

Table VI-4. Average compositions of major sedimentary rock types and their mass-weighted average (all in weight %) based on data by Ronov (1982), and Ronov and Yaroshevskiy (1976).

	Continent <sup>a</sup>				Continent ave. sed.	Oceanic ave. sed.	Global ave. sed.	Upper crust
	shale	sandstone	carbonate	evaporite				
Mass ( $10^{24}$ g)	0.96	0.44	0.48	0.02	1.9	0.19	2.09	
wt. fraction	0.51	0.23	0.25	0.01				
density g/cm <sup>3</sup>	2.49	2.28	2.52	2.3	2.45	1.03		2.8
SiO <sub>2</sub>	55.84	66.71	13.5	0.81	47.2	36.28	46.21	64.2
TiO <sub>2</sub>	0.78	0.54	0.14		0.56	0.52	0.55	0.55
Al <sub>2</sub> O <sub>3</sub>	16.38	10.54	2.79	0.083	11.48	10.49	11.39	14.7
Fe <sub>2</sub> O <sub>3</sub>	3.44	2.32	0.65	0.19	2.45	4.43	2.63	
FeO	3.31	2.36	0.64	0.026	2.39	0.67	2.23	
MnO	0.094	0.11	0.054		0.087	0.35	0.11	0.1
MgO	2.55	1.88	4.87	0.6	2.96	2.62	2.93	2.65
CaO	4.12	4.7	40.01	18.85	13.37	20.22	14	4.48
Na <sub>2</sub> O	1.06	1.49	0.43	22.19	1.22 <sup>b</sup>	1	1.20 <sup>b</sup>	3.42
K <sub>2</sub> O	3.02	1.96	0.6	0.32	2.14	1.87	2.12	3.13
P <sub>2</sub> O <sub>5</sub>	0.14	0.12	0.092		0.12	0.15	0.12	0.2
F	0.061	0.033	0.029	0.024	0.046	0.056	0.046	0.07
Corg	0.95	0.38	0.23		0.63	0.33	0.6	
CO <sub>2</sub>	3.49	3.49	33.5	1.14	10.97	16.31	11.45	
SO <sub>3</sub>	0.33	0.17	0.93	24.5	0.68	0.19	0.64	
S <sub>pyr</sub>	0.28	0.2	0.12		0.22	0.001	0.2	
Cl	0.085	0.06	0.041	26	0.33		(>0.30)	0.015
H <sub>2</sub> O	4.5	2.5	1.47	5.39	3.29	4.72	3.42	
ΣFe <sub>2</sub> O <sub>3</sub> <sup>c</sup>	7.12	4.94	1.36	0.22	5.11	5.17	5.12	6.01

a: The continental sediments include those from platforms, geosynclines, continental shelves and slopes; and contain about  $0.39 \times 10^{24}$  g of additional volcanogenic debris and sediments.

b: If the Na in seawater is added to the continental or global average sediments (ave. sed.), the concentration of Na<sub>2</sub>O becomes 2.0 wt %.

c: Total iron expressed as Fe<sub>2</sub>O<sub>3</sub>.