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CORRECTION

Correction to: Petrology, physicochemical and thermal analyses of selected cretaceous coals from the Benue Trough Basin in Nigeria

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Correction to: Int J Coal Sci Technol (2020) 7(1):26–42
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In this article, Professor Nikki Wagner (Department of Geology, University of Johannesburg, South Africa) raised the following concerns in the data presented in Tables 1 and 2.

1. In Table 1, the sum of proximate data (ash + moisture + fixed carbon + volatile matter) which is far above 100% for Lamja2, Garin-Maiganga, Okaba and Lafia-Obi coal samples.
2. In Table 1, the sum of ultimate data (total sulphur + carbon, nitrogen + hydrogen + oxygen) is far below 50% for Enugu and Imiegba coal samples.
3. In Table 2, the sum of macerals (vitrinite + inertinite + lipnite + mineral matter) which is far above 100% for Enugu and Imiegba coal samples.

Corrections:

Table 1: Proximate analyses (as-received basis) and ultimate analyses (dry basis; C, H, N, total S, and O by difference). The derived values (O/C, H/C and VM/FC), heating value parameters (HHV and LHV) and mineral matter (MM) of coals.

Table 2: Macerals, subtotals of vitrinite submacerals (in italics), and totals of maceral groups and of minerals (in italics) along with the vitrinite maximum and random reflectances and the respective standard deviations of the reflectances. Note that the first column for each coal includes the

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Table 1 Proximate and ultimate analyses of Cretaceous coals from Benue Trough Basin (n = 3)

Parameter	LBT			MBT	UBT			
	Enugu	Imiegba	Okaba	Lafia-Obi	Chikila	Lamja1	Lamja2	Garin-Maiganga
Proximate analysis (as-received basis)								
Moisture (%)	3.17	3.77	8.63	11.59	3.07	2.98	12.91	11.35
Volatile matter (%)	21.74	24.10	40.03	46.04	35.27	35.15	32.04	39.14
Fixed carbon (%)	19.55	15.38	43.65	35.16	53.80	53.76	43.11	45.39
Ash (%)	55.54	56.75	7.69	7.21	7.86	8.11	11.94	4.12
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ultimate analysis (dry basis)								
Hydrogen (%)	3.05	3.32	5.37	6.17	5.48	5.55	4.99	5.09
Carbon (%)	32.18	26.37	62.73	61.80	74.04	74.20	57.51	63.07
Nitrogen (%)	0.43	0.27	1.27	0.91	1.50	1.48	1.13	0.77
Total sulphur (%)	0.20	0.68	0.74	1.74	0.67	0.67	0.49	0.37
Oxygen (%)	8.60	12.61	22.20	22.17	10.45	9.99	23.94	26.58
O/C	0.3	0.5	0.4	0.4	0.1	0.1	0.4	0.4
H/C	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VM/FC	1.1	1.6	0.9	1.3	0.7	0.7	0.7	0.9
MM	60.1	61.7	8.7	8.7	8.9	9.1	13.2	4.7
HHV	11.1	9.8	25.5	23.2	28.8	28.7	23.7	26.1
LHV	10.4	9.0	24.2	21.7	27.6	27.5	22.3	24.8

LBT Lower Benue Trough, *MBT* Middle Benue Trough, *UBT* Upper Benue Trough

Proximate analyses (as-received basis) and ultimate analyses (dry basis; C, H, N, total S, and O by difference) of coals

Table 2 Maceral composition (mineral matter free basis, mmf) and mean reflectance of Cretaceous coals from the Benue Trough. Macerals, subtotals of vitrinite submacerals (in italics), and totals of maceral groups and of minerals (in italics) along with the vitrinite maximum and random reflectances and the respective standard deviations of the reflectances. Note that the first column for each coal includes the minerals in the total and the second column is the mineral-free normalization of the maceral content

