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SUBJECT: SPECTROGRAPHIC ANALYSIS OF NORMAL HUMAN TISSUE FROM DALLAS, TEXAS

TO: K. Z. Morgan

FROM: I. H. Tipton, M. J. Cook, R. L. Steiner, J. M. Foland,
K. K. McDaniel, and S. D. Fentress

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Spectrographic Analysis of Normal Human Tissue from Dallas, Texas

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All tissues included in this report were received from Dallas, Texas and were collected, ashed and analyzed according to the methods described in ORNL-CF-57-2-2.

The average value of the concentration for each element in a tissue is the average of the concentrations in only those samples of the tissue which contained the element. For example, if, of 25 livers analyzed, only 10 contained lead, the average for lead in liver is the average of those 10 values.

For those tissues in which an element does not appear in every sample, the lowest value is reported as less than the limit of sensitivity of the method for that element in that tissue.

For the elements, lithium and rubidium, the ash was a composited ash sample for each particular tissue. As an example, in lieu of analyzing 20 individual aortas, only one composited aorta ash was analyzed.

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Table 1

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Aorta (20 Samples Analyzed)

<u>1.5%</u>	Average Ash	<u>35%</u>	Average Dry Weight
<u>4.5%</u>	Highest Ash	<u>55%</u>	Highest Dry Weight
<u>0.90%</u>	Lowest Ash	<u>26%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	20		1.3	6.3	0.14
Barium	19		0.13	0.32	<0.003
Bismuth					
Boron		1*	<0.11*	<0.11*	<0.09
Cadmium					
Calcium	20		780	2250	170
Cesium					
Chromium	14	4*	0.051	0.09	<0.001
Cobalt	1	1*	0.22	0.22	<0.04
Copper	20		1.5	2.7	0.7
Gallium					
Gold	11		0.80	1.5	<0.10
Iron	20		38	54	22
Lead	20		2.8	12	0.13
Magnesium	20		220	990	86
Manganese	20		0.10	0.19	0.02
Molybdenum					
Nickel	7	2*	0.24	0.46	<0.10
Phosphorus	20		1200	5100	500
Potassium	20		1300	2000	590
Silver	10	4*	0.012	0.03	<0.001
Selenium	20		0.78	2.2	0.22
Tin	13	4*	0.94	6.1	<0.09
Titanium	12		0.37	0.72	<0.10
Vanadium					
Zinc	20		24	68	14

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium, and Zirconium were sought in every sample but were not detected.

Table 2

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue: Bone (22 Samples Analyzed)

<u>15.6%</u>	Average Ash
<u>23 %</u>	Highest Ash
<u>8.2%</u>	Lowest Ash

Elements	Number of Samples Containing Element	Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum				
Barium	22	1.6	4.5	0.6
Bismuth				
Boron				
Cadmium		Not Determined		
Calcium	22	23,000	36,000	9,000
Cesium				
Chromium				
Cobalt				
Copper	22	0.52	0.95	0.32
Gallium				
Gold				
Iron	22	120	290	33
Lead	22	7.6	45	0.8
Lithium	22	0.0032	0.0086	0.0014
Magnesium	22	800	1200	400
Manganese				
Molybdenum				
Nickel				
Phosphorus		Not Determined		
Potassium	22	890	2200	400
Silver				
Sodium	22	1450	3700	650
Strontium	22	14	24	7
Tin	4	1.9	3.4	<1.2
Titanium				
Vanadium				
Zinc	22	53	88	20

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Table 3

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Brain (25 Samples Analyzed)

<u>1.6%</u>	Average Ash	<u>25%</u>	Average Dry Weight
<u>2.3%</u>	Highest Ash	<u>38%</u>	Highest Dry Weight
<u>1.3%</u>	Lowest Ash	<u>18%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	25		0.23	0.44	0.10
Barium	4	2*	0.025	0.05	<0.006
Bismuth					
Boron	3	1*	0.30	0.40	<0.09
Cadmium					
Calcium	25		98	180	45
Cesium					
Chromium	10	3*	0.015	0.04	<0.002
Cobalt	1		0.09	0.09	<0.04
Copper	25		5.3	7.8	3.9
Gallium					
Gold					
Iron	25		50	60	21
Lead	8	7*	0.30	1.5	<0.06
Magnesium	25		140	230	72
Manganese	25		0.26	0.54	0.12
Molybdenum					
Nickel	1	1*	0.18	0.18	<0.06
Phosphorus	25		3100	3700	2100
Potassium	25		3100	4400	2000
Silver	22	1*	0.016	0.17	<0.002
Strontium	24	1*	0.03	0.26	<0.007*
Tin	4		0.80	1.7	<0.06
Titanium	1	3*	0.48	0.48	<0.13
Vanadium					
Zinc	25		12	19	10

* * Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Breast (3 Samples Analyzed)

<u>0.38%</u>	Average Ash	<u>73%</u>	Average Dry Weight
<u>0.80%</u>	Highest Ash	<u>88%</u>	Highest Dry Weight
<u>0.14%</u>	Lowest Ash	<u>50%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element	Average Value for Samples Containing Element ($\mu\text{g/g}$)	Highest Value ($\mu\text{g/g}$)	Lowest Value ($\mu\text{g/g}$)
Aluminum	3	0.59	1.7	0.07
Barium	2	0.034	0.067	<0.0004
Bismuth				
Boron				
Cadmium				
Calcium	3	48	105	26
Cesium				
Chromium	3	0.019	0.01	0.006
Cobalt	1	0.02	0.02	<0.008
Copper	3	0.41	0.77	0.15
Gallium				
Gold	1	0.44	0.44	<0.04
Iron	3	2.3	8	1.8
Lead	2	0.06	0.11	<0.005
Magnesium	3	16	24	7.4
Manganese	3	0.02	0.03	0.01
Molybdenum				
Nickel				
Phosphorus	3	127	160	82
Potassium	3	340	550	160
Silver	1	0.001	0.001	<0.0001
Strontium	3	0.03	0.07	<0.01
Tin	1	1.5	1.5	<0.005
Titanium	2	0.03	0.03	<0.02
Vanadium				
Zinc	3	1.8	3.2	1.1

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Esophagus (14 Samples Analyzed)

<u>0.94%</u>	Average Ash	<u>24%</u>	Average Dry Weight
<u>1.2%</u>	Highest Ash	<u>33%</u>	Highest Dry Weight
<u>0.6%</u>	Lowest Ash	<u>17%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	14		0.67	2.6	0.23
Barium	13	1*	0.05	0.37	<0.003*
Bismuth					
Boron					
Cadmium					
Calcium	14		110	220	72
Cesium					
Chromium	14		0.05	0.21	0.01
Cobalt		1*	<0.02*	<0.02*	<0.02
Copper	14		1.0	1.4	0.74
Gallium					
Gold	7		0.18	0.48	<0.08
Iron	14		30	57	15
Lead	5	3*	0.11	0.16	<0.03
Magnesium	14		120	210	60
Manganese	14		0.09	0.18	0.04
Molybdenum					
Nickel	3		0.14	0.17	<0.11
Phosphorus	14		870	1050	560
Potassium	14		1750	2400	1170
Silver	5	4*	0.002	0.005	<0.001
Strontium	14		0.08	0.19	0.03
Tin	8	2*	2.1	5.0	<0.03
Titanium	2		0.58	0.60	<0.06
Vanadium					
Zinc	14		22	40	13

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Table 6

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue: Heart(27 Samples Analyzed)

<u>1.1%</u>	Average Ash	<u>25%</u>	Average Dry Weight
<u>1.5%</u>	Highest Ash	<u>36%</u>	Highest Dry Weight
<u>0.8%</u>	Lowest Ash	<u>19%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element		Average Value for Samples Containing Element (μg/g)	Highest Value (μg/g)	Lowest Value (μg/g)
Aluminum	27		0.19	0.55	0.05
Barium	6	2*	0.014	0.02	<0.002
Bismuth					
Boron	1	1*	0.17	0.17	<0.09
Cadmium					
Calcium	27		48	106	23
Cesium					
Chromium	20	1*	0.021	0.12	<0.001
Cobalt	7	1*	0.12	0.55	<0.04
Copper	27		3.0	3.8	2.3
Gallium					
Gold					
Iron	27		50	100	27
Lead	4	4*	0.12	0.13	<0.04
Magnesium	27		160	270	53
Manganese	27		0.19	0.45	0.08
Molybdenum					
Nickel	4		0.64	1.2	<0.09
Phosphorus	27		1500	1850	790
Potassium	27		2300	3500	1400
Silver	2	4*	0.012	0.02	<0.001
Strontium	27		0.022	0.06	0.005
Tin	8	1*	0.79	1.9	<0.04
Titanium	1		0.32	0.32	<0.09
Vanadium					
Zinc	27		24	35	15

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium, and Zirconium were sought in every sample but were not detected.

