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410741

April 20, 1959

Dr. John Wolfe, Chief
Environmental Sciences Branch
Division of Biology and Medicine
Washington Atomic Energy Commission
Washington 25, D. C.

Dear John:

In a telephone conversation on April 15, your office was informed through Al Seymour that in response to questions from Gordon Dunning certain data concerning strontium-90 levels at Rongelap Atoll would be reported to you by telephone on April 22, 1959.

Dorothy South has just completed tabulating some of these data so we thought it best to get this much off to you immediately.

Please find enclosed three tables: (1) Strontium-90 in Pandanus samples collected at Rongelap Atoll - March, 1958. (2) Strontium-90 in Pandanus samples collected at Rongelap Atoll - August, 1958, (3) Strontium-90 in Pandanus fruit, summary table.

These tables should follow page 82 in the two files of assembled Rongelap data.

Copies are also enclosed for Dr. Dunning.

Best regards,

Edward E. Held
Research Assistant Professor

EEH:srb
cc: Dr. Gordon Dunning

Enclosures

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Sr^{90} in Pandanus Fruit Summary Table

Island	Date collected	Number samples	Sr^{90} in m per gram wet sample	Strontium units	Limit of detectability d/m/g wet
Rongelap	January, 19[illegible]	1	[illegible]		0.11
Rongelap	October, 19[illegible]	1	[illegible]		0.11
Rongelap (seed end)	July, 19[illegible]	1	[illegible]	150	0.15
Rongelap	July, 19[illegible]	1	[illegible]	1056	0.8
Rongelap	March, 19[illegible]	1	[illegible]	0	0.5
Kabelle	March, 19[illegible]	1	[illegible]	0	0.5
Eniaetok	March, 19[illegible]	2		0	0.5

Note: Three fruit samples, one each from Rongelap, Kabelle, and Eniaetok are now in process and the results will be available later.

Strontium^{90} in Pandanus Samples collected at Rongelap Atoll - August, 1958

Island	Sample	Sr^{90} d/m per gram[4] dried sample	Sr^{90} d/m per gram wet sample	Ca mg per gram[4] wet sample	Strontium units
Rongelap	Leaves # 1	103±3	29±1	3.84±.03	3406
	Leaves # 2	78±2	22±1	4.95±.22	1966
	Leaves # 3	66±2	18±1	3.07±.11	2715
	Leaves # 8	38±2	11±1	2.85± 0	1667
	Trunk[2]				
	Borings # 2	0	0	3.68± 0	0
	Fruit #22[1]				
Kabelle	Leaves # 7	74±4	21±1	3.26±.01	2869
	Branch # 7	28±1	-	[3]11.54±.83	1101
	Bark # 7	102±4	-	[3] 6.25±.03	7360
	Fruit # 7[1]				
Eniaetok	Leaves #10	55±2	15±0.5	4.56±.11	1524
	Leaves #11	91±4	28±1	4.37±.06	2611
	Fruit #10[1]				

1) These fruit samples are now being processed and the results will be available later.

2) Limit of detectibility of Sr^{90} in this sample is 46 d/m/g dried sample.

3) These results are in mg of calcium per gram dried sample. Wet sample weights are not available for these samples.

4) Errors for activity values are determined from counting error.

5) Errors for calcium values are standard deviations for replicate analyses.

Sr^{90} in Pandanus Fruit-Summary Table

Island	Date collected	Number samples	Sr^{90} µ/m per gram wet sample	Strontium units	Limit of detectability d/m/g wet
Rongelap	January, 1955	4	2.4		0.11
Rongelap	October, 1955	4	3.8		0.11
Rongelap (seed end)	July, 1956	4	2.2	150	0.15
Rongelap	July, 1957	4	1.7	1056	0.8
Rongelap	March, 1958	1	0	0	0.5
Kabelle	March, 1958	4	0	0	0.5
Eniaetok	March, 1958	2	0	0	0.5

Note: Three fruit samples, one each from Rongelap, Kabelle, and Eniaetok are now in process and the results will be available later.

