

Geochemistry and sedimentology of the Upper Ordovician–lower Silurian black shale in the northern margin of the Upper Yangtze Platform, South China: Implications for depositional controls on organic-matter accumulation

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Supplementary paper

Table S1. Correlation coefficients of total organic carbon (TOC) and element content for samples from the Yueliangping profile.

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		Correlation coefficient																
		TOC	SiO ₂	TiO ₂	Al ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	P/Ti	Ba/Al	V _{xs}	U _{xs}	Mo _{xs}	Excess SiO ₂	Terrigenous SiO ₂	
WA1 (n = 3)	TOC	1.00																
	SiO ₂	-0.70	1.00															
	TiO ₂	0.87	-0.96	1.00														
	Al ₂ O ₃	0.76	-1.00	0.98	1.00													
	MgO	0.99	-0.82	0.94	0.86	1.00												
	CaO	0.23	-0.85	0.67	0.81	0.39	1.00											
	Na ₂ O	0.86	-0.24	0.50	0.32	0.76	-0.31	1.00										
	K ₂ O	0.81	-0.99	0.99	1.00	0.90	0.75	0.40	1.00									
	P ₂ O ₅	0.24	-0.86	0.69	0.82	0.41	1.00*	-0.29	0.76	1.00								
	P/Ti	0.24	-0.86	0.68	0.81	0.40	1.00**	-0.29	0.76	1.00**	1.00							
	Ba/Al	-0.95	0.89	-0.98	-0.92	-0.99	-0.52	-0.66	-0.95	-0.53	-0.53	1.00						
	V _{xs}	0.98	-0.56	0.77	0.62	0.94	0.04	0.94	0.69	0.06	0.05	-0.87	1.00					
	U _{xs}	0.95	-0.90	0.99	0.93	0.99	0.53	0.64	0.96	0.55	0.54	-1.00**	0.87	1.00				
	Mo _{xs}	0.82	-0.16	0.43	0.24	0.70	-0.38	1.00	0.33	-0.36	-0.37	-0.59	0.91	0.58	1.00			
	Excess SiO ₂	-0.73	.99*	-0.97	-.99*	-0.84	-0.83	-0.28	-0.99	-0.84	-0.84	0.91	-0.59	-0.91	-0.20	1.00		
	Terrigenous SiO ₂	0.76	-1.00	0.98	1.00**	0.86	0.81	0.32	1.00	0.82	0.81	-0.92	0.62	0.93	0.24	-.99*	1.00	
WA2 (n = 8)	TOC	1.00																
	SiO ₂	-0.45	1.00															
	TiO ₂	0.46	-.85**	1.00														
	Al ₂ O ₃	0.48	-.84**	.99**	1.00													
	MgO	0.44	-.94**	.80*	.77*	1.00												
	CaO	-0.06	-0.38	-0.12	-0.17	0.45	1.00											
	Na ₂ O	0.48	-.93**	.95**	.96**	.86**	0.03	1.00										
	K ₂ O	0.51	-.83*	.99**	.99**	.78*	-0.16	.95**	1.00									
	P ₂ O ₅	0.11	-0.52	0.40	0.36	.73*	0.44	0.47	0.38	1.00								
	P/Ti	-0.39	0.07	-0.32	-0.38	0.16	0.61	-0.23	-0.37	0.69	1.00							
	Ba/Al	-0.09	-0.27	-0.26	-0.30	0.26	.93**	-0.07	-0.31	0.26	0.58	1.00						
	V _{xs}	0.63	-0.35	0.35	0.40	0.34	-0.01	0.35	0.42	-0.12	-0.57	-0.21	1.00					
	U _{xs}	0.64	-.75*	0.59	0.63	.74*	0.19	.78*	0.64	0.54	-0.02	0.14	0.43	1.00				
	Mo _{xs}	0.56	-.88**	.93**	.94**	.81*	0.00	.93**	.95**	0.27	-0.45	-0.16	0.62	0.67	1.00			
	Excess SiO ₂	-0.49	.95**	-.97**	-.97**	-.88**	-0.07	-.98**	-.97**	-0.45	0.25	0.05	-0.39	-.71*	-.95**	1.00		
	Terrigenous SiO ₂	0.48	-.84**	.99**	1.00**	.77*	-0.17	.96**	.99**	0.36	-0.38	-0.30	0.40	0.63	.94**	-.97**	1.00	

* Numbers indicate values > the critical correlation coefficient at the 95% significance level; ** Numbers indicate values > the significant correlation coefficient at the 99% significance level.