Table 7

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Intestine-Jejunum (20 Samples Analyzed)

<u>1.0%</u>	Average Ash	<u>24%</u>	Average Dry Weight
<u>1.3%</u>	Highest Ash	<u>32%</u>	Highest Dry Weight
<u>0.9%</u>	Lowest Ash	<u>17%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element	Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	20	0.47	1.4	0.11
Barium	18	1* 0.035	0.10	<0.002
Bismuth	4	0.24	0.45	<0.03
Boron	1	1* 0.26	0.26	<0.06
Cadmium	2	7* 0.98	1.0	<0.5
Calcium	20	79	160	39
Cesium				
Chromium	18	2* 0.018	0.096	<0.001*
Cobalt		1* <0.05*	<0.05*	<0.03
Copper	20	2.1	4.4	0.9
Gallium				
Gold	6	3* 0.52	1.9	<0.06
Iron	20	29	63	11
Lead	15	3* 0.20	0.72	<0.03
Magnesium	20	130	270	70
Manganese	20	0.65	1.5	0.21
Molybdenum				
Nickel		1* <0.04*	<0.04*	<0.04
Phosphorus	20	1500	3300	720
Potassium	20	1700	3000	900
Silver	9	1* 0.006	0.013	<0.001
Strontium	20	0.14	0.43	0.01
Tin	16	3* 0.7	3.3	<0.03
Titanium		1* <0.11*	<0.11*	<0.06
Vanadium	1	0.02	0.02	<0.01
Zinc	20	22	25	14

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Table 8

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Intestine-Sigmoid Colon (27 Samples Analyzed)

<u>0.72%</u>	Average Ash	<u>29%</u>	Average Dry Weight
<u>1.4%</u>	Highest Ash	<u>74%</u>	Highest Dry Weight
<u>0.2%</u>	Lowest Ash	<u>17%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element	Average Value for Samples Containing Element (μg/g)	Highest Value (μg/g)	Lowest Value (μg/g)
Aluminum	27	1.4	8.4	0.16
Barium	27	0.15	1.5	0.01
Bismuth	2	0.69	1.4	<0.01
Boron	1	2* 0.11	0.11	<0.02
Cadmium	1	3* 0.6	0.6	<0.18
Calcium	27	140	590	23
Cesium	2	1.0	1.0	0.2
Chromium	27	0.042	0.17	0.003
Cobalt	5	0.15	0.33	<0.01
Copper	27	1.5	4.5	0.44
Gallium				
Gold	9	1* 0.18	0.4	<0.02
Iron	27	24	58	8
Lead	24	1* 0.25	1.5	<0.03
Magnesium	27	220	>1400	60
Manganese	27	0.66	2.2	0.12
Molybdenum				
Nickel	22	0.22	1.0	<0.05
Phosphorus	27	800	1650	280
Potassium	27	1260	2300	340
Silver	17	6* 0.016	0.09	<0.001
Strontium	27	0.33	0.98	0.07
Tin	26	0.86	3.4	<0.03
Titanium	7	3* 0.48	1.5	<0.02
Vanadium	3	3* 0.07	0.14	<0.002
Zinc	27	16	34	6

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Kidney (27 Samples Analyzed)

<u>1.2%</u>	Average Ash	<u>22%</u>	Average Dry Weight
<u>1.7%</u>	Highest Ash	<u>27%</u>	Highest Dry Weight
<u>0.9%</u>	Lowest Ash	<u>17%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	27		0.38	2.1	0.07
Barium	17	2*	0.022	0.12	<0.003
Bismuth	9	2*	0.22	0.53	<0.04
Boron	1	1*	0.48	0.48	<0.09
Cadmium	27		34	77	12
Calcium	27		100	270	50
Cesium					
Chromium	22		0.022	0.13	<0.001
Cobalt		1*	<0.07*	<0.07*	<0.04
Copper	27		2.7	3.6	1.4
Gallium					
Gold	5	1*	0.46	1.1	<0.10
Iron	27		67	120	29
Lead	27		1.4	3.5	0.4
Magnesium	27		130	200	56
Manganese	27		0.89	1.2	0.60
Molybdenum	27		0.43	0.74	0.11
Nickel	1		1.0	1.0	<0.09
Phosphorus	27		1600	2100	1050
Potassium	27		2000	2700	980
Silver	7	12*	0.006	0.02	<0.001
Strontium	27		0.06	0.17	0.02
Tin	19	6*	0.40	2.7	<0.05
Titanium	2		<0.10*	<0.10*	<0.09
Vanadium					
Zinc	27		46	72	28

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Table 10

Concentrations of Elements in Wet Tissue
(Arranged by Elements)

Tissue Liver (28 Samples Analyzed)

<u>1.4%</u>	Average Ash	<u>35%</u>	Average Dry Weight
<u>2.6%</u>	Highest Ash	<u>52%</u>	Highest Dry Weight
<u>1.2%</u>	Lowest Ash	<u>25%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	28		0.68	2.1	0.01
Barium	2	3*	0.03	0.04	<0.004
Bismuth	2	1*	0.19	0.20	<0.05
Boron	3	4*	0.29	0.37	<0.13
Cadmium	23	3*	2.7	4.8	<0.7
Calcium	28		64	105	24
Cesium					
Chromium	15	6*	0.023	0.10	<0.001
Cobalt	10	1*	0.14	0.40	<0.05
Copper	28		6.3	13.0	3.5
Gallium					
Gold	1	1*	0.23	0.23	<0.13
Iron	28		170	410	36
Lead	28		2.0	4.2	0.45
Magnesium	28		150	270	74
Manganese	28		1.4	2.4	0.62
Molybdenum	28		1.0	1.8	0.3
Nickel	2		0.21	0.21	<0.13
Phosphorus	28		2500	3400	1800
Potassium	28		2700	4000	1800
Silver	27	1*	0.0041	0.02	<0.003*
Strontium	27		0.026	0.19	<0.007
Tin	23	3*	0.37	1.4	<0.07
Titanium					
Vanadium	2		0.04	0.04	<0.01
Zinc	28		44	83	20

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Concentrations of Elements in Wet Tissue
(Arranged by Elements)

Tissue Lung (28 Samples Analyzed)

<u>1.1%</u>	Average Ash	<u>22%</u>	Average Dry Weight
<u>1.3%</u>	Highest Ash	<u>29%</u>	Highest Dry Weight
<u>0.5%</u>	Lowest Ash	<u>16%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element	Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	28	19	43	4.6
Barium	28	0.16	0.56	0.02
Bismuth				
Boron	4	2*	0.26	<0.05
Cadmium	9	6*	1.5	<0.35
Calcium	28	130	260	46
Cesium				
Chromium	28	0.11	0.6	0.005
Cobalt	2	0.12	0.19	<0.02
Copper	28	1.2	1.6	0.8
Gallium		2*	<0.01*	<0.01
Gold				
Iron	28	310	700	60
Lead	28	0.67	1.8	0.07
Magnesium	28	95	150	42
Manganese	28	0.16	0.25	0.08
Molybdenum				
Nickel	4	1*	0.52	<0.05
Phosphorus	28	1100	1700	530
Potassium	28	1900	2500	930
Silver	9	9*	0.012	<0.001
Strontium	28	0.09	0.27	0.03
Tin	26	1*	2.4	<0.05
Titanium	28	2.6	5.8	0.20
Vanadium	8	3*	0.12	<0.01
Zinc	28	14	24	7.2