Macerals	LBT						MBT		UBT							
	Enugu		Imiegba		Okaba		Lafia-Obi		Chikila		Lamja1		Lamja2		Garin-Maiganga	
Telinite	13.4	22.7	12.5	51.4	8.2	8.3	8.9	9.5	10.3	10.5	8.7	8.8	23.6	23.9	15.8	15.8
Collotelinite	6.6	11.0	4.2	17.1	19.5	19.6	21.6	22.9	64.0	65.6	71.1	72.3	47.2	47.8	8.1	8.1
Total telovitrinite	*20.0*	*33.7*	*16.7*	*68.6*	*27.7*	*27.9*	*30.5*	*32.4*	*74.3*	*76.1*	*79.8*	*81.1*	*70.8*	*71.7*	*23.9*	*23.9*
Vitrodetrinite	15.9	26.7	3.8	15.7	25.1	25.3	25.3	26.9	11.3	11.6	6.7	6.8	10.0	10.1	16.9	16.9
Collodetrinite	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total detrovitrinite	*15.9*	*26.7*	*3.8*	*15.7*	*25.5*	*25.7*	*25.3*	*26.9*	*11.3*	*11.6*	*6.7*	*6.8*	*10.0*	*10.1*	*16.9*	*16.9*
Corpogelinite	3.8	6.4	1.7	7.1	3.7	3.8	3.7	4.0	3.1	3.2	0.4	0.4	3.2	3.2	2.2	2.2
Gelinite	0.0	0.0	0.0	0.0	1.5	1.5	3.0	3.2	0.3	0.4	0.0	0.0	0.0	0.0	0.7	0.7
Total gelovitrinite	*3.8*	*6.4*	*1.7*	*7.1*	*5.2*	*5.3*	*6.7*	*7.1*	*3.4*	*3.5*	*0.4*	*0.4*	*3.2*	*3.2*	*2.9*	*2.9*
Total vitrinite	*39.7*	*66.9*	*22.2*	*91.4*	*58.4*	*58.9*	*62.5*	*66.4*	*89.0*	*91.2*	*87.0*	*88.4*	*84.0*	*85.0*	*43.8*	*43.8*
Fusinite	5.9	9.9	1.0	4.3	23.6	23.8	12.3	13.0	4.5	4.6	5.9	6.0	10.0	10.1	37.5	37.5
Semifusinite	3.1	5.2	1.0	4.3	9.0	9.1	2.2	2.4	0.7	0.7	0.4	0.4	0.4	0.4	15.1	15.1
Micrinite	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1
Macrinite	0.3	0.6	0.0	0.0	0.0	0.0	0.4	0.4	0.7	0.7	0.8	0.8	0.0	0.0	0.0	0.0
Secretinite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Funginite	t	t	0.0	0.0	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	2.0	2.0	0.0	0.0
Inertodetrinite	0.0	0.0	0.0	0.0	0.4	0.4	1.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total inertinite	*9.3*	*15.7*	*2.1*	*8.6*	*33.3*	*33.6*	*16.7*	*17.8*	*6.2*	*6.3*	*7.5*	*7.6*	*12.4*	*12.6*	*53.7*	*53.7*
Sporinite	4.8	8.1	0.0	0.0	3.0	3.0	4.8	5.1	0.7	0.7	2.4	2.4	0.8	0.8	1.1	1.1
Cutinite	0.7	1.2	0.0	0.0	1.5	1.5	0.0	0.0	1.7	1.8	1.6	1.6	1.2	1.2	0.7	0.7
Resinite	4.8	8.1	0.0	0.0	2.6	2.6	10.0	10.7	0.0	0.0	0.0	0.0	0.4	0.4	0.7	0.7
Alginite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Liptodetrinite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Suberinite	t	t	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exsudatinite	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total liptinite	*10.3*	*17.4*	*0.0*	*0.0*	*7.5*	*7.5*	*14.9*	*15.8*	*2.4*	*2.5*	*4.0*	*4.0*	*2.4*	*2.4*	*2.6*	*2.6*
Silicate	37.2		75.0		0.7		3.3		2.4		1.6		0.8		0.0	
Sulfide	0.3		0.3		0.0		1.9		0.0		0.0		0.4		0.0	
Carbonate	0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
Other	3.1		0.3		0.0		0.7		0.0		0.0		0.0		0.0	
Total mineral	*40.7*		*75.7*		*0.7*		*5.9*		*2.4*		*1.6*		*1.2*		*0.0*	
R max	0.55		0.45		0.49		0.39		0.71		0.73		0.72		0.39	
Stdev	0.05		0.05		0.03		0.02		0.04		0.03		0.03		0.03	
R random	0.52		0.42		0.45		0.35		0.66		0.67		0.69		0.35	
Stdev	0.04		0.04		0.04		0.03		0.05		0.05		0.04		0.03	

minerals in the total and the second column is the mineral-free normalization of the maceral content.