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1. RADIOACTIVITY IN IRRADIATED HAM

1.1 8.4 MEV IRRADIATION

1.1a Gamma Analysis

Eighty-five #2 cans of 8.4 Mev irradiated ham were counted in the standard array on the date of arrival for 900 minutes and 85 cans of non-irradiated ham were counted in the standard array on September 15, 1961, for 900 minutes.

Table I presents the radioactivity tabulated on an energy group basis for irradiated and non-irradiated ham (channels 20-116). The spectra of both runs are shown in Figure 1.

TABLE I

GROUP	CHANNELS	NET IRRADIATED HAM, CPM	NET COOKED HAM, CPM	BURDEN, CPM
III	20-32	136.65 ± 0.78	147.75 ± 0.81	-10.38 ± 1.12
IV	32-44	70.85 ± 0.56	70.39 ± 0.56	0.44 ± 0.79
V	44-56	63.55 ± 0.53	63.81 ± 0.60	-0.26 ± 0.80
VI	56-68	172.19 ± 0.87	174.99 ± 0.88	-2.80 ± 1.24
VII	68-80	3.15 ± 0.12	4.21 ± 0.14	-1.06 ± 0.18
VIII	80-92	3.85 ± 0.13	3.35 ± 0.12	0.50 ± 0.18
IX	92-104	4.54 ± 0.14	4.17 ± 0.14	0.37 ± 0.19
X	104-116	1.99 ± 0.09	1.43 ± 0.08	0.56 ± 0.12
Groups	20-116	469.10 ± 1.44	456.77 ± 1.42	-12.33 ± 2.03

All errors quoted are ± 2 Poisson standard deviations. Groups III and VI were adjusted to correspond to Cs¹³⁷ and K⁴⁰ photopeaks, respectively.

From the graph and the data, it can be seen that there are no significant differences in the K⁴⁰ and Cs¹³⁷ content of the irradiated and non-irradiated ham except in Group I where the non-irradiated ham was found to have greater activity than the irradiated ham. The remaining groups show no significant differences.

Since there is no significant increase in activity in the irradiated ham over the non-irradiated, it is assumed that the irradiated ham has no induced activity.

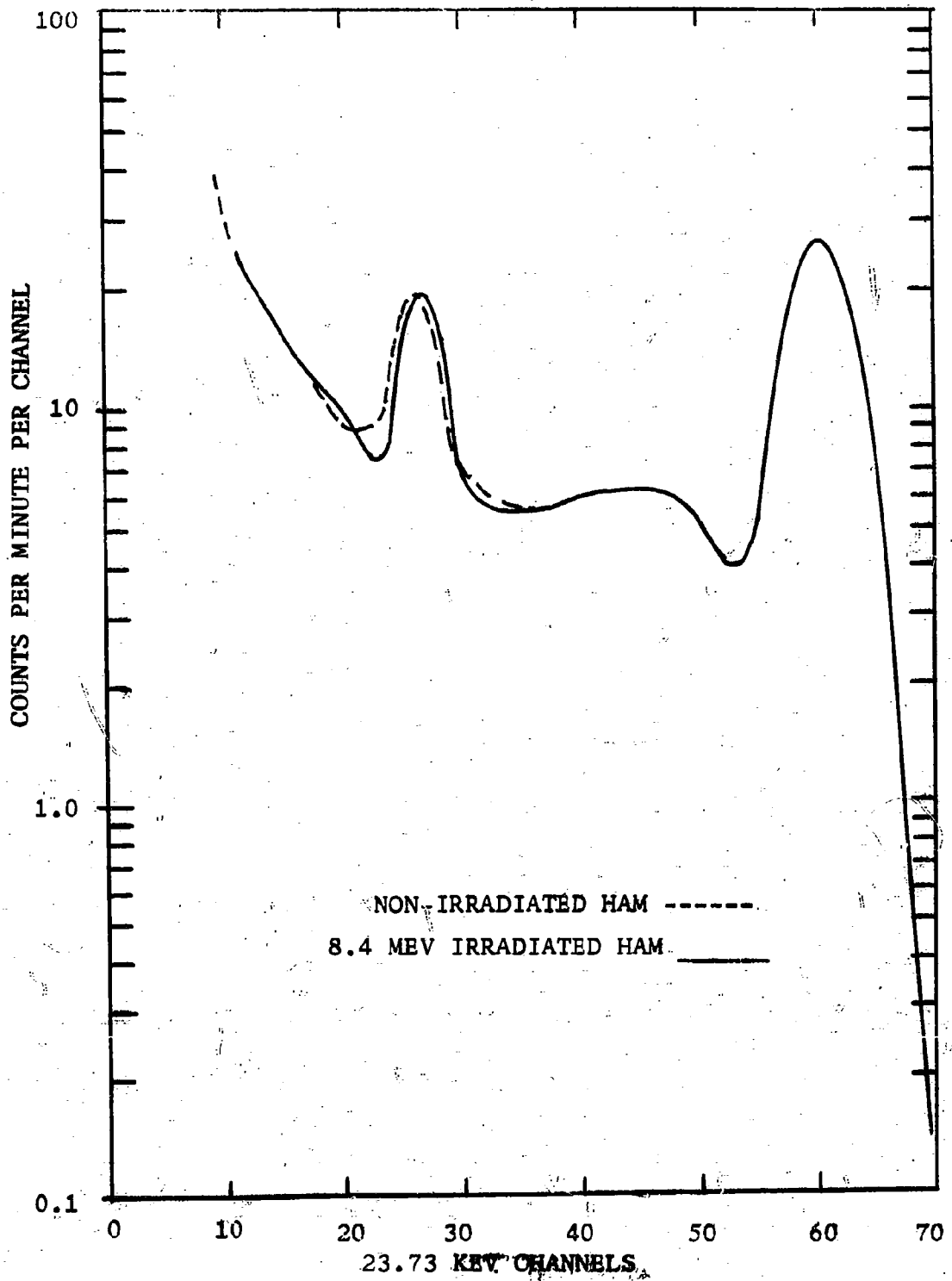


FIGURE 1

m-1

1.1b Beta Analysis

Analysis of beta-emitting isotopes performed under this contract was sub-contracted to Tracerlab, Inc., of Waltham, Massachusetts, and the exact chemical procedure and description of methods have been previously reported in Army Report DA-49-193-MD-2101, covering the period September 16, 1960 - March 15, 1961. The results of the analysis performed on 8.4 Mev irradiated and non-irradiated ham are shown in Table II. Values in parentheses are the upper bounds of the isotopes. These could not be conclusively identified. The Sr-89 and Sr-90 results are on a per gram of calcium basis.

TABLE II

ISOTOPE INVESTIGATED	IRRADIATED OR NON-IRRADIATED	COUNTING DATE	NET CPM OBSERVED	DPM/GRAM OF ELEMENT ON COUNTING DATE
H-3	Irradiated	10/ 4/61	134 ± 7	71 ± 4
H-3	Non-irradiated	3/22/61	167 ± 8	132 ± 6
C-14	Irradiated	3/ 1/62	25 ± 1	21 ± 1
C-14	Non-irradiated	4/10/61	19 ± 1	16 ± 1
P-32	Irradiated	9/22/61	0.2 ± 0.1	(4 ± 2)
P-32	Non-irradiated	2/21/61	0.3 ± 0.1	(4 ± 1)
P-33	Irradiated	9/22/61	0.2 ± 1	(30 ± 15)
P-33	Non-irradiated	2/21/61	0.3 ± 0.1	(40 ± 10)
S-35	Irradiated	10/17/61	0.5 ± 5	(300 ± 100)
S-35	Non-irradiated	2/21/61	0.2 ± 0.1	(200 ± 100)
Ca-45	Irradiated	11/10/61	1.1 ± 0.1	(170 ± 15)
Ca-45	Non-irradiated	5/10/61	0.2 ± 0.1	(18 ± 9)
Sr-89	Irradiated	11/ 9/61	0.2 ± 0.1	(4 ± 2)
Sr-89	Non-irradiated	6/15/61	0.1 ± 0.1	(7 ± 7)
Sr-90	Irradiated			6 ± 1
Sr-90	Non-irradiated	6/15/61	0.4 ± 0.1	8 ± 2

1.2 COBALT-60 IRRADIATION

1.2a Gamma Analysis

On December 12, 1961, fifteen #10 cans of Co⁶⁰ irradiated ham were received and counted for 900 minutes at energy calibrations of 23.73 Kev/channel and 5.93 Kev/channel.