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Muscle-Pectoral (14 Samples Analyzed)

<u>1.3%</u>	Average Ash	<u>27%</u>	Average Dry Weight
<u>2.8%</u>	Highest Ash	<u>30%</u>	Highest Dry Weight
<u>1.0%</u>	Lowest Ash	<u>18%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	14		0.21	0.60	0.10
Barium	3	1*	0.037	0.07	<0.003
Bismuth					
Boron	1		0.3	0.3	<0.10
Cadmium					
Calcium	14		33	70	14
Cesium					
Chromium	12		0.007	0.019	<0.001
Cobalt					
Copper	14		0.70	0.95	0.43
Gallium					
Gold		1*	<0.11*	<0.11*	<0.10
Iron	14		28	39	23
Lead	3	5*	0.41	0.73	<0.05
Magnesium	14		160	230	74
Manganese	14		0.04	0.06	0.01
Molybdenum					
Nickel	2		0.08	0.08	<0.08
Phosphorus	14		1500	1900	1100
Potassium	14		2900	4500	2000
Silver	1	2*	0.004	0.004	<0.001
Strontium	12	2*	0.013	0.08	<0.002*
Tin	2		1.7	1.8	<0.05
Titanium					
Vanadium					
Zinc	14		48	61	35

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Muscle - Psoas (24 Samples Analyzed)

<u>1.4%</u>	Average Ash	<u>28%</u>	Average Dry Weight
<u>2.3%</u>	Highest Ash	<u>42%</u>	Highest Dry Weight
<u>0.8%</u>	Lowest Ash	<u>24%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element	Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	24	0.24	1.0	0.05
Barium	5	0.032	0.07	<0.002
Bismuth				
Boron	1	0.31	0.31	<0.08
Cadmium				
Calcium	24	39	69	21
Cesium				
Chromium	18	0.041	0.187	<0.001
Cobalt				
Copper	24	0.86	1.5	0.48
Gallium				
Gold	1	0.11	0.11	<0.08
Iron	24	38	77	21
Lead	1	0.62	0.62	<0.04
Magnesium	24	190	280	110
Manganese	23	0.05	0.10	<0.02
Molybdenum				
Nickel	4	0.17	0.26	<0.08
Phosphorus	24	1700	3200	1100
Potassium	24	3200	5700	1800
Silver	1	0.005	0.005	<0.001
Strontium	22	0.023	0.09	<0.002*
Tin	2	1.8	1.8	<0.04
Titanium	1	0.12	0.12	<0.08
Vanadium				
Zinc	24	50	84	33

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Table 14

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Ovary (3 Samples Analyzed)

<u>1.0%</u>	Average Ash	<u>19%</u>	Average Dry Weight
<u>1.1%</u>	Highest Ash	<u>21%</u>	Highest Dry Weight
<u>0.9%</u>	Lowest Ash	<u>17%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element	Average Value for Samples Containing Element (μg/g)	Highest Value (μg/g)	Lowest Value (μg/g)
Aluminum	3	1.0	2.2	0.58
Barium	2	0.025	0.03	<0.003
Bismuth				
Boron				
Cadmium				
Calcium	3	87	105	65
Cesium				
Chromium	3	0.012	0.02	0.006
Cobalt				
Copper	3	1.2	1.3	1.1
Gallium				
Gold	1	1*	0.33	<0.09
Iron	3	35	46	24
Lead	1	0.05	0.05	<0.05
Magnesium	3	90	110	76
Manganese	3	0.11	0.13	0.10
Molybdenum				
Nickel				
Phosphorus	3	1100	1300	800
Potassium	3	1600	1800	1300
Silver				
Strontium	3	0.16	0.20	0.11
Tin	1	1*	4.6	<0.05
Titanium	1	1*	0.14	<0.09
Vanadium				
Zinc	3	10	14	7

* Trace

- Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Pancreas (26 Samples Analyzed)

<u>1.3%</u>	Average Ash	<u>31%</u>	Average Dry Weight
<u>2.0%</u>	Highest Ash	<u>70%</u>	Highest Dry Weight
<u>0.7%</u>	Lowest Ash	<u>22%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element	Average Value for Samples Containing Element (μg/g)	Highest Value (μg/g)	Lowest Value (μg/g)
Aluminum	26	0.51	6.2	0.07
Barium	15	4* 0.04	0.32	<0.001
Bismuth	1	0.05	0.05	<0.03
Boron	2	4* 0.43	0.43	<0.07
Cadmium	15	8* 1.5	3.0	<0.42
Calcium	26	110	250	63
Cesium				
Chromium	26	0.022	0.140	0.002
Cobalt	1	0.13	0.13	<0.03
Copper	26	1.7	3.6	0.7
Gallium				
Gold	1	5* 0.39	0.39	<0.07
Iron	26	44	200	13
Lead	26	0.75	2.2	0.13
Magnesium	26	170	390	66
Manganese	26	1.3	2.0	0.55
Molybdenum	1	0.05	0.05	<0.05
Nickel	2	0.10	0.13	<0.07
Phosphorus	26	2400	3400	1100
Potassium	26	2600	3800	1700
Silver	4	9* 0.004	0.005	<0.001
Strontium	26	0.05	0.14	0.01
Tin	5	5* 1.6	3.4	<0.04
Titanium	2	0.75	0.87	<0.07
Vanadium				
Zinc	26	25	35	13

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Table 16

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Prostate (15 Samples Analyzed)

<u>1.2%</u>	Average Ash	<u>25%</u>	Average Dry Weight
<u>2.0%</u>	Highest Ash	<u>44%</u>	Highest Dry Weight
<u>0.7%</u>	Lowest Ash	<u>19%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	15		0.61	3.3	0.08
Barium	12	1*	0.053	0.27	<0.003
Bismuth					
Boron	1	1*	0.72	0.72	<0.07
Cadmium		4*	<0.8*	<1.1*	<0.4
Calcium	15		300	990	135
Cesium					
Chromium	13	1*	0.019	0.09	<0.002
Cobalt	1		0.79	0.79	<0.03
Copper	15		1.2	2.7	0.8
Gallium					
Gold	3	2*	0.64	0.77	<0.07
Iron	15		33	90	15
Lead	11	2*	0.35	0.96	<0.05
Magnesium	15		160	250	80
Manganese	15		0.13	0.20	0.06
Molybdenum					
Nickel	2		0.10	0.10	<0.07
Phosphorus	14		1000	2200	600
Potassium	15		2000	3600	1500
Silver	10	1*	0.018	0.14	<0.001
Strontium	15		0.28	1.5	0.03
Tin	10	2*	0.41	2.1	<0.04
Titanium	2	1*	0.35	0.40	<0.07
Vanadium					
Zinc	15		65	192	25

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Concentrations of Elements in Wet Tissue

(Arranged by Elements)

Tissue Spleen (26 Samples Analyzed)

<u>1.4%</u>	Average Ash	<u>27%</u>	Average Dry Weight
<u>1.8%</u>	Highest Ash	<u>56%</u>	Highest Dry Weight
<u>0.9%</u>	Lowest Ash	<u>21%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	26		1.2	7.2	0.08
Barium	7	2*	0.064	0.26	<0.003
Bismuth		1*	<0.06*	<0.06*	<0.04
Boron	2	1*	0.29	0.31	<0.09
Cadmium		1*	<1.0*	<1.0*	<0.5
Calcium	26		77	144	35
Cesium					
Chromium	16	2*	0.01	0.024	<0.001
Cobalt	1		0.18	0.18	<0.04
Copper	26		1.2	1.6	0.8
Gallium					
Gold		1*	<0.14*	<0.14*	<0.09
Iron	26		390	980	56
Lead	24	1*	0.67	3.6	<0.06
Magnesium	26		140	220	98
Manganese	26		0.10	0.17	0.02
Molybdenum					
Nickel	1		0.49	0.49	<0.09
Phosphorus	26		2100	2700	1600
Potassium	26		3200	4900	1800
Silver	5	8*	0.003	0.004	<0.001
Strontium	26		0.04	0.14	0.01
Tin	17	5*	0.41	2.6	<0.06
Titanium	2		0.67	0.78	<0.09
Vanadium	1		<0.01*	<0.01*	<0.01
Zinc	26		18	24	12

