

National Background data values from USGS, 1984:
Mean Concentrations¹, Deviations, and Ranges of Elements in Samples of Soils in the Coterminous United States²

Element	Western United States (west of 96th meridian)				Eastern United States (east of 96th meridian)			
	Mean	Deviation	Observed Range	Estimated Arithmetic Mean	Mean	Deviation	Observed Range	Estimated Arithmetic Mean
Al%	5.8	2	0.5 - >10	7.4	3.3	2.87	0.7 - >10	5.7
As	5.5	1.98	<0.10 - 97	7	4.8	2.56	<0.1 - 73	7.4
B	23	1.99	<20 - 300	29	31	1.88	<20 - 150	38
Ba	580	1.72	70 - 5,000	670	290	2.35	10 - 1,500	420
Be	0.68	2.3	<1 - 15	0.97	0.55	2.53	<1 - 7	0.85
Br	0.52	2.74	<0.5 - 11	0.86	0.62	2.18	<0.5 - 5.3	0.85
C%	1.7	2.37	0.16 - 10	2.5	1.5	2.88	0.06 - 37	2.56
Ca%	1.8	3.05	0.06 - 32	3.3	0.34	3.08	0.01 - 28	0.63
Ce	65	1.71	<150 - 300	75	63	1.85	<150 - 300	76
Co	7.1	1.97	<3 - 50	9	5.9	2.57	<3 - 70	9.2
Cr	41	2.19	3 - 2,000	56	33	2.6	1 - 1,000	52
Cu	21	2.07	2 - 300	27	13	2.8	<1 - 2.0	22
F	280	2.52	<10 - 1,900	440	130	4.19	<10 - 3,700	360
Fe%	2.1	1.95	0.1 - >10	2.6	1.4	2.87	0.01 - >10	2.5
Ga	16	1.68	<5 - 70	119	9.3	2.38	<5 - 70	14
Ge	1.2	1.32	0.58 - 2.5	1.2	1.1	1.45	<0.01 - 2.0	1.2
Hg	0.046	2.33	<0.01 - 4.6	0.065	0.081	2.52	0.01 - 3.4	0.12
I	0.79	2.55	<0.5 - 9.6	1.2	0.68	2.81	<0.5 - 7.0	1.2
K% 3	1.8	0.71	0.19 - 6.3	none	1.2	0.75	0.005 - 3.7	none
La	30	1.89	<30 - 200	37	29	1.98	<30 - 200	37
Li	22	1.58	5 - 130	25	17	2.16	<5 - 140	22
Mg%	0.74	2.21	0.03 - >10	1	0.21	3.55	0.005 - 5	0.46
Mn	380	1.98	<0.5 - 9.6	480	260	3.82	<2 - 7,000	640
Mo	0.85	2.17	0.19 - 6.3	1.1	0.32	3.93	<3 - 15	0.79
Na%	0.97	1.95	<30 - 200	1.2	0.25	4.55	<0.05 - 5	0.78
Nb	9.7	1.82	<10 - 100	10	10	1.65	<10 - 50	12
Nd	36	1.76	<70 - 300	43	46	1.58	<70 - 300	51
Ni	15	2.1	<5 - 700	19	11	2.64	<5 - 700	18
P	320	2.3	40 - 4,500	460	200	2.95	<20 - 6,800	360
Pb	17	1.8	<10 - 700	20	14	1.95	<10 - 300	17
Rb	69	1.5	<20 - 210	74	43	1.94	<20 - 160	53
S%	0.13	2.37	<0.08 - 4.8	0.19	0.1	1.34	<0.08 - 0.31	0.11
Sb	0.47	2.15	<1 - 2.6	0.62	0.52	2.38	<1 - 8.8	0.76
Sc	8.2	1.74	<5 - 50	9.6	6.5	1.9	<5 - 30	8
Se	0.23	2.43	<0.1 - 4.3	0.34	0.3	2.44	<0.1 - 3.9	0.45
Si% 3	30	5.7	15 - 44	none	34	6.64	1.7 - 45	none
Sn	0.9	2.11	<0.1 - 7.4	1.2	0.86	2.81	<0.1 - 10	1.5
Sr	200	2.16	10 - 3,000	270	53	3.61	<5 - 700	120
Ti%	0.22	1.78	0.05 - 2.0	0.26	0.28	2	0.007 - 1.5	0.35
Th	9.1	1.49	2.4 - 31	9.8	7.7	1.58	2.2 - 23	8.6
U	2.5	1.45	0.68 - 7.9	2.7	2.1	2.12	0.29 - 11	2.7
V	70	1.95	7 - 500	88	43	2.51	<7 - 300	66
Y	22	1.66	<10 - 150	25	20	1.97	<10 - 200	25
Yb	2.6	1.63	<1 - 20	3	2.6	2.06	<1 - 50	3.3
Zn	55	1.79	10 - 2,100	65	40	2.11	<5 - 2,900	52
Zr	160	1.77	<20 - 1,500	190	220	2.01	<20 - 2,000	290

- 1 Means and ranges are reported in parts per million (mg/g) or percent, as indicated. Means and deviations are geometric except as indicated.
- 2 Source: Shacklett HT, Boerngen JG. Element concentrations in soils and other surficial materials of the conterminous United States. U.S. Geological Survey Professional Paper 1270. Washington, DC: U.S. Government Printing Office, 1984.
- 3 Means are arithmetic, deviations are standard.
- % Percent.