Group comparison data and plotted data from both energy ranges, compared to similar data obtained on non-irradiated ham, indicated that no induced gamma emitters occur in Co⁶⁰ irradiated ham. A comparison of the spectra of the irradiated and non-irradiated ham data is presented

in Figures 2 and 3. Table III shows the data obtained by integrating the energy-groups of the entire spectrum, at an energy calibration of 23.73 Kev/channel. Similar data for the low energy calibration are shown in Table IV.

TABLE III
GROUP COMPARISON DATA
23.73 Kev/Channel

Group	Co ⁶⁰ Irrad. Ham Gross CPM	Control Ham Gross CPM	Burden Net CPM
III	325.442 ± 1.200	343.327 ± 1.234	-17.885 ± 0.28
IV	159.722 ± 0.842	164.362 ± 0.854	-46.400 ± 0.46
V	121.869 ± 0.734	125.131 ± 0.746	-3.262 ± 0.13
VI	215.721 ± 0.980	210.308 ± 0.966	+5.413 ± 0.15
VII	32.422 ± 0.380	35.047 ± 0.384	-2.625 ± 0.11
VIII	20.731 ± 0.304	20.833 ± 0.304	-0.102 ± 0.020
IX	17.361 ± 0.276	18.153 ± 0.282	-0.792 ± 0.056
X	12.012 ± 0.228	11.916 ± 0.228	+0.096 ± 0.020
\sum_{III}^X	905.280 ± 2.006	929.077 ± 2.032	-23.797 ± 0.326

TABLE IV
GROUP COMPARISON DATA
5.93 Kev/Channel

Group	Co ⁶⁰ Irrad. Ham Gross CPM	Control Ham Gross CPM	Burden Net CPM
III	249.245 ± 1.286	212.185 ± 1.186	37.087 ± 0.498
IV	195.065 ± 1.138	191.366 ± 1.126	3.699 ± 0.150
V	141.557 ± 0.970	146.921 ± 0.988	-5.364 ± 0.189
VI	103.331 ± 0.830	101.681 ± 0.822	1.650 ± 0.110
VII	91.018 ± 0.778	92.690 ± 0.784	-1.672 ± 0.110
VIII	75.972 ± 0.710	86.998 ± 0.758	-11.026 ± 0.268
IX	84.386 ± 0.748	95.537 ± 0.798	-11.151 ± 0.276
X	77.064 ± 0.716	57.920 ± 0.620	19.144 ± 0.358
\sum_{III}^X	1017.638 ± 2.604	985.271 ± 2.562	37.367 ± 0.464

All errors are ± 2 Poisson standard deviations.