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Stomach (19 Samples Analyzed)

<u>0.87%</u>	Average Ash	<u>25%</u>	Average Dry Weight
<u>1.5%</u>	Highest Ash	<u>34%</u>	Highest Dry Weight
<u>0.5%</u>	Lowest Ash	<u>20%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	19		0.47	2.2	0.11
Barium	16	2*	0.047	0.26	<0.002
Bismuth					
Boron	4	2*	0.39	0.91	<0.05
Cadmium	2	2*	0.42	0.48	<0.35
Calcium	19		110	690	33
Cesium					
Chromium	16	2*	0.013	0.036	<0.001
Cobalt		1*	<0.04*	<0.04*	<0.02
Copper	19		1.6	2.0	1.0
Gallium					
Gold	3	2*	0.23	0.36	<0.05
Iron	19		36	240	14
Lead	13	5*	0.15	0.6	<0.04
Magnesium	19		100	190	37
Manganese	19		0.29	0.54	0.05
Molybdenum					
Nickel					
Phosphorus	19		1200	2000	700
Potassium	19		1700	3000	1000
Silver	12	9*	0.003	0.004	<0.001
Strontium	19		0.12	0.47	0.03
Tin	13	2*	0.35	1.2	<0.03
Titanium	2	2*	0.24	0.36	<0.05
Vanadium	1	1*	0.27	0.27	<0.005
Zinc	19		17	27	9

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium, and Zirconium were sought in every sample but were not detected.

Table 19

21

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Testis (18 Samples Analyzed)

<u>1.1%</u>	Average Ash	<u>17%</u>	Average Dry Weight
<u>1.3%</u>	Highest Ash	<u>24%</u>	Highest Dry Weight
<u>0.9%</u>	Lowest Ash	<u>13%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	18		0.32	0.61	0.15
Barium	10	3*	0.01	0.015	<0.002
Bismuth	2	2*	0.15	0.20	<0.04
Boron					
Cadmium		1*	<0.63*	<0.63*	<0.63
Calcium	18		90	122	58
Cesium					
Chromium	16	1*	0.013	0.024	<0.001
Cobalt	1		0.11	0.11	<0.04
Copper	18		1.3	10	0.58
Gallium					
Gold	4	2*	0.31	0.39	<0.10
Iron	18		33	160	13
Lead	14	3*	0.18	0.59	<0.05
Magnesium	18		106	154	65
Manganese	18		0.13	0.24	0.08
Molybdenum					
Nickel	1	1*	0.20	0.20	<0.05
Phosphorus	18		1200	1800	630
Potassium	18		2000	2800	1250
Silver	4	7*	0.004	0.007	<0.001
Strontium	18		0.06	0.08	0.02
Tin	8	4*	0.46	2.1	<0.05
Titanium	1	2*	0.28	0.28	<0.09
Vanadium					
Zinc	18		14	26	6

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium, and Zirconium were sought in every sample but were not detected.

Table 20

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Trachea (16 Samples Analyzed)

<u>1.7%</u>	Average Ash	<u>33%</u>	Average Dry Weight
<u>2.3%</u>	Highest Ash	<u>61%</u>	Highest Dry Weight
<u>0.9%</u>	Lowest Ash	<u>26%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	16		1.6	8.1	0.26
Barium	15	1*	0.044	0.13	< 0.005*
Bismuth					
Boron	1		0.19	0.19	< 0.09*
Cadmium		1*	< 0.72*	< 0.72*	< 0.6
Calcium	16		510	1200	230
Cesium					
Chromium	16		0.063	0.27	0.01
Cobalt					
Copper	16		1.4	7.2	0.62
Gallium					
Gold	7	1*	1.6	5.1	< 0.11
Iron	16		43	80	24
Lead	14	2*	0.36	0.75	< 0.09*
Magnesium	16		150	210	78
Manganese	16		0.18	0.27	0.10
Molybdenum					
Nickel	2	3*	0.54	0.94	< 0.09
Phosphorus	16		700	850	470
Potassium	16		2400	3400	810
Silver	8	5*	0.045	0.024	< 0.001
Strontium	16		0.29	0.50	0.12
Tin	10	1*	1.0	5.7	< 0.08
Titanium	4		0.47	0.90	< 0.11
Vanadium					
Zinc	16		10	18	4

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Table 21

23

Concentration of Elements in Wet Tissue
(Arranged by Elements)

Tissue Urinary Bladder (19 Samples Analyzed)

<u>0.92%</u>	Average Ash	<u>32%</u>	Average Dry Weight
<u>1.8%</u>	Highest Ash	<u>75%</u>	Highest Dry Weight
<u>0.6%</u>	Lowest Ash	<u>21%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element	Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	19	0.60	5.3	0.10
Barium	15	1*	0.16	<0.003
Bismuth				
Boron	1	2	2	<0.06
Cadmium		1*	<0.5*	<0.5
Calcium	19	114	175	48
Cesium				
Chromium	(1 high) 16	(0.17) 0.025	(2.8) 0.09	<0.001
Cobalt				
Copper	19	1.0	2.9	0.56
Gallium				
Gold	5	1*	0.63	<0.07
Iron	19	25	70	10
Lead	9	5*	0.14	<0.03
Magnesium	19	110	170	54
Manganese	(1 high) 18	0.16 0.10	(1.2) 0.12	0.04
Molybdenum				
Nickel	3	0.08	0.10	<0.07
Phosphorus	19	800	1800	420
Potassium	19	1800	2200	1100
Silver	7	6*	0.004	<0.001
Strontium	19	0.11	0.19	0.04
Tin	9	6*	0.5	<0.03
Titanium	4	0.25	0.35	<0.06
Vanadium				
Zinc	19	21	28	14

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Table 22

Concentration of Elements in Wet Tissue
(Arranged by Elements)

24

Tissue Uterus (7 Samples Analyzed)

<u>1.0%</u>	Average Ash	<u>22%</u>	Average Dry Weight
<u>1.2%</u>	Highest Ash	<u>30%</u>	Highest Dry Weight
<u>0.9%</u>	Lowest Ash	<u>20%</u>	Lowest Dry Weight

Elements	Number of Samples Containing Element	Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aluminum	7	0.47	0.85	0.34
Barium	6	0.024	0.066	<0.003
Bismuth	1	0.08	0.08	<0.04
Boron	1*	<0.09*	<0.09*	<0.09
Cadmium				
Calcium	7	130	380	70
Cesium				
Chromium	6	0.014	0.03	<0.001
Cobalt				
Copper	7	0.93	1.3	0.70
Gallium				
Gold				
Iron	7	27	56	15
Lead	3	1*	0.06	<0.05
Magnesium	7	100	140	80
Manganese	6	1*	0.10	<0.02*
Molybdenum				
Nickel				
Phosphorus	7	1100	1350	780
Potassium	7	1900	2700	1300
Silver	1	1*	0.001	<0.001
Strontium	7	0.10	0.25	0.03
Tin	6	0.11	0.18	<0.05
Titanium				
Vanadium				
Zinc	7	20	28	13

* Trace

Antimony, Arsenic, Beryllium, Lanthanum, Niobium, Ruthenium, Thallium and Zirconium were sought in every sample but were not detected.

