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Title of article Secular trends in the composition of sedimentary rock assemblages -- Archean through Phanerozoic time

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Table 1 - Bulk Chemical composition of composite
sedimentary rock successions, in percent

29	Sediment fill, post-Alpinean fold belts	64.4	0.9	16.8	3.9	3.6	0.1	4.0	1.5	2.0	2.6	0.2	100.0	Ronov and Yarobovsky, 1969	Ge neural estimate
30	Phanerozoic fold belts, excluding carbonate	70.1	0.7	15.4	3.5	2.7	..	2.8	..	1.8	3.2	..	100.0	Polderhaar, 1955	General estimate
31	Paleozoic cover, Russian platform	60.7	0.8	13.2	4.4	2.1	0.1	5.3	0.9	3.5	9.0	100.0	Ronov and Migdov, 1971	1584	
32	Paleozoic cover, North American platform	70.0	0.9	12.3	3.7	1.3	..	3.0	0.9	3.7	4.2	100.0	Ronov and Migdov, 1971	1371	
33	Mesozoic-Cenozoic cover, Russian platform	68.7	0.6	12.1	3.7	1.8	0.1	2.6	1.1	2.3	9.0	100.0	Ronov and Migdov, 1971	801	
34	Mesozoic-Cenozoic cover, North American platform	72.8	0.7	12.8	3.1	2.0	1.0	2.2	5.8	100.0	Ronov and Migdov, 1971	1380	
35	Palaeozoic Appalachian miogeocline(Vt. and Tenn.)	67.8	..	11.2	3.1	1.9	..	1.8	3.3	1.2	2.3	7.5	100.0	Schwab, 1971	General estimate
36	Palaeozoic-Meso-Cordilleran miogeocline(Nev. and Idaho)	72.3	..	8.9	2.8	1.5	..	1.8	3.4	0.9	1.9	6.7	100.0	Schwab, 1971	General estimate
37	Palaeozoic Appalachia eugeocline(Vt. and N.H.)	65.4	..	12.9	2.8	2.5	..	2.1	2.8	1.6	2.4	7.5	100.0	Schwab, 1971	General estimate
38	Cordilleran eugeocline(Cal., Ore., and Nev.)	64.5	..	13.0	2.7	2.5	..	2.1	3.0	2.1	2.3	7.8	100.0	Schwab, 1971	General estimate
39	Clastic residue, Palaeozoic miogeoclines	78.8	..	11.4	3.2	1.9	0.4	1.1	2.3	0.9	100.0	Schwab, 1971	General estimate
40	Clastic residue, Palaeozoic eugeoclines	70.4	..	14.1	2.3	3.4	0.1	3.0	1.0	2.5	2.5	0.7	100.0	Schwab, 1971	General estimate
41	Average Palaeozoic geosyncline, North America	73.2	..	13.2	2.6	2.9	0.2	2.0	0.7	2.0	2.4	0.8	100.0	Schwab, 1971	General estimate
PH	Average for Phanerozoic sedimentary successions(sections 29-41)	69.0	0.4	12.9	3.2	2.2	0.1	2.6	3.5	1.5	2.8	4.6	100.0		
	MISCELLANEOUS CRYSTALLINE COMPLEXES														
101	Average for Archean, Canadian Shield	65.1	0.5	16.0	1.5	3.0	0.1	2.3	3.4	4.1	2.7	1.3	100.0	Eade and Fabrig, 1971	14,000
102	Average for Archean basement, Scotland	64.0	0.8	15.4	6.1	0.1	3.1	5.3	3.7	1.7	..	100.0	Holland and Lambert, 1972	1,000	
103	Average for Archean, Baltic-Ukrainian craton	65.4	0.5	15.8	2.1	3.3	0.1	2.2	3.4	2.8	3.1	1.5	100.0	Ronov and Migdov, 1971	621
104	Average Archean crystalline basement(sections 101-103)	64.8	0.8	15.7	5.3	0.1	2.5	4.0	3.5	2.5	0.9	99.9	Ronov and Migdov, 1971	180	
105	Average for Proterozoic, Canadian Shield	65.0	0.8	16.0	1.2	3.4	0.1	2.1	3.3	3.5	3.5	1.3	100.0	Eade and Fabrig, 1971	
106	Average for Proterozoic, Baltic-Ukrainian craton	64.4	0.5	14.1	2.5	4.0	0.1	2.5	2.2	2.0	3.7	3.1	100.0	Ronov and Migdov, 1971	3,545
107	Average Proterozoic crystalline basement(sections 105-106)	64.7	0.6	15.1	6.0	0.1	2.3	2.8	2.8	3.6	2.2	100.2	Nockolds, 1964	48	
g	Average granite	72.1	0.4	13.9	0.9	1.7	0.1	0.5	1.3	3.1	5.5	0.5	100.0	Ronov and Yarobovsky, 1969	General estimate
tc	Total Crust	67.9	0.8	16.3	2.5	4.3	0.2	3.9	7.0	2.9	3.3	3.2	100.0	Clarke and Washington, 1934	General estimate
UTC	Upper third of Crust	69.1	1.1	16.3	3.1	3.8	0.1	3.5	6.1	3.8	3.1	2.0	100.0		