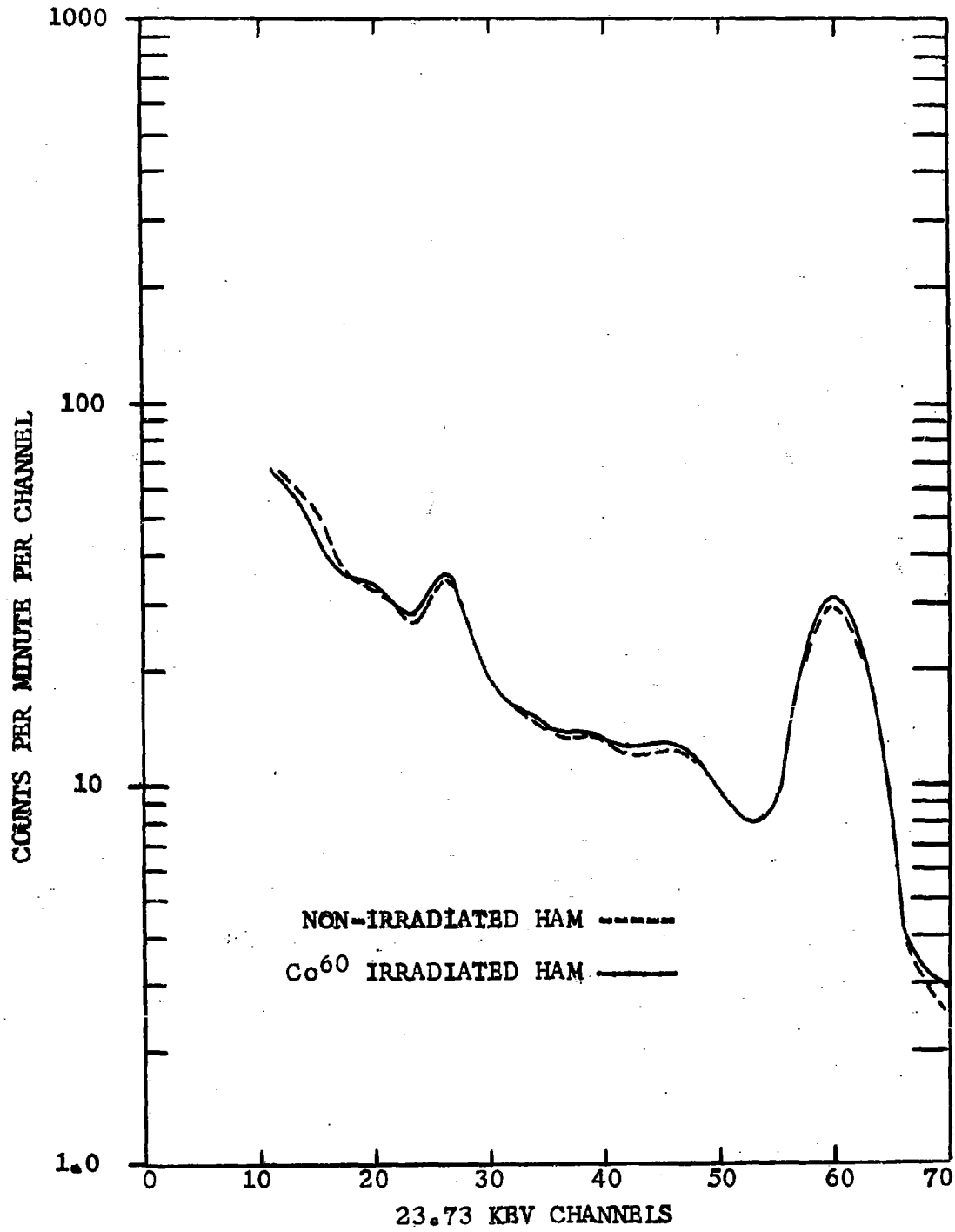


FIGURE 2

70-1

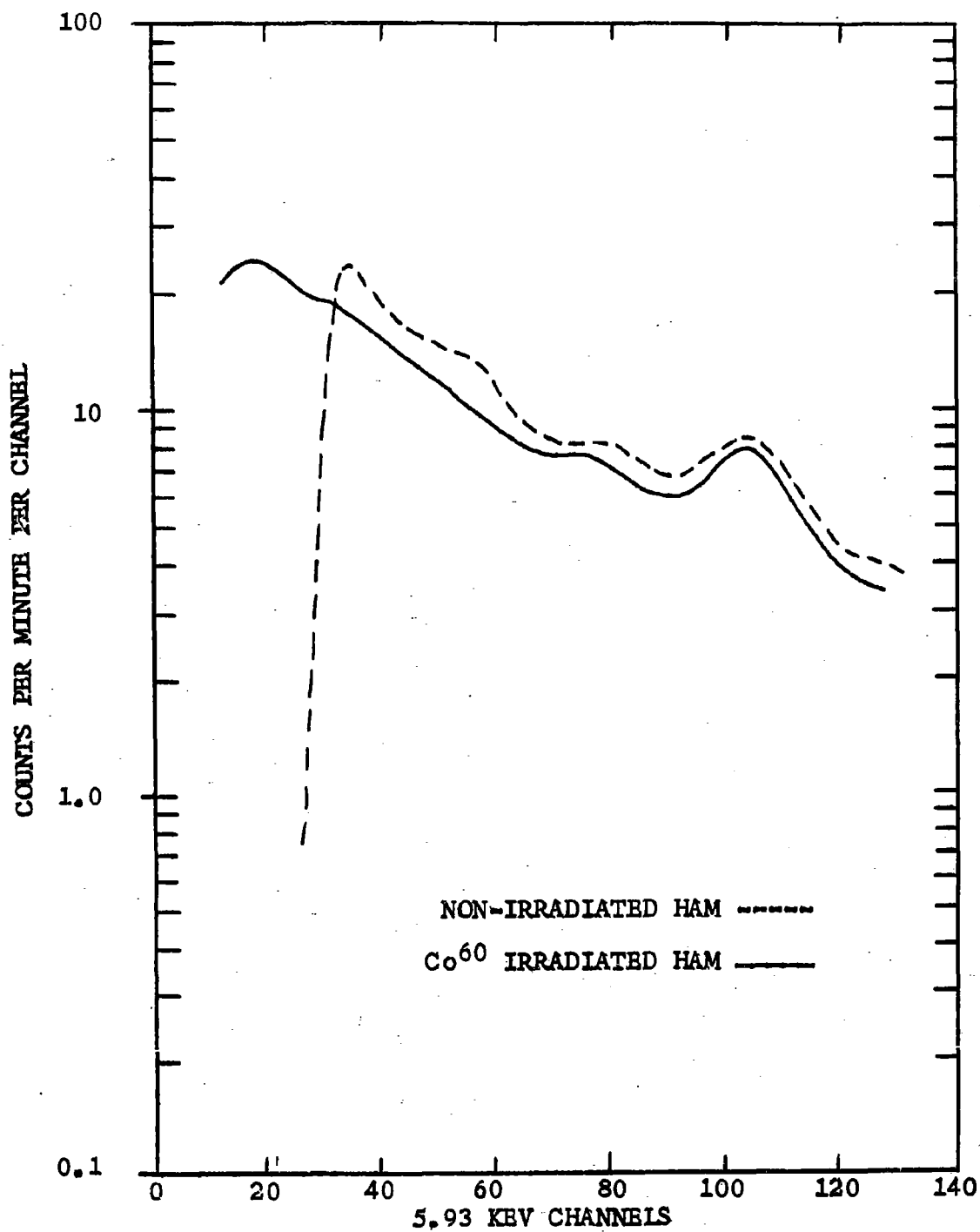


FIGURE 3

me-8

1.2b Beta Analysis of Co⁶⁰ Irradiated Ham

ISOTOPE INVESTIGATED	IRRADIATED OR NON-IRRADIATED	COUNTING DATE	NET CPM OBSERVED	DPM/GRAM OF ELEMENT ON COUNTING DATE *
H-3	Irradiated	12/29/61	50 ± 6	74 ± 9
H-3	Non-irradiated	3/22/61	167 ± 8	132 ± 6
C-14	Irradiated	1/25/62	29 ± 2	25 ± 2
C-14	Non-irradiated	4/10/61	19 ± 1	16 ± 1
P-32	Irradiated	12/13/61	0 ± 0.1	(0 ± 1)
P-32	Non-irradiated	2/21/61	0.3 ± 0.1	(4 ± 1)
P-33	Irradiated	12/13/61	0 ± 0.1	(0 ± 10)
P-33	Non-irradiated	2/21/61	0.3 ± 0.1	(40 ± 10)
S-35	Irradiated	12/28/61	0.1 ± 0.1	(100 ± 100)
S-35	Non-irradiated	2/21/61	0.2 ± 0.1	(200 ± 100)
Ca-45	Irradiated	1/4/62	0.2 ± 0.1	(20 ± 10)
Ca-45	Non-irradiated	5/10/61	0.2 ± 0.1	(18 ± 9)
Sr-89	Irradiated	1/9/62	0.2 ± 0.1	(3 ± 1)
Sr-89	Non-irradiated	6/15/61	0.1 ± 0.1	(7 ± 7)
Sr-90	Irradiated	1/9/62	1.4 ± 0.1	7 ± 1
Sr-90	Non-irradiated	6/15/61	0.4 ± 0.1	8 ± 2

* Values in parentheses are the upper bounds of isotopes. These could not be conclusively identified. All errors indicated are one standard deviation. Sr⁸⁹ and Sr⁹⁰ results are based on per gram of calcium.

2. RADIOACTIVITY IN Co⁶⁰ IRRADIATED BEEF2.1 GAMMA ANALYSIS

Fifteen number 10 cans of Co⁶⁰ irradiated beef were received at Vanderbilt University on November 17, 1961, and counted for 800 minutes. Fifteen cans of non-irradiated control beef were counted on November 19, 1961, for a period of 900 minutes. The spectra obtained from both runs are presented in Figure 4.

On November 21, 1961, both samples were again counted for a period of 400 minutes with an expanded energy scale of 5.93 Kev/channel to study more closely the spectra at a lower energy range. These spectra are shown in Figure 5.

Tables V and VI show a comparison of the data obtained from the control and the irradiated beef, with the 128 channels of data grouped.