Concentrations of Elements in Wet Tissue
(Arranged by Tissue)

Element: Aluminum

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	20	(20)	1.3	6.3	0.14
Bone		(22)			
Brain	25	(25)	0.23	0.44	0.10
Breast	3	(3)	0.59	1.7	0.07
Esophagus	14	(14)	0.67	2.6	0.23
Heart	27	(27)	0.19	0.55	0.05
Intestine					
Jejunum	20	(20)	0.47	1.4	0.11
Sigmoid colon	27	(27)	1.4	8.4	0.16
Kidney	27	(27)	0.38	2.1	0.07
Liver	28	(28)	0.68	2.1	0.01
Lung	28	(28)	190	43	4.6
Muscle					
Pectoral	14	(14)	0.21	0.60	0.10
Psoas	24	(24)	0.24	1.0	0.05
Ovary	3	(3)	1.0	2.2	0.58
Pancreas	26	(26)	0.51	6.2	0.07
Prostate	15	(15)	0.61	3.3	0.08
Spleen	26	(26)	1.2	7.2	0.08
Stomach	19	(19)	0.47	2.2	0.11
Testis	18	(18)	0.32	0.61	0.15
Trachea	16	(16)	1.6	8.1	0.26
Urinary Bladder	19	(19)	0.60	5.3	0.10
Uterus	7	(7)	0.47	0.85	0.34

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Table 24

26

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element: Barium

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element ($\mu\text{g/g}$)	Highest Value ($\mu\text{g/g}$)	Lowest Value ($\mu\text{g/g}$)
Aorta	19	(20)	0.13	0.32	<0.003
Bone	22	(22)	0.58	3.6	0.9
Brain	4	2* (25)	0.025	0.05	<0.006
Breast	2	(3)	0.034	0.067	<0.0004
Esophagus	13	1* (14)	0.05	0.37	<0.003*
Heart	6	2* (27)	0.014	0.02	<0.002
Intestine					
Jejunum	18	1* (20)	0.035	0.10	<0.002
Sigmoid colon	27	(27)	0.15	1.5	0.01
Kidney	17	2* (27)	0.022	0.12	<0.003
Liver	2	3* (28)	0.03	0.04	<0.004
Lung	28	(28)	0.16	0.56	0.02
Muscle					
Pectoral	3	1* (14)	0.037	0.07	<0.003
Psoas	5	4* (24)	0.032	0.07	<0.002
Ovary	2	(3)	0.025	0.03	<0.003
Pancreas	15	4* (26)	0.04	0.32	<0.001
Prostate	12	1* (15)	0.053	0.27	<0.003
Spleen	7	2* (26)	0.064	0.26	<0.003
Stomach	16	2* (19)	0.047	0.26	<0.002
Testis	10	3* (18)	0.01	0.015	<0.002
Trachea	15	1* (16)	0.044	0.13	<0.005*
Urinary Bladder	15	1* (19)	0.032	0.16	<0.003
Uterus	6	(7)	0.024	0.066	<0.003

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Table 25

27

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Bismuth

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta		(20)			
Bone		(22)			
Brain		(25)			
Breast		(3)			
Esophagus	1*	(14)	<0.02*	<0.02*	<0.02
Heart		(27)			
Intestine					
Jejunum	4	(20)	0.24	0.45	<0.03
Sigmoid colon	2	(27)	0.69	1.4	<0.01
Kidney	9	2* (27)	0.22	0.53	<0.04
Liver	2	1* (20)	0.19	0.20	<0.05
Lung		(28)			
Muscle					
Pectoral		(14)			
Psoas		(24)			
Ovary		(3)			
Pancreas	1	(26)	0.05	0.05	<0.03
Prostate		(15)			
Spleen	1*	(26)	<0.06*	<0.06*	<0.04
Stomach		(19)			
Testis	2	2* (18)	0.15	0.20	<0.04
Trachea		(16)			
Urinary Bladder		(19)			
Uterus	1	(7)	0.08	0.08	<0.04

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

28

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Boron

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element (μg/g)	Highest Value (μg/g)	Lowest Value (μg/g)
Aorta	1*	(20)	<0.11*	<0.11*	<0.09
Bone		(22)			
Brain	3	1*	0.30	0.40	<0.09
Breast		(3)			
Esophagus		(14)			
Heart	1	1*	0.17	0.17	<0.09
Intestine					
Jejunum	1	1*	0.26	0.26	<0.06
Sigmoid colon	1	2*	0.11	0.11	<0.02
Kidney	1	1*	0.48	0.48	<0.09
Liver	3	4*	0.29	0.37	<0.13
Lung	4	2*	0.20	0.26	<0.05
Muscle					
Pectoral	1		0.3	0.3	<0.10
Psoas	1		0.31	0.31	<0.08
Ovary		(3)			
Pancreas	2	4*	0.43	0.43	<0.07
Prostate	1	1*	0.72	0.72	<0.07
Spleen	2	1*	0.29	0.31	<0.09
Stomach	4	2*	0.39	0.91	<0.05
Testis		(18)			
Trachea	1		0.19	0.19	<0.09*
Urinary Bladder	1		2.0	2.0	<0.06
Uterus		1* (7)	<0.09*	<0.09*	<0.09

* Trace

The number in parentheses indicate the number of samples of the particular tissue analyzed.

Table 27

29

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Cadmium

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta		(20)	Not determined		
Bone		(22)			
Brain		(25)			
Breast		(3)			
Esophagus		(14)			
Heart		(27)			
Intestine					
Jejunum	2	7*	(20)	0.98	1.0
Sigmoid colon	1	3*	(27)	0.6	0.6
Kidney	27	()	(27)	34	77
Liver	23	3*	(28)	2.7	4.8
Lung	9	6*	(28)	1.0	1.5
Muscle					
Pectoral		(14)			
Psoas		(24)			
Ovary		(3)			
Pancreas	15	8*	(26)	1.5	3.0
Prostate		4*	(15)	<0.8*	<1.1*
Spleen		1*	(26)	<1.0*	<1.0*
Stomach	2	2*	(19)	0.42	0.48
Testis		1*	(18)	<0.63*	<0.63*
Trachea		1*	(16)	<0.72*	<0.72*
Urinary Bladder		1*	(19)	<0.5*	<0.5*
Uterus		(7)			

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Calcium

Tissue	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	20	(20)	780	2,250	170
Bone	22	(22)	23,000	39,000	9,000
Brain	25	(25)	98	180	45
Breast	3	(3)	48	105	26
Esophagus	14	(14)	110	220	72
Heart	27	(27)	48	106	23
Intestine					
Jejunum	20	(20)	79	160	39
Sigmoid colon	27	(27)	140	590	23
Kidney	27	(27)	100	270	50
Liver	28	(28)	64	105	24
Lung	28	(28)	130	260	46
Muscle					
Pectoral	14	(14)	33	70	14
Psoas	24	(24)	39	69	21
Ovary	3	(3)	87	105	65
Pancreas	26	(26)	110	250	63
Prostate	15	(15)	300	990	135
Spleen	26	(26)	77	144	35
Stomach	19	(19)	110	600	33
Testis	18	(18)	90	122	58
Trachea	16	(16)	510	1,200	230
Urinary Bladder	19	(19)	114	175	48
Uterus	7	(7)	130	380	70

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Chromium

Tissues	Number of Samples Containing Element			Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	14	4*	(20)	0.051	0.09	<0.001
Bone			(22)			
Brain	10	3*	(25)	0.015	0.04	<0.002
Breast	3		(3)	0.019	0.01	0.006
Esophagus	14		(14)	0.05	0.21	0.01
Heart	20	1*	(27)	0.021	0.12	<0.001
Intestine						
Jejunum	18	2*	(20)	0.018	0.096	<0.001*
Sigmoid colon	27		(27)	0.042	0.17	0.003
Kidney	22		(27)	0.022	0.13	<0.001
Liver	15	6*	(28)	0.023	0.10	<0.001
Lung	28		(28)	0.11	0.6	0.005
Muscle						
Pectoral	12		(14)	0.007	0.019	<0.001
Psoas	18	2*	(24)	0.041	0.187	<0.001
Ovary	3		(3)	0.012	0.02	0.006
Pancreas	26		(26)	0.022	0.140	0.002
Prostate	13	1*	(15)	0.019	0.09	<0.002
Spleen	16	2*	(26)	0.01	0.024	<0.001
Stomach	16	2*	(19)	0.013	0.036	<0.001
Testis	16	1*	(18)	0.013	0.024	<0.001
Trachea	16		(16)	0.063	0.27	0.01
Urinary Bladder	1 High			(0.17)	(2.8)	
	16	2*	(19)	0.025	0.09	<0.001
Uterus	6		(7)	0.014	0.03	<0.001

