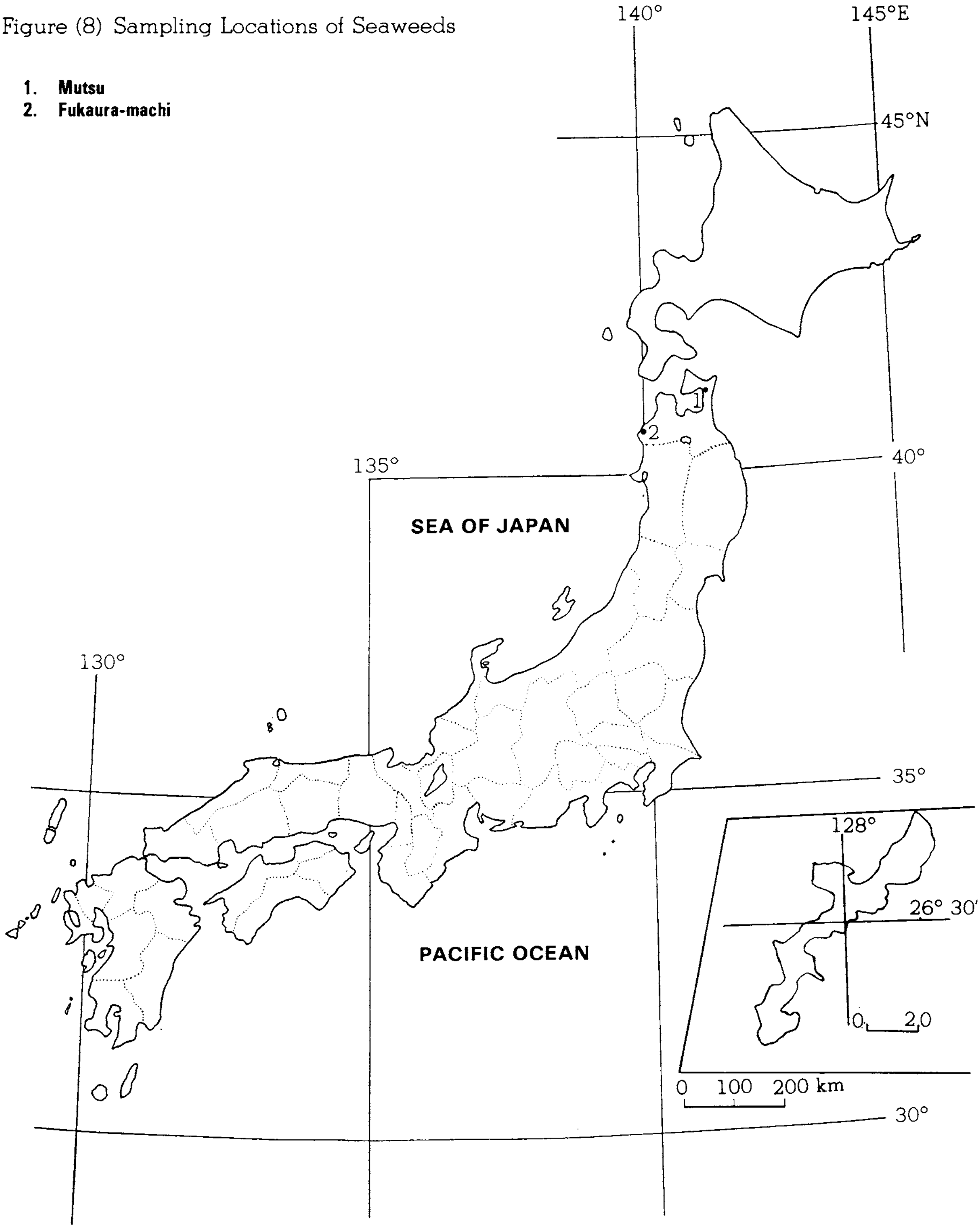
Table (8): Strontium-90 and Cesium-137 in Seaweeds

Location	Component			^{90}Sr		^{137}Cs	
	Ash(%)	Ca(g/kg)	K(g/kg)	pCi/kg	S.U.	pCi/kg	C.U.
(Sargassum fulvellum)							
May, 1985							
Mutsu, AOMORI	3.97	1.09	12.5	0.8±0.42	0.7±0.38	0.6±0.25	0.05±0.02
June, 1985							
Fukaura-machi, AOMORI	4.26	2.73	8.39	5.1±0.55	1.9±0.20	1.9±0.30	0.2 ±0.04

Seaweeds

Japanese name	English name	Scientific name
Hondawara	Gulfweed	Sargassum fulvellum

Figure (8) Sampling Locations of Seaweeds



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