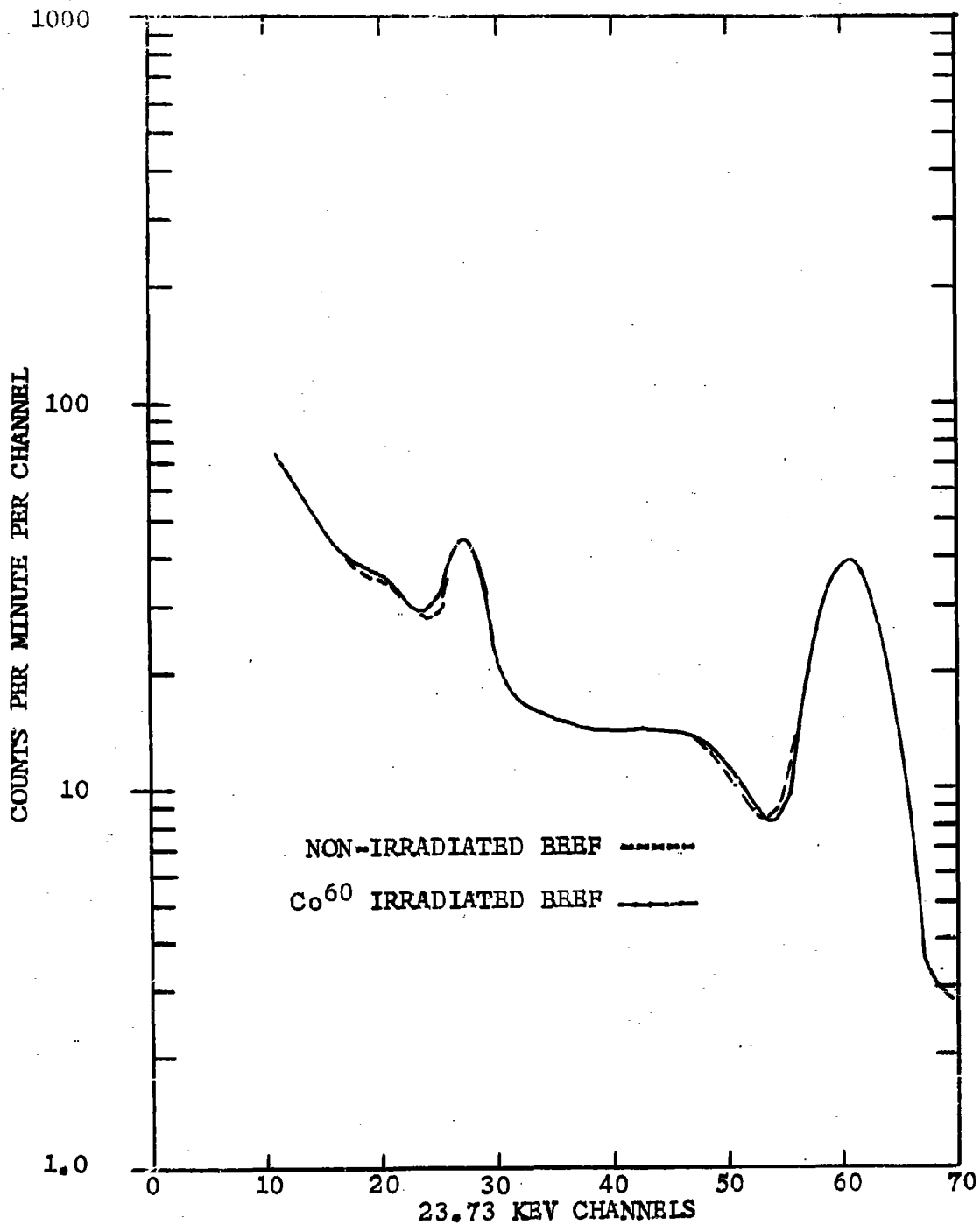


FIGURE 4

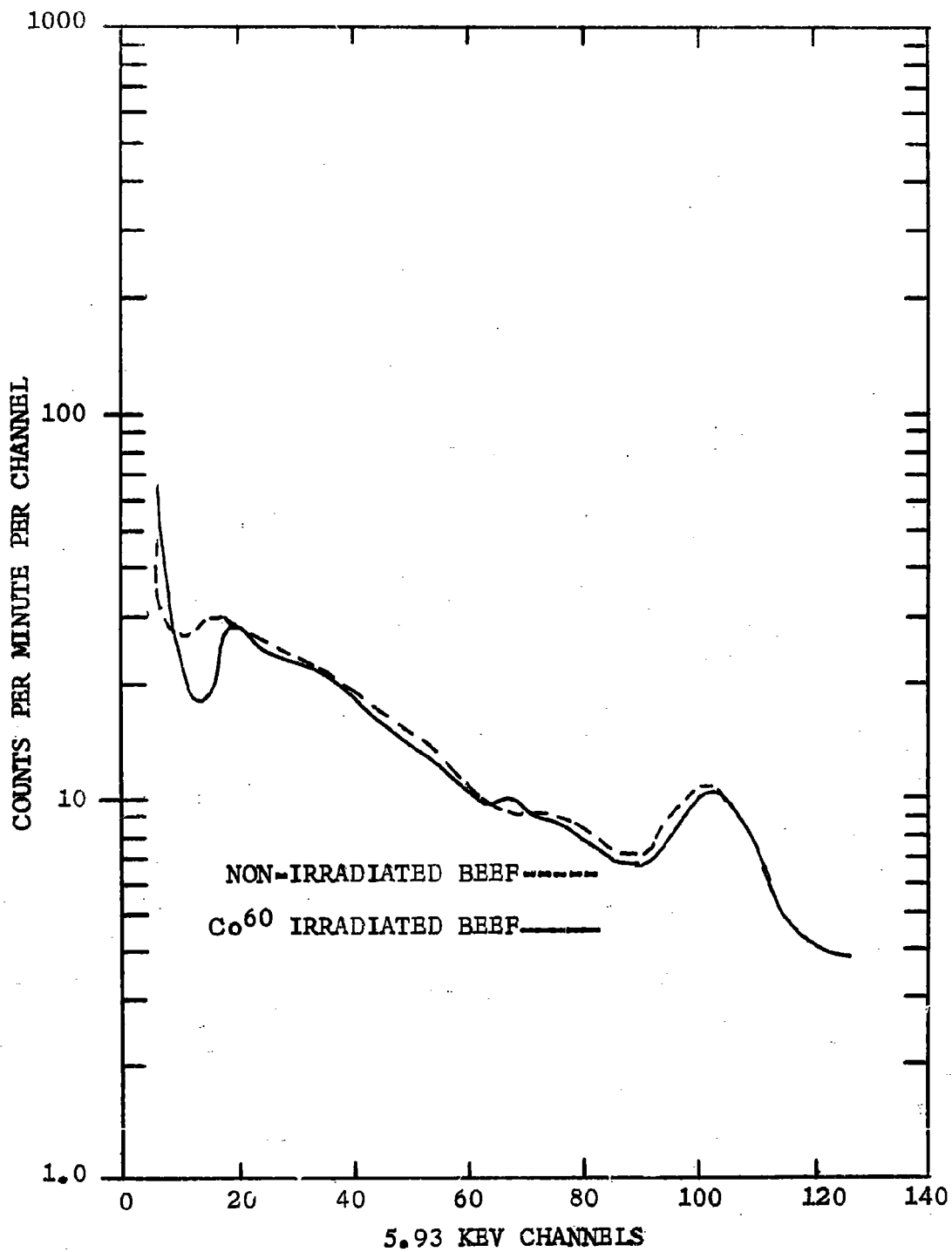


FIGURE 5

TABLE V
GROUP COMPARISON DATA
23.73 Kev/Channel

Group	Co ⁶⁰ Irradiated Beef, CPM	Control Beef CPM	Burden CPM
III	381.529 ± 1.38	368.738 ± 1.28	12.791 ± 1.88
IV	178.032 ± 0.94	174.812 ± 0.88	3.220 ± 1.29
V	139.097 ± 0.83	133.824 ± 0.77	5.273 ± 1.14
VI	274.076 ± 1.17	256.483 ± 1.07	17.593 ± 1.59
VII	28.369 ± 0.38	27.840 ± 0.35	0.529 ± 0.52
VIII	19.121 ± 0.31	19.488 ± 0.30	-0.367 ± 0.43
IX	17.681 ± 0.30	17.526 ± 0.28	0.155 ± 0.41
X	11.997 ± 0.25	12.158 ± 0.24	0.161 ± 0.34
\sum_{III}^X	1049.902 ± 2.29	1010.869 ± 2.25	39.033 ± 0.44

TABLE VI
GROUP COMPARISON DATA
5.93 Kev/Channel

Group	Co ⁶⁰ Irradiated Beef, CPM	Control Beef CPM	Burden CPM
III	293.624 ± 1.711	300.211 ± 1.73	-6.587 ± 2.438
IV	228.409 ± 1.511	233.722 ± 1.53	-5.313 ± 3.410
V	161.873 ± 1.271	169.681 ± 1.30	-7.808 ± 1.822
VI	118.215 ± 1.09	120.050 ± 1.10	-1.835 ± 1.544
VII	104.605 ± 1.02	105.377 ± 1.03	-0.772 ± 1.440
VIII	86.703 ± 0.93	88.174 ± 0.94	-1.471 ± 1.322
IX	111.989 ± 1.06	112.354 ± 1.06	-0.365 ± 1.498
X	93.173 ± 0.966	89.428 ± 0.95	+3.475 ± 1.352
\sum_{III}^X	1198.591 ± 2.45	1218.997 ± 6.47	-20.406 ± 0.32

2.2 BETA ANALYSIS OF Co^{60} IRRADIATED BEEF

ISOTOPE INVESTIGATED	IRRADIATED OR NON-IRRADIATED	COUNTING DATE	NET CPM OBSERVED	DPM/GRAM OF ELEMENT ON COUNTING DATE*
H-3	Irradiated	1/ 5/62	138 ± 10	97 ± 7
H-3	Non-irradiated	3/15/61	196 ± 10	195 ± 11
C-14	Irradiated	2/26/62	22 ± 2	15 ± 1
C-14	Non-irradiated	3/10/61	21 ± 1	18 ± 1
P-32	Irradiated	11/22/61	0 ± 0.1	(0 ± 1)
P-32	Non-irradiated	2/23/61	0.3 ± 0.1	(4 ± 1)
P-33	Irradiated	11/22/61	0 ± 0.1	(0 ± 10)
P-33	Non-irradiated	2/23/61	0.3 ± 0.1	(40 ± 10)
S-35	Irradiated	12/14/61	0.2 ± 0.1	(0 ± 100)
S-35	Non-irradiated	2/20/61	0.3 ± 0.1	(300 ± 100)
Ca-45	Irradiated	1/ 2/62	0.1 ± 0.1	(10 ± 10)
Ca-45	Non-irradiated	5/11/61	0.3 ± 0.1	(27 ± 9)
Sr-89	Irradiated	1/ 3/62	0.4 ± 0.1	(5 ± 1)
Sr-89	Non-irradiated	6/20/61	0.1 ± 0.1	(2.5 ± 2.5)
Sr-90	Irradiated	1/ 3/62	4.5 ± 0.2	22 ± 1
Sr-90	Non-irradiated	6/20/61	3.1 ± 0.2	27 ± 2

*Values in parentheses are the upper bounds of isotopes. These could not be conclusively identified. All errors indicated are one standard deviation. Sr⁸⁹ and Sr⁹⁰ results are based on per gram of calcium.