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Cobalt

Tissues	Number of Samples Containing Element			Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	1	1*	(20)	0.22	0.22	<0.04
Bone			(22)			
Brain	1		(25)	0.09	0.09	<0.04
Breast	1		(3)	0.02	0.02	<0.008
Esophagus			(14)			
Heart	7	1*	(27)	0.12	0.55	<0.04
Intestine						
Jejunum		1*	(20)	<0.05*	<0.05*	<0.03
Sigmoid colon	5		(27)	0.15	0.33	<0.01
Kidney		1*	(27)	<0.07*	<0.07*	<0.04
Liver	10	1*	(28)	0.14	0.40	<0.05
Lung	2		(28)	0.12	0.19	<0.02
Muscle						
Pectoral			(14)			
Psoas			(24)			
Ovary			(3)			
Pancreas	1		(26)	0.13	0.13	<0.03
Prostate	1		(15)	0.79	0.79	<0.03
Spleen	1		(26)	0.18	0.18	<0.04
Stomach		1*	(19)	<0.04*	<0.04*	<0.02
Testis	1		(18)	0.11	0.11	<0.04
Trachea			(16)			
Urinary Bladder			(19)			
Uterus			(7)			

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Table 31

33

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Copper

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	20	(20)	1.5	2.7	0.7
Bone	22	(22)	0.52	0.95	0.32
Brain	25	(25)	5.3	7.8	3.9
Breast	3	(3)	0.41	0.77	0.15
Esophagus	14	(14)	1.0	1.4	0.74
Heart	27	(27)	3.0	3.8	2.3
Intestine					
Jejunum	20	(20)	2.1	4.4	0.9
Sigmoid colon	27	(27)	1.5	4.5	0.44
Kidney	27	(27)	2.7	3.6	1.4
Liver	28	(28)	6.3	13.0	3.5
Lung	20	(20)	1.2	1.6	0.8
Muscle					
Pectoral	14	(14)	0.70	0.95	0.43
Psoas	24	(24)	0.86	1.5	0.48
Ovary	3	(3)	1.2	1.3	1.1
Pancreas	26	(26)	1.7	3.6	0.7
Prostate	15	(15)	1.2	2.7	0.8
Spleen	26	(26)	1.2	1.6	0.8
Stomach	19	(19)	1.6	2.0	1.0
Testis	18	(18)	1.3	10	0.58
Trachea	16	(16)	1.4	7.2	0.62
Urinary Bladder	19	(19)	1.0	2.9	0.56
Uterus	7	(7)	0.93	1.3	0.70

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

34

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Gallium

Tissues	Number of Samples Containing Element	Average Value for Samples Containing Element (μg/g)	Highest Value (μg/g)	Lowest Value (μg/g)
Aorta	(20)			
Bone	(22)			
Brain	(25)			
Breast	(3)			
Esophagus	(14)			
Heart	(27)			
Intestine				
Jejunum	(20)			
Sigmoid colon	(27)			
Kidney	(27)			
Liver	(28)			
Lung	2* (28)	<0.01*	<0.01*	<0.01
Muscle				
Pectoral	(14)			
Psoas	(24)			
Ovary	(3)			
Pancreas	(26)			
Prostate	(15)			
Spleen	(26)			
Stomach	(19)			
Testis	(18)			
Trachea	(16)			
Urinary Bladder	(19)			
Uterus	(7)			

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Gold

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element ($\mu\text{g/g}$)	Highest Value ($\mu\text{g/g}$)	Lowest Value ($\mu\text{g/g}$)
Aorta	11	(20)	0.80	1.5	<0.10
Bone		(22)			
Brain		(25)			
Breast	1	(3)	0.44	0.44	<0.04
Esophagus	7	(14)	0.18	0.48	<0.08
Heart		(27)			
Intestine					
Jejunum	6	3* (20)	0.52	1.9	<0.06
Sigmoid colon	9	1* (27)	0.18	0.4	<0.02
Kidney	5	1* (27)	0.46	1.1	<0.10
Liver	1	1* (28)	0.23	0.23	<0.13
Lung		(28)			
Muscle					
Pectoral		1* (14)	<0.11*	<0.11*	<0.10
Psoas	1	1* (24)	0.11	0.11	<0.08
Ovary	1	1* (3)	0.33	0.33	<0.09
Pancreas	1	5* (26)	0.39	0.39	<0.07
Prostate	3	2* (15)	0.64	0.77	<0.07
Spleen		1* (26)	<0.14*	<0.14*	<0.09
Stomach	3	2* (19)	0.23	0.36	<0.05
Testis	4	2* (18)	0.31	0.39	<0.10
Trachea	7	1* (16)	1.6	5.1	<0.11
Urinary Bladder	5	1* (19)	0.63	2.1	<0.07
Uterus		(7)			

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Table 34

36

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Iron

Tissues	Number of Samples Containing Element	Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	20 (20)	38	54	22
Bone	22 (22)	117	290	33
Brain	25 (25)	50	60	21
Breast	3 (3)	22.3	8.0	1.8
Esophagus	14 (14)	30	57	15
Heart	27 (27)	50	100	27
Intestine				
Jejunum	20 (20)	29	63	11
Sigmoid colon	27 (27)	24	58	8
Kidney	27 (27)	67	120	29
Liver	28 (28)	170	410	36
Lung	28 (28)	310	700	60
Muscle				
Pectoral	14 (14)	28	39	23
Psoas	24 (24)	38	77	21
Ovary	3 (3)	35	46	24
Pancreas	26 (26)	44	200	13
Prostate	15 (15)	33	90	15
Spleen	26 (26)	390	980	56
Stomach	19 (19)	36	240	14
Testis	18 (18)	33	160	13
Trachea	16 (16)	43	80	24
Urinary Bladder	19 (19)	25	70	10
Uterus	7 (7)	27	56	15

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Lead

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	20	(20)	2.8	12	0.13
Bone	22	(22)	7.6	45	0.78
Brain	8	7* (25)	0.30	1.5	<0.06
Breast	2	(3)	0.06	0.11	<0.005
Esophagus	5	3* (14)	0.11	0.16	<0.03
Heart	4	4* (27)	0.12	0.13	<0.04
Intestine					
Jejunum	15	3* (20)	0.20	0.72	<0.03
Sigmoid colon	24	1* (27)	0.25	1.5	<0.03
Kidney	27	(27)	1.4	3.5	0.4
Liver	28	(28)	2.0	4.2	0.45
Lung	28	(28)	0.67	1.8	0.07
Muscle					
Pectoral	3	5* (14)	0.41	0.73	<0.05
Psoas	1	9* (24)	0.62	0.62	<0.04
Ovary	1	(3)	0.05	0.05	<0.05
Pancreas	26	(26)	0.75	2.2	0.13
Prostate	11	2* (15)	0.35	0.96	<0.05
Spleen	24	1* (26)	0.67	3.6	<0.06
Stomach	13	5* (19)	0.15	0.6	<0.04
Testis	14	3* (18)	0.18	0.59	<0.05
Trachea	14	2* (16)	0.36	0.75	<0.09*
Urinary Bladder	9	5* (19)	0.14	0.23	<0.03
Uterus	3	1* (7)	0.06	0.06	<0.05

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Magnesium

Tissues	Number of Samples Containing Element	Average Value for Samples Containing Element (μg/g)	Highest Value (μg/g)	Lowest Value (μg/g)
Aorta	2020 (20)	220	990	86
Bone	22 (22)	800	1200	400
Brain	25 (25)	140	230	72
Breast	3 (3)	16	24	7.4
Esophagus	14 (14)	120	210	60
Heart	27 (27)	160	270	53
Intestine				
Jejunum	20 (20)	130	270	70
Sigmoid colon	27 (27)	220	>1400	60
Kidney	27 (27)	130	200	56
Liver	28 (28)	1500	270	74
Lung	28 (28)	95	150	42
Muscle				
Pectoral	14 (14)	1600	230	74
Psoas	24 (24)	190	280	110
Ovary	3 (3)	90	110	76
Pancreas	26 (26)	170	390	66
Prostate	15 (15)	160	250	80
Spleen	26 (26)	140	220	98
Stomach	19 (19)	100	190	37
Testis	18 (18)	106	154	65
Trachea	16 (16)	150	210	78
Urinary Bladder	19 (19)	110	170	54
Uterus	7 (7)	100	140	80