TABLE 1. BULK CHEMICAL COMPOSITION OF COMPOSITE SEDIMENTARY ROCK SUCCESSIONS, IN PERCENT

Section Number	Description	SiO ₂	TiO ₂	Al ₂ O ₃	P ₂ O ₅	FeO	MnO	MgO	CaO	Na ₂ O	K ₂ O	Other	Sum %	References	Number of samples
ARCHEAN(A)															
1	Kulite Series, Canadian Shield, bulk composition of graywacke-shale succession	61.6%	0.6%	14.6%	6.6%	..	2.5%	3.9%	4.2%	1.9%	4.0%	100.0%	Rogers and McKay, 1972	28	
2	Average composition paracocci, Ruman platform	63.3	0.5	15.3	2.8	3.8	0.1	2.8	4.8	2.7	2.2	2.1	100.0	Ronov and Midgley, 1971	312
3	Fig Tree Series graywackes, Africa	63.0	0.5	11.6	8.8	..	4.5	2.8	2.3	1.9	8.8	100.0	Condie, Mackie, and Reimer, 1970	23	
4	Archean graywackes, southern Rhodesia	65.5	0.5	12.5	6.9	..	3.3	4.7	2.4	1.6	2.6	100.0	Vlasic, 1966	7	
5	Average Archean graywacke, Canadian Shield	61.8	0.6	16.1	0.7	5.8	0.2	3.0	2.6	2.6	2.4	4.2	100.0	Pettijohn, 1972	5
6	Average Archean slate, Canadian Shield	58.4	0.7	20.2	1.2	5.2	0.1	3.1	1.3	2.6	3.4	3.6	100.0	Pettijohn, 1972	6
7	Average graywacke-shale mix, Canadian Shield, average of sections 5 and 6	60.1	0.7	18.1	0.9	6.5	0.1	3.1	2.0	2.6	2.9	4.0	100.0	Pettijohn, 1972	11
8	Representative Archean mica schists and paragneisses, presumably altered from sediment	63.9	0.6	15.5	1.4	4.4	0.1	3.5	3.5	2.8	2.6	1.8	100.0	Pettijohn, 1972	6
9	Graywackes, Wind River Range, Wyoming	64.4	0.6	15.5	6.5	..	3.1	2.2	3.7	2.4	1.6	100.0	Condie, 1967	21	
10	Average Archean sediment, Superior Province; Ontario and Quebec	64.5	0.4	17.2	1.2	3.7	0.1	2.0	2.1	3.2	2.9	2.7	100.0	Goodwin, 1968	6
11	Predominant sedimentary rock type, Superior Province; Ontario	65.4	0.6	16.1	1.5	4.0	0.1	2.6	1.7	2.2	2.8	3.0	100.0	Goodwin, 1968	1
12	Archean granites and granitic gneisses produced from Archean sediments, Superior Province	65.4	0.5	15.8	1.4	2.9	0.1	2.2	3.7	4.0	2.5	1.5	100.0	Goodwin, 1968	2
13	Average of Archean graywackes, Superior Province	65.2	0.5	16.6	0.8	4.0	0.1	2.4	2.2	3.5	2.5	2.2	100.0	Goodwin, 1972	16
14	Greenville basement, least altered gneiss representing average sediment	70.9	0.3	12.2	1.3	4.1	..	2.3	1.6	3.7	2.9	0.7	100.0	Engel and Engel, 1963	24
15	Basement gneiss, Blue Ridge thrust sheet, North Carolina	67.9	0.9	14.6	1.9	4.0	0.1	1.8	1.6	2.7	2.5	2.0	100.0	Bryant and Reed, 1970	10
16	Kulite Lake metasedimentary succession, Ontario and Minnesota	64.0	0.5	15.4	1.1	4.1	0.1	3.3	2.7	3.3	2.2	3.3	100.0	Goldich, Hansen, Hallford, and Muday, 1972	6
17	Yellowknife Supergroup, Northwest Territories, Canada, Bawkuash Formation	59.8	0.8	18.0	1.0	5.8	0.1	3.8	1.5	2.7	2.7	3.8	100.0	Henderson, 1972	6
18	Timiskaming argillite, representative of Archean basement	61.0	0.4	18.0	1.2	4.6	0.1	4.0	1.4	3.2	2.3	3.8	100.0	Macpherson, 1958	1
A	Average for Archean sedimentary successions (sections 1-18)	63.7	0.5	15.8	5.9	0.1	2.9	2.6	3.0	2.7	3.0	100.2			