3. RADIOACTIVITY IN Co⁶⁰ IRRADIATED CHICKEN3.1 GAMMA ANALYSIS

Fifteen #10 cans of Co⁶⁰ irradiated chicken were received and counted for 900 minutes on December 7, 1961, at 23.73 and 5.94 Kev/Channel energy scales. The resulting spectra and data obtained, along with spectra from non-irradiated chicken, are shown in Figures 6 and 7 and Tables VI and VII.

TABLE VI

GROUP COMPARISON DATA
23.73 Kev/Channel

Group	Co ⁶⁰ Irrad. Chicken Gross CPM	Control Chicken Gross CPM	Burden Net CPM
III	275.515 ± 1.106	286.764 ± 1.128	-11.249 ± 0.23
IV	162.326 ± 0.848	166.135 ± 0.858	-3.809 ± 0.13
V	122.676 ± 0.738	126.583 ± 0.752	-3.907 ± 0.13
VI	234.027 ± 1.020	235.713 ± 1.024	-1.686 ± 0.09
VII	27.780 ± 0.352	31.359 ± 0.374	-3.579 ± 0.13
VIII	18.972 ± 0.290	19.174 ± 0.290	-0.202 ± 0.00
IX	18.013 ± 0.282	17.880 ± 0.282	+0.133 ± 0.00
X	11.955 ± 0.228	11.660 ± 0.228	+0.295 ± 0.00
\sum_{III}^X	870.564 ± 1.966	895.268 ± 1.994	-24.704 ± 0.328

TABLE VII

GROUP COMPARISON DATA
5.94 Kev/Channel

Group	Co ⁶⁰ Irrad. Chicken Gross CPM	Control Chicken Gross CPM	Burden Net CPM
III	255.268 ± 1.430	239.095 ± 1.546	16.173 ± 0.380
IV	187.900 ± 1.226	176.447 ± 1.328	11.453 ± 0.316
V	142.644 ± 1.068	131.850 ± 1.150	10.794 ± 0.310
VI	99.680 ± 0.892	94.205 ± 0.992	5.475 ± 0.220
VII	89.836 ± 0.848	87.800 ± 0.938	2.036 ± 0.142
VIII	74.988 ± 0.774	70.548 ± 0.840	4.440 ± 0.200
IX	74.848 ± 0.774	70.113 ± 0.836	4.735 ± 0.210
X	58.226 ± 0.682	55.321 ± 0.744	2.945 ± 0.168
\sum_{III}^X	983.390 ± 2.804	925.379 ± 3.042	58.011 ± 0.718