		Correlation coefficient															
		TOC	SiO ₂	TiO ₂	Al ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	P/Ti	Ba/Al	V _{xs}	U _{xs}	Mo _{xs}	Excess SiO ₂	Terrigenous SiO ₂
LA1 (n = 10)	TOC	1.00															
	SiO ₂	-.92**	1.00														
	TiO ₂	.90**	-.99**	1.00													
	Al ₂ O ₃	.89**	-.99**	.99**	1.00												
	MgO	.79**	-.94**	.96**	.97**	1.00											
	CaO	0.09	-0.19	0.20	0.20	0.32	1.00										
	Na ₂ O	.91**	-.91**	.89**	.89**	.76*	-0.04	1.00									
	K ₂ O	.88**	-.98**	.99**	.99**	.98**	0.26	.82**	1.00								
	P ₂ O ₅	0.62	-.78**	.77**	.80**	.80**	0.55	0.61	.78**	1.00							
	P/Ti	-0.17	0.04	-0.07	-0.03	0.03	0.59	-0.16	-0.03	0.54	1.00						
	Ba/Al	-.83**	.87**	-.88**	-.88**	-.84**	-0.25	-.80**	-.88**	-.64*	0.13	1.00					
	V _{xs}	0.62	-.67*	.66*	.65*	.70*	0.35	0.36	.75*	0.60	0.13	-0.61	1.00				
	U _{xs}	0.61	-.67*	0.63	.65*	0.58	-0.10	0.52	.65*	.64*	0.18	-0.56	.74*	1.00			
	Mo _{xs}	.83**	-.92**	.90**	.92**	.84**	-0.11	.89**	.87**	.69*	-0.06	-.74*	0.54	.76*	1.00		
	Excess SiO ₂	-.91**	.99**	-.99**	-.99**	-.96**	-0.20	-.90**	-.98**	-.79**	0.04	.88**	-.66*	-.66*	-.93**	1.00	
Terrigenous us SiO ₂	.89**	-.99**	.99**	1.00**	.97**	0.20	.89**	.99**	.80**	-0.03	-.88**	.65*	.65*	.92**	-.99**	1.00	
LA2 (n = 5)	TOC	1.00															
	SiO ₂	0.83	1.00														
	TiO ₂	0.25	0.35	1.00													
	Al ₂ O ₃	0.05	0.36	.90*	1.00												
	MgO	-0.83	-.99**	-0.45	-0.44	1.00											
	CaO	-0.80	-.98**	-0.52	-0.51	.99**	1.00										
	Na ₂ O	0.24	0.27	0.44	0.54	-0.31	-0.33	1.00									
	K ₂ O	0.07	0.38	.92*	.99**	-0.47	-0.54	0.47	1.00								
	P ₂ O ₅	-0.78	-.93*	-0.40	-0.45	.93*	.92*	-0.61	-0.44	1.00							
	P/Ti	-0.79	-.93*	-0.54	-0.56	.96*	.96*	-0.58	-0.56	.98**	1.00						
	Ba/Al	-0.69	-.95*	-0.58	-0.59	.97**	.98**	-0.23	-0.62	0.84	.90*	1.00					
	V _{xs}	-0.05	0.43	0.67	.91*	-0.49	-0.54	0.44	.90*	-0.49	-0.55	-0.63	1.00				
	U _{xs}	0.42	0.26	0.75	0.61	-0.35	-0.38	0.81	0.59	-0.50	-0.56	-0.31	0.31	1.00			
	Mo _{xs}	0.09	0.02	-0.07	-0.30	-0.01	0.00	-.89*	-0.21	0.35	0.26	-0.10	-0.31	-0.50	1.00		
	Excess SiO ₂	0.83	0.80	-0.22	-0.28	-0.74	-0.68	-0.08	-0.25	-0.66	-0.60	-0.59	-0.14	-0.12	0.21	1.00	
Terrigenous us SiO ₂	0.05	0.36	.90*	1.00**	-0.44	-0.51	0.54	.99**	-0.45	-0.56	-0.59	.91*	0.61	-0.30	-0.28	1.00	

* Numbers indicate values > the critical correlation coefficient at the 95% significance level; ** Numbers indicate values > the significant correlation coefficient at the 99% significance level.