19	Yavapai Supergroup, Arizona														b-alkyl pyritobezulite(BP)	
20	Animikie Group, northern Michigan	63.8	0.8	16.1	5.0	2.0	1.9	2.6	2.4	2.4	2.3	0.7	100.0	Anderson and Blacet, 1972	6	
21	Gowganda Tillite, Michigan (representative of basement)	62.9	0.6	11.2	1.8	11.5	0.2	2.8	1.1	0.9	2.3	4.7	100.0	James, 1955; Grou et al., 1951	12	
22	Gowganda Tillite, Ontario	63.9	0.6	14.7	2.2	3.5	..	3.4	0.4	4.2	4.2	2.9	100.0	Young, 1969	4	
EP	Average for Early Proterozoic sedimentary successions (sections 19-22)	61.8	0.7	16.3	2.5	4.4	..	3.9	1.3	3.9	2.6	2.6	100.0	Young, 1969	25	
23	Late Proterozoic, Russian platform	68.6	0.7	13.1	3.4	2.6	0.1	0.9	0.9	0.9	3.5	5.3	100.0	Ronov and Migdov, 1971	83	
24	Average for Moline Schist, Great Britain	64.5	1.0	17.1	6.7	0.1	1.9	1.9	2.6	4.1	0.1	100.0	Holland and Lambert, 1972	T1		
25	Belt Series, Montana	69.5	0.5	12.6	1.5	2.1	..	2.6	1.7	1.9	3.3	4.3	100.0	Ross, 1963, 1967	1970	19
26	Ocoee Series, bulk composition, Tennessee	60.0	0.8	18.1	5.7	0.3	2.0	2.0	2.2	4.2	4.7	100.0	King, 1964, 1970	14		
27	Torridonian succession, Scotland	75.6	0.4	11.4	0.8	1.6	0.1	0.7	1.7	2.5	3.4	1.8	100.0	Anderson, 1965	3	
LP	Average for Late Proterozoic sedimentary successions (sections 23-27)	67.8	0.7	14.5	4.9	0.1	1.6	1.6	2.0	3.7	3.2	99.9				
PR	Average for entire Proterozoic	66.4	0.7	14.6	6.6	0.3	2.4	1.5	2.5	3.3	3.0	100.3	Ronov and Migdov, 1971	1408		
28	Paratucks, Proterozoic, Russian platform	60.7	0.7	14.2	2.7	5.7	0.1	4.2	3.3	1.5	2.4	4.5	100.0			