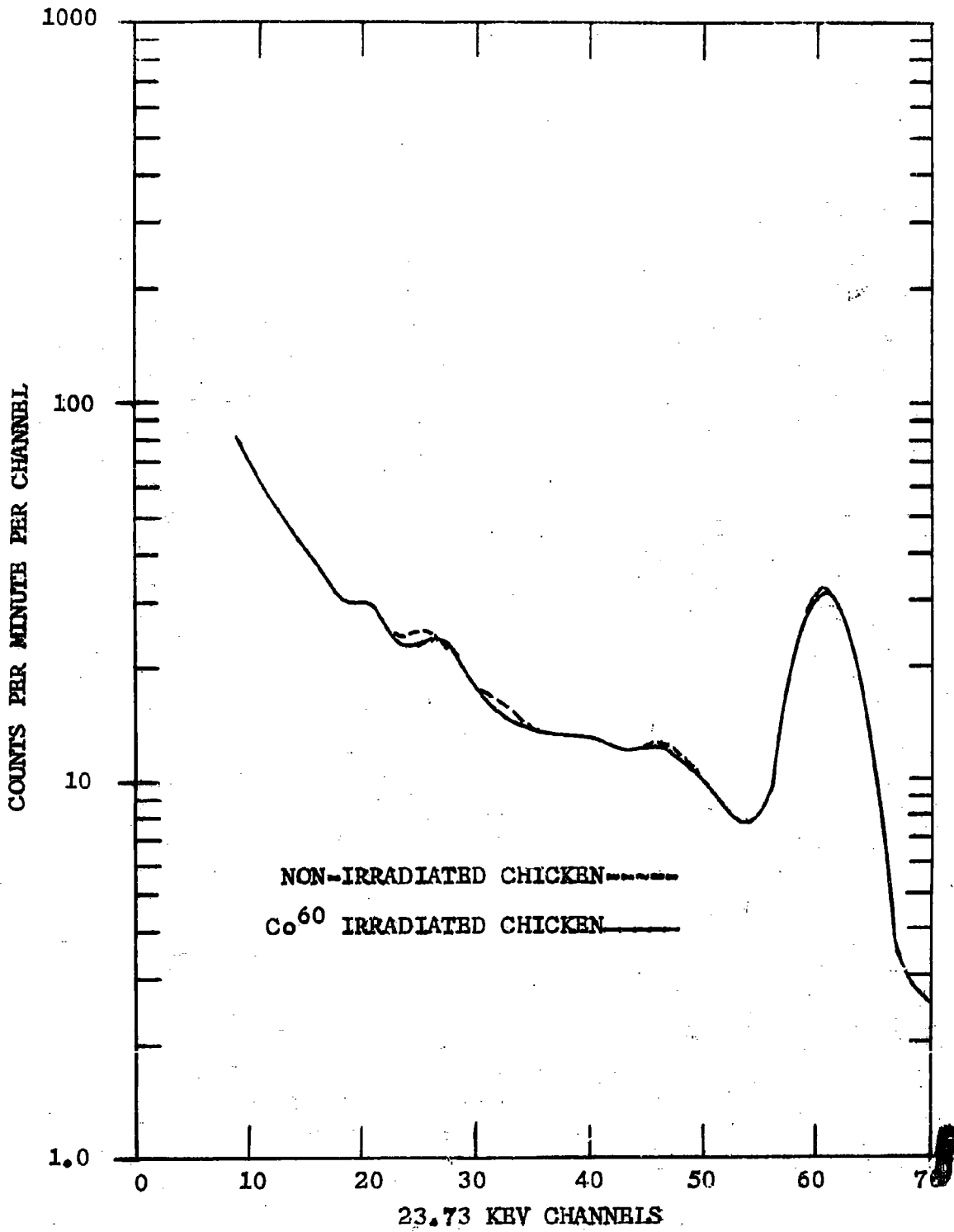


FIGURE 6

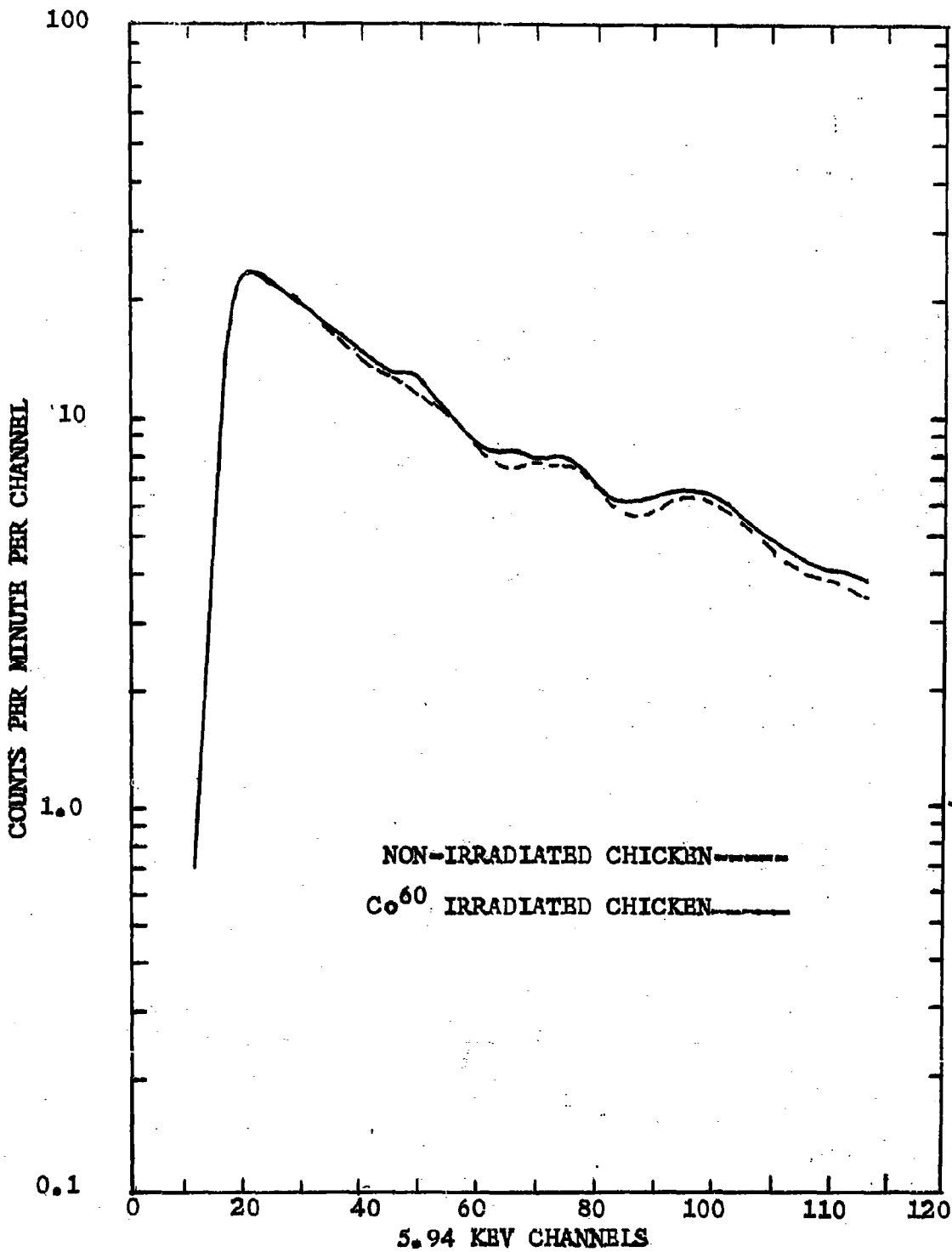


FIGURE 7

me-16

3.2 BETA ANALYSIS OF Co⁶⁰ IRRADIATED CHICKEN

ISOTOPE INVESTI- GATED	IRRADIATED OR NON-IRRADIATED	COUNTING DATE	NET CPM OBSERVED	DPM/GRAM OF ELEMENT ON COUNTING DATE*
H-3	Irradiated	1/ 4/62	132 ± 10	61 ± 5
H-3	Non-irradiated	3/20/61	239 ± 13	97 ± 5
C-14	Irradiated	2/22/62	23 ± 3	21 ± 1
C-14	Non-irradiated	3/ 2/61	17 ± 1	16 ± 1
P-32	Irradiated	12/11/61	0 ± 0.1	(0 ± 1)
P-32	Non-irradiated	2/23/61	0.3 ± 0.1	(4 ± 1)
P-33	Irradiated	12/11/61	0 ± 0.1	(0 ± 10)
P-33	Non-irradiated	2/23/61	0.3 ± 0.1	(40 ± 10)
S-35	Irradiated	12/28/61	0.1 ± 0.1	(100 ± 100)
S-35	Non-irradiated	2/20/61	0.1 ± 0.1	(100 ± 100)
Ca-45	Irradiated	1/ 5/62	0.1 ± 0.1	(10 ± 10)
Ca-45	Non-irradiated	5/11/61	0 ± 0.1	(0 ± 9)
Sr-89	Irradiated	1/ 8/62	0 ± 0.1	(0 ± 1)
Sr-89	Non-irradiated	6/13/61	0.2 ± 0.2	(4 ± 4)
Sr-90	Irradiated	1/ 8/62	0 ± 0.1	(0 ± 0.4)
Sr-90	Non-irradiated	6/13/61	0.8 ± 0.4	6 ± 3

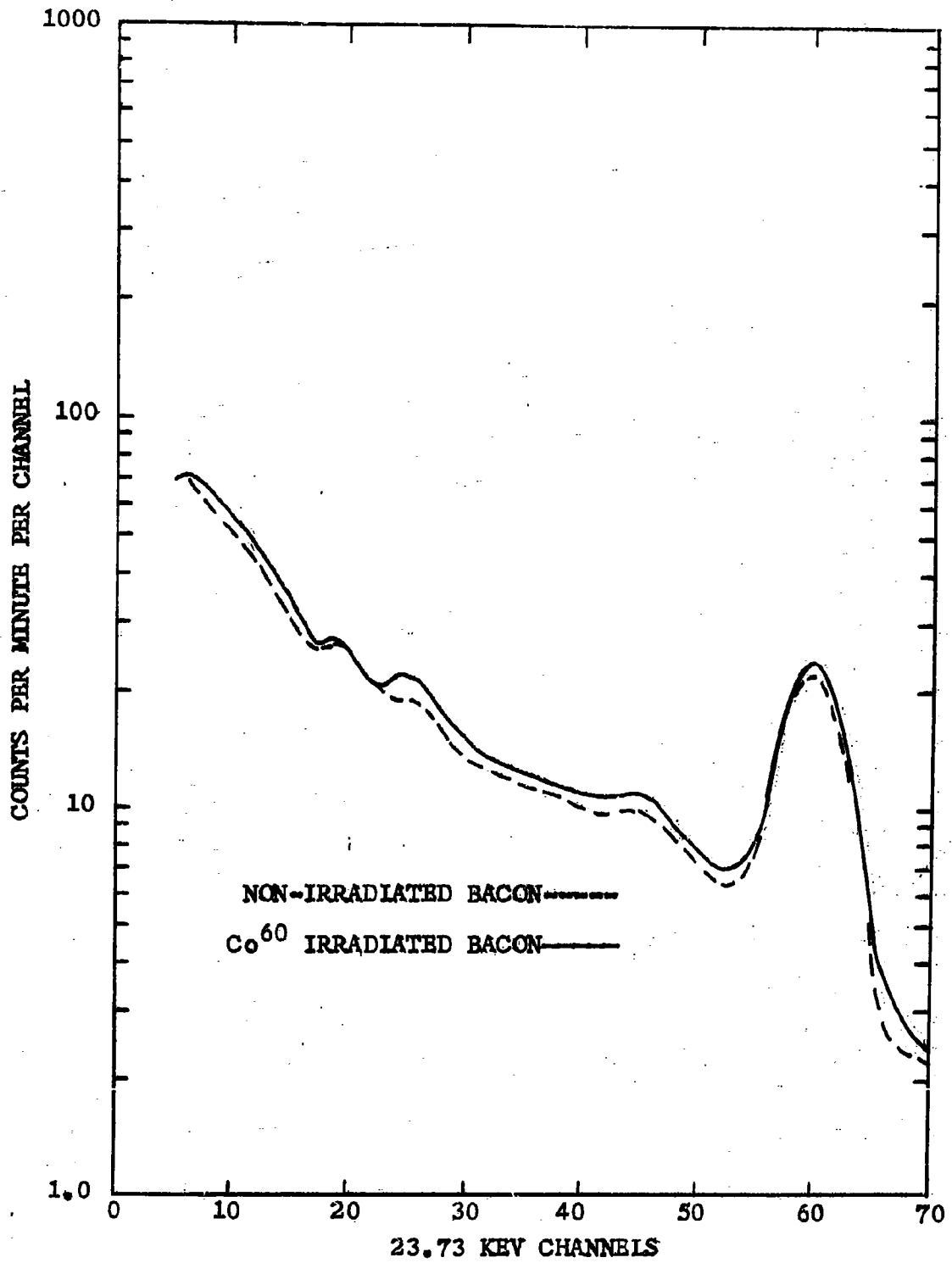
* Values in parentheses are the upper bounds of isotopes. These could not be conclusively identified. All errors indicated are one standard deviation. Sr⁸⁹ and Sr⁹⁰ results are based on per gram of calcium.