Sr^{90} in Pandanus Fruit-Summary Table

Island	Date collected	Number samples	Sr^{90} d/m per gram wet sample	Strontium units	Limit of detect-ability d/m/g wet
Rongelap	January, 1955	1	2.4		0.11
Rongelap	October, 1955	1	5.8		0.11
Rongelap (seed end)	July, 1956	1	[illegible]	150	0.15
Rongelap	July, 1957	1	[illegible]	1056	0.8
Rongelap	March, 1958	1	0	0	0.5
Kabelle	March, 1958	1	0	0	0.5
Eniaetok	March, 1958	2	0	0	0.5

Note: Three fruit samples, one each from Rongelap, Kabelle, and Eniaetok are now in process and the results will be available later.

Sr^{90} in Pandanus Fruit-Summary Table

Island	Date collected	Number samples	Sr^{90} µ/m per gram wet sample	Strontium units	Limit of detect-ability d/m/g wet
Rongelap	January, 1955	1	[illegible]		0.11
Rongelap	October, 1955	1	[illegible]		0.11
Rongelap (seed end)	July, 1956	1	[illegible]	150	0.15
Rongelap	July, 1957	1	[illegible]	1056	0.8
Rongelap	March, 1958	1	[illegible]	0	0.5
Kabelle	March, 1958	1	[illegible]	0	0.5
Eniaetok	March, 1958	2	[illegible]	0	0.5

Note: Three fruit samples, one each from Rongelap, Kabelle, and Eniaetok are now in process and the results will be available later.

Strontium^{90} in Pandanus Samples collected at Rongelap Atoll - August, 1958

Island	Sample	Sr^{90} d/m per gram[4] dried sample	Sr^{90} d/m per gram wet sample	Ca mg per gram[4] wet sample	Strontium units
Rongelap	Leaves # 1	103±3	29±1	3.84±.03	3406
	Leaves # 2	78±2	22±1	4.95±.22	1966
	Leaves # 3	66±2	18±1	3.07±.11	2715
	Leaves # 8	38±2	11±1	2.85± 0	1667
	Trunk[2] Borings# 2	0	0	3.68± 0	0
	Fruit #22[1]				
Kabelle	Leaves # 7	74±4	21±1	3.26±.01	2869
	Branch # 7	28±1	-	[3]11.54±.83	1101
	Bark # 7	102±4	-	[3] 6.25±.03	7360
	Fruit # 7[1]				
Eniaetok	Leaves #10	55±2	15±0.5	4.56±.11	1524
	Leaves #11	91±4	25±1	4.37±.06	2611
	Fruit #10[1]				

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2) Limit of detectibility of Sr^{90} in this sample is 46 d/m/g dried sample.

3) These results are in mg of calcium per gram dried sample. Wet sample weights are not available for these samples.

4) Errors for activity values are determined from counting error.

5) Errors for calcium values are standard deviations for replicate analyses.

Strontium^{90} in Pandanus Samples Collected at Rongelap Atoll - March, 1958

Island	Sample	Sr^{90} d/m per gram[2] dried sample	Sr^{90} d/m per gram wet sample	Per gram[3] wet sample mg Ca	Strontium units
Rongelap	Leaves # 14	59± 4	19± [illegible]	3.88±.07	2295
	Leaves # 31	40± [illegible]	[illegible]	4.00± 0	1253
	Leaves # 36	52± 4	17± [illegible]	3.86±.02	2053
	Leaves # 94	51± [illegible]	14± [illegible]	3.00± 0	2132
	Fruit # 88[illegible]	0	0	2.44±.13	0
Kabelle	Leaves # 65	179±4[illegible]	49± [illegible]	6.87±0.61	3239
	Leaves # 75	25± [illegible]	[illegible]	3.54± .01	896
	Fruit # 88[illegible]	0	[illegible]	2.96± .05	0
Eniaetok	Leaves #104	62± 3	17± [illegible]	5.69± .03	1367
	Leaves #114A	107± 4	33± [illegible]	3.38± .09	3457
	Fruit #107[illegible]	0	[illegible]	2.83± .01	0
	#114[illegible]	0	[illegible]	4.51± .05	0

1) Limit of detectability of Sr^{90} in these fruit samples is 2 d/m/g dried sample.

2) Errors given for activity values are obtained from counting error.

3) Error given for calcium values are standard deviations for replicate analyses.