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Manganese

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	20	(20)	0.10	0.19	<0.02
Bone		(22)			
Brain	25	(25)	0.26	0.54	0.12
Breast	3	(3)	0.02	0.03	0.01
Esophagus	14	(14)	0.09	0.18	0.04
Heart	27	(27)	0.19	0.45	0.08
Intestine					
Jejunum	20	(20)	0.65	1.5	0.21
Sigmoid colon	27	(27)	0.66	2.2	0.12
Kidney	27	(27)	0.89	1.2	0.60
Liver	28	(28)	1.4	2.4	0.62
Lung	28	(28)	0.16	0.25	0.08
Muscle					
Pectoral	14	(14)	0.04	0.06	0.01
Psoas	23	(24)	0.05	0.10	<0.02
Ovary	3	(3)	0.11	0.13	0.10
Pancreas	26	(26)	1.3	2.0	0.55
Prostate	15	(15)	0.13	0.20	0.06
Spleen	26	(26)	0.10	0.17	0.02
Stomach	19	(19)	0.29	0.54	0.05
Testis	18	(18)	0.13	0.24	0.08
Trachea	16	(16)	0.18	0.27	0.10
Urinary Bladder	(1 High)		(1.2)	(1.2)	
	18	(19)	0.10	0.12	0.04
Uterus	6	1* (17)	0.09	0.10	<0.02*

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Molybdenum

Tissues	Number of Samples Containing Element	Average Value for Samples Containing Element (μg/g)	Highest Value (μg/g)	Lowest Value (μg/g)
Aorta	(20)			
Bone	(22)			
Brain	(25)			
Breast	(3)			
Esophagus	(14)			
Heart	(27)			
Intestine				
Jejunum	(20)			
Sigmoid colon	(27)			
Kidney	26 (27)	0.50	0.70	0.25
Liver	28 (28)	1.0	1.8	0.3
Lung	(28)			
Muscle				
Pectoral	(14)			
Psoas	(24)			
Ovary	(3)			
Pancreas	1 (26)	0.05	0.05	<0.05
Prostate	(15)			
Spleen	(26)			
Stomach	(19)			
Testis	(18)			
Trachea	(16)			
Urinary Bladder	(19)			
Uterus	(7)			

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Table 39

Concentration of Element in Wet Tissue
(Arranged by Tissues)

Element Nickel

Tissue	Number of Samples Containing Element			Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	7	2*	(20)	0.24	0.46	<0.10
Bone			(22)			
Brain	1	1*	(25)	0.18	0.18	<0.06
Breast			(3)			
Esophagus	3		(3)	0.14	0.17	0.11
Heart	4		(27)	0.64	1.2	<0.09
Intestine						
Jejunum		1*	(20)	<0.04*	<0.04*	<0.04
Sigmoid colon	22		(27)	0.22	1.0	<0.05
Kidney	1		(27)	1.0	1.0	<0.09
Liver	2		(28)	0.21	0.21	<0.13
Lung	4	1*	(28)	0.24	0.52	<0.05
Muscle						
Pectoral	2		(14)	0.08	0.08	<0.08
Psoas	4	1*	(24)	0.17	0.26	<0.08
Ovary			(3)			
Pancreas	2		(26)	0.10	0.13	<0.07
Prostate	2		(15)	0.10	0.10	<0.07
Spleen	1		(26)	0.49	0.49	<0.09
Stomach			(19)			
Testis			(18)			
Trachea	2	3*	(16)	0.54	0.94	<0.09
Urinary Bladder	3		(19)	0.08	0.10	<0.07
Uterus			(7)			

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Elements in Wet Tissue
(Arranged by Tissue)

Element Phosphorus

Tissues	Number of Samples Containing Element	Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	20	(20)	1200	5100
Bone		(22)	Not Determined	500
Brain	25	(25)	3100	3700
Breast	3	(3)	127	160
Esophagus	14	(14)	870	1050
Heart	27	(27)	1500	1850
Intestine				
Jejunum	20	(20)	1500	3300
Sigmoid colon	27	(27)	800	1650
Kidney	27	(27)	1600	2100
Liver	28	(28)	2500	3400
Lung	28	(28)	1100	1700
Muscle				
Pectoral	14	(14)	1500	1900
Psoas	24	(24)	1700	3200
Ovary	3	(3)	1100	1300
Pancreas	26	(26)	2400	3400
Prostate	14	(15)	1000	2200
Spleen	26	(26)	2100	2700
Stomach	19	(19)	1200	2000
Testis	18	(18)	1200	1800
Trachea	16	(16)	700	850
Urinary Bladder	19	(19)	800	1800
Uterus	7	(7)	1100	1350

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Potassium

Tissues	Number of Samples Containing Element	Average Value for Samples Containing Element (μg/g)	Highest Value (μg/g)	Lowest Value (μg/g)
Aorta	20 (20)	1300	2000	590
Bone	22 (22)	890	2200	400
Brain	25 (25)	3100	4400	2000
Breast	3 (3)	340	550	160
Esophagus	14 (14)	1750	2400	1170
Heart	27 (27)	2300	3500	1400
Intestine				
Jejunum	20 (20)	1700	3000	900
Sigmoid colon	27 (27)	1260	2300	340
Kidney	27 (27)	2000	2700	980
Liver	28 (28)	2700	4000	1800
Lung	28 (28)	1900	2500	930
Muscle				
Pectoral	14 (14)	2900	4500	2000
Psoas	24 (24)	3200	5700	1800
Ovary	3 (3)	1600	1800	1300
Pancreas	26 (26)	2600	3800	1700
Prostate	15 (15)	2000	3600	1500
Spleen	26 (26)	3200	4900	1800
Stomach	19 (19)	1700	3000	1000
Testis	18 (18)	2000	2800	1250
Trachea	16 (16)	2400	3400	810
Urinary Bladder	19 (19)	1800	2200	1100
Uterus	7 (7)	1900	2700	1300

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Element in Wet Tissue
(Arranged by Tissues)

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Element Silver

Tissues	Number of Samples Containing Element			Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	10	4*	(20)	0.012	0.03	<0.001
Bone			(22)			
Brain	22	1*	(25)	0.016	0.17	<0.002
Breast	1		(3)	0.001	0.001	<0.0001
Esophagus	5	4*	(14)	0.002	0.005	<0.001
Heart	2	4*	(27)	0.012	0.02	<0.001
Intestine						
Jejunum	9	1*	(20)	0.006	0.013	<0.001
Sigmoid colon	17	6*	(27)	0.016	0.09	<0.001
Kidney	7	12*	(27)	0.006	0.02	<0.001
Liver	27	1*	(28)	0.0041	0.02	<0.003*
Lung	9	9*	(28)	0.006	0.012	<0.001
Muscle						
Pectoral	1	2*	(14)	0.004	0.004	<0.001
Psoas	1	5*	(24)	0.005	0.005	<0.001
Ovary			(3)			
Pancreas	4	9*	(26)	0.004	0.005	<0.001
Prostate	10	1*	(15)	0.018	0.14	<0.001
Spleen	5	8*	(26)	0.003	0.004	<0.001
Stomach	2	9*	(19)	0.003	0.004	<0.001
Testis	4	7*	(18)	0.004	0.007	<0.001
Trachea	8	5*	(16)	0.045	0.024	<0.001
Urinary Bladder	7	6*	(19)	0.004	0.006	<0.001
Uterus	1	1*	(7)	0.001	0.001	<0.001

* Trace

The number in parentheses indicates the number of samples of that particular tissue analyzed.