4. RADIOACTIVITY IN Co⁶⁰ IRRADIATED BACON

4.1 GAMMA ANALYSIS

A shipment consisting of fifteen #10 cans of Co⁶⁰ irradiated bacon was received at the Vanderbilt facility on November 22, 1961. This was counted for a period of 900 minutes on November 22, and again on November 27. A control sample of non-irradiated bacon was counted on November 29, 1961. Figures 8 and 9 show the resulting spectra on these runs. An energy-group comparison of the data is shown in Tables VIII and IX.

On December 1, 1961, the samples were again counted for a period of 600 minutes, but with the lower energy scale of 5.93 Kev/channel. The resulting spectra and data are shown in Figure 10 and Table XI.



23.73 KEV CHANNELS

FIGURE 8

72-19

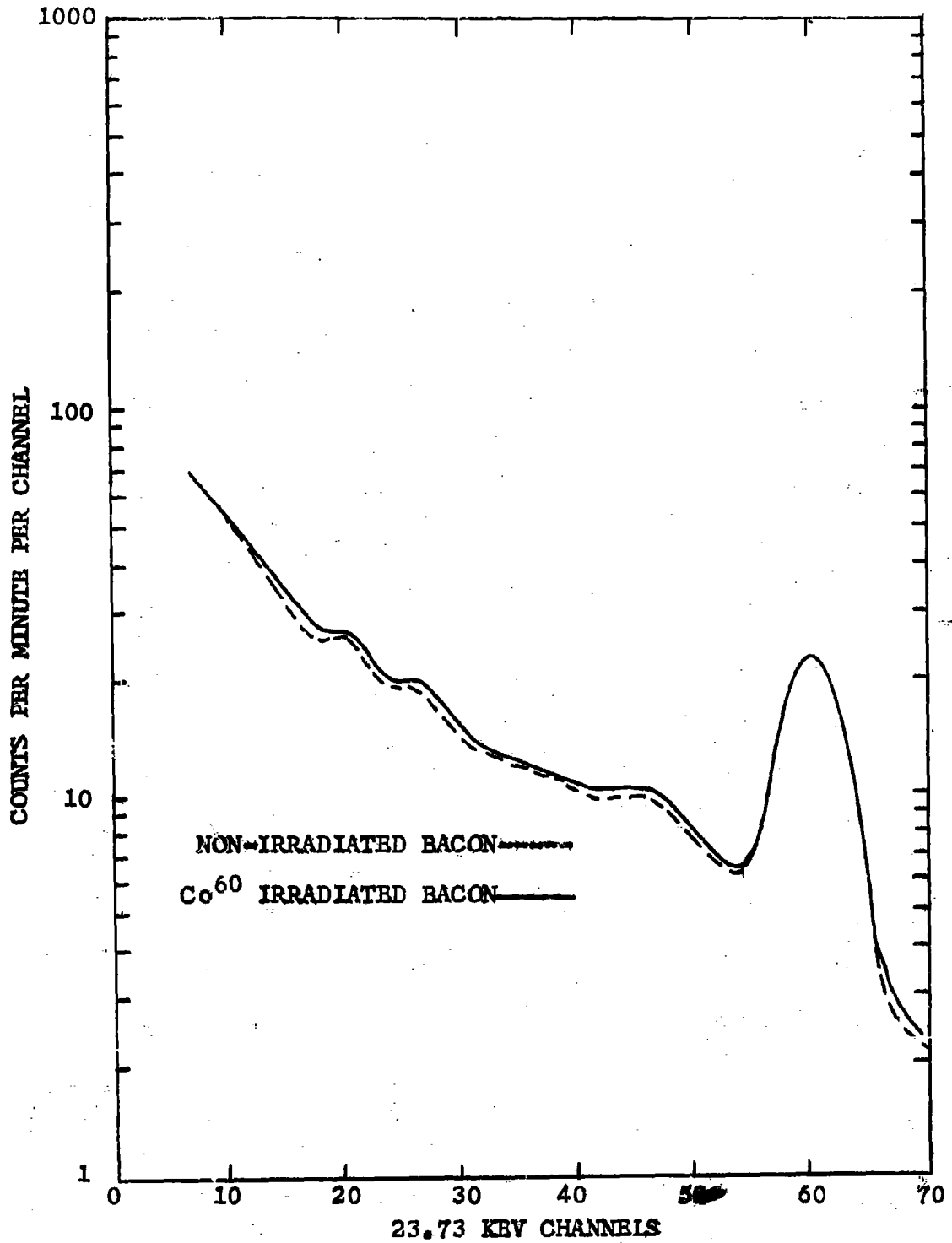


FIGURE 9

ML-20

TABLE VIII

Co⁶⁰ IRRADIATED BACON
 GROUP COMPARISON (23.73 Key/Channel)
 T = 0 (11/22/61)

Group	Irradiated Bacon Gross CPM	Control Bacon Gross CPM	Burden Net CPM
III	241.338 ± 1.04	233.954 ± 1.02	7.384 ± 1.45
IV	140.543 ± 0.79	135.393 ± 0.77	5.150 ± 0.93
V	104.297 ± 0.68	97.997 ± 0.66	6.30 ± 0.95
VI	167.008 ± 0.86	163.319 ± 0.86	3.689 ± 1.21
VII	29.061 ± 0.36	27.587 ± 0.36	1.474 ± 0.50
VIII	20.374 ± 0.30	19.144 ± 0.30	1.230 ± 0.40
IX	17.613 ± 0.28	17.858 ± 0.28	-0.245 ± 0.40
X	12.302 ± 0.24	12.182 ± 0.26	0.120 ± 0.33

TABLE IX

Co⁶⁰ IRRADIATED BACON
 GROUP COMPARISON (23.73 Key/Channel)
 T = 117.2 Hours (11/27/61)

Group	Irradiated Bacon Gross CPM	Control Bacon Gross CPM	Burden Net CPM
III	235.212 ± 1.02	233.954 ± 1.02	1.258 ± 1.45
IV	137.413 ± 0.78	135.393 ± 0.77	2.020 ± 1.11
V	100.326 ± 0.66	97.997 ± 0.66	2.329 ± 0.95
VI	164.768 ± 0.86	163.319 ± 0.86	1.449 ± 1.21
VII	26.877 ± 0.34	27.587 ± 0.36	-0.710 ± 0.50
VIII	19.640 ± 0.28	19.144 ± 0.30	0.496 ± 0.42
IX	17.218 ± 0.28	17.858 ± 0.28	-0.640 ± 0.40
X	12.174 ± 0.24	12.182 ± 0.26	-0.008 ± 0.33