Table 43

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Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Strontium

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element (μg/g)	Highest Value (μg/g)	Lowest Value (μg/g)
Aorta	20	(20)	0.78	2.2	0.22
Bone	22	(22)	14	24	7.1
Brain	24	1* (25)	0.03	0.26	<0.007*
Breast	3	(3)	0.03	0.07	0.01
Esophagus	14	(14)	0.08	0.19	0.03
Heart	27	(27)	0.022	0.06	0.005
Intestine					
Jejunum	20	(20)	0.14	0.43	0.01
Sigmoid colon	27	(27)	0.33	0.98	0.07
Kidney	27	(27)	0.06	0.17	0.02
Liver	27	(28)	0.026	0.19	<0.007
Lung	28	(28)	0.09	0.27	0.03
Muscle					
Pectoral	12	2* (14)	0.013	0.08	<0.002*
Psoas	22	2* (24)	0.023	0.09	<0.002*
Ovary	3	(3)	0.16	0.20	0.11
Pancreas	26	(26)	0.05	0.14	0.01
Prostate	15	(15)	0.28	1.5	0.03
Spleen	26	(26)	0.04	0.14	0.01
Stomach	19	(19)	0.12	0.47	0.03
Testis	18	(18)	0.06	0.08	0.02
Trachea	16	(16)	0.29	0.50	0.12
Urinary Bladder	19	(19)	0.11	0.19	0.04
Uterus	7	(7)	0.10	0.25	0.03

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Table 44

46

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Tin

Tissues	Number of Samples Containing Element			Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	13	4*	(20)	0.94	6.1	<0.09
Bone	4		(22)	1.9	3.4	<1.2
Brain	4		(25)	0.80	1.7	<0.06
Breast	1		(3)	1.5	1.5	<0.005
Esophagus	8	2*	(14)	2.1	5.0	<0.03
Heart	8	1*	(27)	0.79	1.9	<0.04
Intestine						
Jejunum	16	3*	(20)	0.7	3.3	<0.03
Sigmoid colon	26		(27)	0.86	3.4	<0.03
Kidney	19	6*	(27)	0.40	2.7	<0.05
Liver	23	3*	(28)	0.37	1.4	<0.07
Lung	26	1*	(28)	0.60	2.4	<0.05
Muscle						
Pectoral	2		(14)	1.7	1.8	<0.05
Psoas	2	1*	(24)	1.8	1.8	<0.04
Ovary	1	1*	(3)	4.6	4.6	<0.05
Pancreas	5	5*	(26)	1.6	3.4	<0.04
Prostate	10	2*	(15)	0.41	2.1	<0.04
Spleen	17	5*	(26)	0.41	2.6	<0.06
Stomach	13	2*	(19)	0.35	1.2	<0.03
Testis	8	4*	(18)	0.46	2.1	<0.05
Trachea	10	1*	(16)	1.0	5.7	<0.08
Urinary Bladder	9	6*	(19)	0.5	2.6	<0.03
Uterus	6		(7)	0.11	0.18	<0.05

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Titanium

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta	12	(20)	0.37	0.72	< 0.10
Bone		(22)			
Brain	1	3* (25)	0.48	0.48	< 0.13
Breast	2	(3)	0.03	0.03	< 0.02
Esophagus	2	(14)	0.58	0.60	< 0.06
Heart	1	(27)	0.32	0.32	< 0.09
Intestine					
Jejunum		1* (20)	< 0.11*	< 0.11*	< 0.06
Sigmoid colon	7	3* (27)	0.48	1.5	< 0.02
Kidney	2	(27)	< 0.10*	< 0.10*	< 0.09
Liver		(28)			
Lung	28	(28)	2.6	5.8	0.20
Muscle					
Pectoral		(14)			
Psoas	1	(24)	0.12	0.12	< 0.08
Ovary	1	1* (3)	0.14	0.14	< 0.09
Pancreas	2	(26)	0.75	0.87	< 0.07
Prostate	2	1* (15)	0.35	0.40	< 0.07
Spleen	2	(26)	0.67	0.78	< 0.09
Stomach	2	2* (19)	0.24	0.36	< 0.05
Testis	1	2* (18)	0.28	0.28	< 0.09
Trachea	4	(16)	0.47	0.90	< 0.11
Urinary Bladder	4	(19)	0.25	0.35	< 0.06
Uterus		(7)			

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Table 46

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Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element Vanadium

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element (µg/g)	Highest Value (µg/g)	Lowest Value (µg/g)
Aorta		(20)			
Bone		(22)			
Brain		(25)			
Breast		(3)			
Esophagus		(14)			
Heart		(27)			
Intestine					
Jejunum	1	(20)	0.02	0.02	<0.01
Sigmoid colon	3	3* (27)	0.07	0.14	<0.002
Kidney		(27)			
Liver	2	(28)	0.04	0.04	<0.01
Lung	8	3* (28)	0.05	0.12	<0.01
Muscle					
Pectoral		(14)			
Psoas		(24)			
Ovary		(3)			
Pancreas		(26)			
Prostate		(15)			
Spleen	1	1* (26)	<0.01*	<0.01*	<0.01
Stomach	1	1* (19)	0.27	0.27	<0.005
Testis		(18)			
Trachea		(16)			
Urinary Bladder		(19)			
Uterus		(7)			

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Concentration of Elements in Wet Tissue
(Arranged by Tissues)

Element

Zinc

Tissues	Number of Samples Containing Element		Average Value for Samples Containing Element ($\mu\text{g/g}$)	Highest Value ($\mu\text{g/g}$)	Lowest Value ($\mu\text{g/g}$)
Aorta	20	(20)	24	68	14
Bone	22	(22)	53	88	20
Brain	25	(25)	12	19	10
Breast	3	(3)	1.8	3.2	1.1
Esophagus	14	(14)	22	40	13
Heart	27	(27)	24	35	15
Intestine					
Jejunum	20	(20)	22	25	14
Sigmoid colon	27	(27)	16	34	6
Kidney	27	(27)	46	72	28
Liver	28	(28)	44	83	20
Lung	28	(28)	14	24	7.2
Muscle					
Pectoral	14	(14)	48	61	35
Psoas	24	(24)	50	84	33
Ovary	3	(3)	10	14	7
Pancreas	26	(26)	25	35	13
Prostate	15	(15)	65	192	25
Spleen	26	(26)	18	24	12
Stomach	19	(19)	17	27	9
Testis	18	(18)	14	26	6
Trachea	16	(16)	10	18	4
Urinary Bladder	19	(19)	21	28	14
Uterus	7	(7)	20	28	13

* Trace

The number in parentheses indicate the number of samples of that particular tissue analyzed.

Table 48

50Concentrations of Elements in Wet Tissue
(Arranged by Tissues)Element: Lithium

Tissues	Number of Samples Composited	Composite Value ($\mu\text{g/g}$)
Aorta	20	0.027
Bone	22	
Brain	25	
Diaphragm		0.007
Esophagus	14	0.010
Heart	27	0.009
Intestine		
Jejunum	20	0.012
Sigmoid colon	27	0.014
Kidney	27	0.011
Liver	28	
Lung	28	0.027
Muscle	38	
Ovary	3	0.005
Pancreas	26	<0.007*
Prostate	15	0.017
Spleen	26	
Stomach	19	0.079
Testes	18	0.009
Trachea	16	0.032
Urinary Bladder	19	0.018
Uterus	7	

* Trace

Table 49

51Concentrations of Elements in Wet Tissue
(Arranged by Tissues)Element: Rubidium

Tissues	Number of Samples Composited	Composite Value ($\mu\text{g/g}$)
Aorta	20	6.6
Bone	22	
Brain	25	35
Diaphragm		11
Esophagus	14	6.6
Heart	27	19
Intestine		
Jejunum	20	16
Sigmoid colon	27	6.5
Kidney	27	11
Liver	28	5.9
Lung	28	6.6
Muscle	38	32
Ovary	3	6.4
Pancreas	26	65
Prostate	15	8.4
Spleen	26	42
Stomach	19	6.1
Testes	18	8.6
Thyroid		N.D.
Trachea	16	24
Urinary Bladder	19	7.4
Uterus	7	

* Trace

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