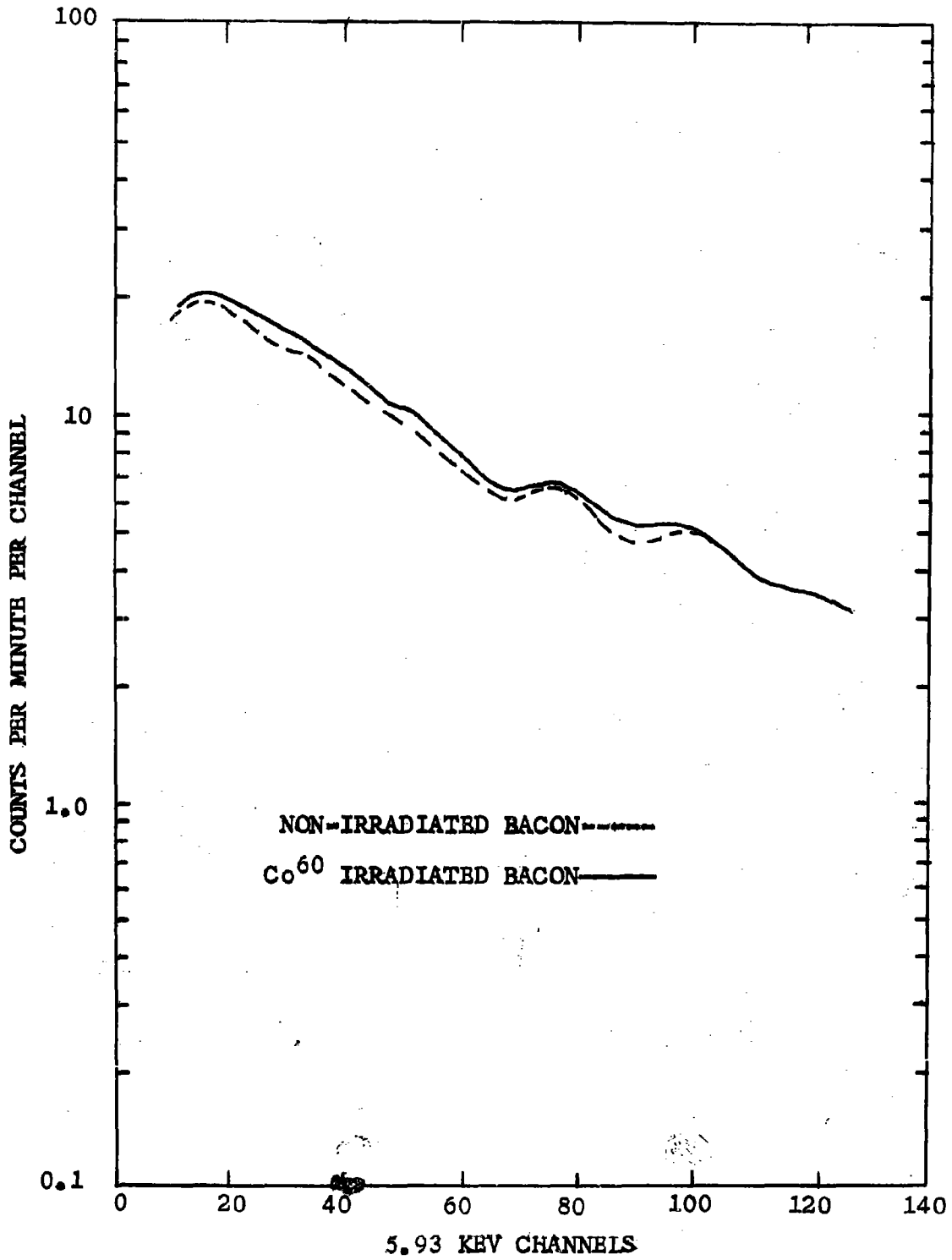


FIGURE 10

710-22

TABLE XI
 Co^{60} IRRADIATED BACON
 GROUP COMPARISON (5.93 Kev/Channel)

Group	Irradiated Bacon Gross CPM	Control Bacon Gross CPM	Burden Net CPM
III	215.501 ± 1.20	198.052 ± 1.14	17.449 ± 1.66
IV	168.964 ± 1.06	156.546 ± 1.02	12.418 ± 1.47
V	125.459 ± 0.92	116.664 ± 0.88	8.795 ± 1.27
VI	87.954 ± 0.76	84.044 ± 0.74	3.910 ± 1.07
VII	80.705 ± 0.74	77.333 ± 0.72	3.372 ± 1.02
VIII	67.156 ± 0.68	64.305 ± 0.66	2.851 ± 0.94
IX	62.872 ± 0.64	57.788 ± 0.62	5.084 ± 0.89
X	49.710 ± 0.58	49.698 ± 0.58	0.012 ± 0.82
X III	858.321 ± 1.95	804.430 ± 0.89	53.891 ± 2.72

4.2 BETA ANALYSIS OF Co⁶⁰ IRRADIATED BACON

ISOTOPE INVESTI- GATED	IRRADIATED OR NON-IRRADIATED	COUNTING DATE	NET CPM OBSERVED	DPM/GRAM OF ELEMENT ON COUNTING DATE*
H-3	Irradiated	12/29/61	32 ± 5	61 ± 8
H-3	Non-irradiated	1/ 3/62	100 ± 8	83 ± 7
C-14	Irradiated	1/ 8/62	24.2 ± 1.2	23 ± 1
C-14	Non-irradiated	1/10/62	21.3 ± 1.2	19 ± 2
P-32	Irradiated	11/30/61	0.6 ± 0.1	12 ± 2
P-32	Non-irradiated	11/21/61	0.2 ± 0.1	(3 ± 1)
P-33	Irradiated	11/30/61	0.6 ± 0.1	(80 ± 10)
P-33	Non-irradiated	11/21/61	0.2 ± 0.1	(30 ± 10)
S-35	Irradiated	12/18/61	0.5 ± 0.1	(500 ± 100)
S-35	Non-irradiated	12/15/61	0.7 ± 0.1	(700 ± 100)
Ca-45	Irradiated	12/27/61	0 ± 0.1	(0 ± 10)
Ca-45	Non-irradiated	12/22/61	0.1 ± 0.1	(20 ± 20)
Sr-89	Irradiated	12/20/61	0.1 ± 0.1	(2 ± 2)
Sr-89	Non-irradiated	12/19/61	0.1 ± 0.1	(4 ± 4)
Sr-90	Irradiated	12/20/61	0.1 ± 0.1	(1 ± 1)
Sr-90	Non-irradiated	12/19/61	0.2 ± 0.1	(2 ± 1)

* Values in parentheses are the upper bounds of isotopes. These could not be conclusively identified. All errors indicated are one standard deviation. Sr⁸⁹ and Sr⁹⁰ results are based on per gram of calcium.

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(END)

4.2 BETA ANALYSIS OF Co⁶⁰ IRRADIATED BACON

ISOTOPE INVESTIGATED	IRRADIATED OR NON-IRRADIATED	COUNTING DATE	NET CPM OBSERVED	DPM/GRAM OF ELEMENT ON COUNTING DATE*
H-3	Irradiated	12/29/61	32 ± 5	61 ± 8
H-3	Non-irradiated	1/ 3/62	100 ± 8	83 ± 7
C-14	Irradiated	1/ 8/62	24.2 ± 1.2	23 ± 1
C-14	Non-irradiated	1/10/62	21.3 ± 1.2	19 ± 2
P-32	Irradiated	11/30/61	0.6 ± 0.1	12 ± 2
P-32	Non-irradiated	11/21/61	0.2 ± 0.1	(3 ± 1)
P-33	Irradiated	11/30/61	0.6 ± 0.1	(80 ± 10)
P-33	Non-irradiated	11/21/61	0.2 ± 0.1	(30 ± 10)
S-35	Irradiated	12/18/61	0.5 ± 0.1	(500 ± 100)
S-35	Non-irradiated	12/15/61	0.7 ± 0.1	(700 ± 100)
Ca-45	Irradiated	12/27/61	0 ± 0.1	(0 ± 10)
Ca-45	Non-irradiated	12/22/61	0.1 ± 0.1	(20 ± 20)
Sr-89	Irradiated	12/20/61	0.1 ± 0.1	(2 ± 2)
Sr-89	Non-irradiated	12/19/61	0.1 ± 0.1	(4 ± 4)
Sr-90	Irradiated	12/20/61	0.1 ± 0.1	(1 ± 1)
Sr-90	Non-irradiated	12/19/61	0.2 ± 0.1	(2 ± 1)

* Values in parentheses are the upper bounds of isotopes. These could not be conclusively identified. All errors indicated are one standard deviation. Sr⁸⁹ and Sr⁹⁰ results are based on per gram of calcium.

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