

---

# COAL QUALITY SPECIFICATION

---

Nº ETT\_SP\_TC

---



ISO 45001:2018



ISO 9001:2015



ISO 14001:2015



### COAL STOCKPILE QUALITY (Weighted average)

<b>Total moisture</b> <b>TM (ar)</b> <b>6.0%</b> (-3.0; +3.0)	<b>Ash (db)</b> <b>18.5%</b> (-5.0; +5.0)	<b>Volatile matter</b> <b>VM (daf)</b> <b>32.0%</b> (-5.0; +5.0)
<b>Total sulphur</b> <b>S (ad)</b> <b>≤1.5%</b> max	<b>Calorific value</b> <b>CV (ar)</b> <b>5500</b> (-800; +500)	<b>Quantity</b> <b>128.0</b> Thousand tons

The following is the result of the laboratory tests.

ALS GROUP LLC  
 Mongol Nakhmal Building, 2nd khoroo  
 Chinggis Avenue, Khan-Uul District  
 Ulaanbaatar, Mongolia  
 Tel +976 70 007667



CERTIFICATE OF ANALYSIS  
 23E18-TT-23H59-TT

**CLIENT:** Erdenes Tavantolgoi JSC  
**ADDRESS:** Finance Center, Jigjidjav-8  
 1st khoroo, Chingeltei District  
 Ulaanbaatar, Mongolia  
**ATTN:** Galtzaya.B  
**PROJECT NO.** xxx  
**LAB. JOB NO.** 23E18-TT-23H59-TT  
**NO. SAMPLES:** 67  
**Notes/Comments:** xxx

**SAMPLES RECEIVED:** 08/08/2023-4/05/2023  
**INSTRUCTIONS RECEIVED:** 08/08/2023-4/05/2023  
**DATE OF REPORT:** 09/08/2023-5/05/2023  
**STATUS OF REPORT:** FINAL  
**ANALYSIS COMPLETE:** 09/08/2023-5/05/2023  
**PREPARATION CODE:** CRUSH-01, 02: MILL-01  
**ANALYSIS CODE:** 2.1\_COOKING COAL  
 2.1\_THERMAL COAL  
 TM, MOIS, ASH, VOL, TSUL,  
 GCV, CSN, CIGN

APPROVED BY: Laboratory Manager  
 Quality Manager

CHECKED BY: Chief Chemist

These test results are representative only of the sample received in the laboratory.

LAB NO.	SAMPLE NO.	STANDARD METHOD											
		GB/T 211	GB/T 212	GB/T 212	GB/T 212	ISO 19579	GB/T 213	GB/T 212	GB/T 212	GB/T 212	GB/T 212	ISO 19579	GB/T 213
		AS RECEIVED BASIS						AIR DRIED BASIS					
		Total Moisture (TM)	Ash (ASH)	Volatile Matter (VOL)	Fixed Carbon (FC)	Total Sulphur (TSUL)	Gross Calorific Value (GCV)	Moisture (MOIS)	Ash (ASH)	Volatile Matter (VOL)	Fixed Carbon (FC)	Total Sulphur (TSUL)	Gross Calorific Value (GCV)
		%						kcal/kg					
1	WSS-23-6-1tr-1A-106	6.69	14.08	25.13	54.11	0.34	6217	2.21	14.76	26.33	56.70	0.36	6515
2	WSS-23-6-1tr-1B-122	3.80	17.33	25.42	53.45	0.39	6339	1.18	17.80	26.11	54.91	0.40	6511
3	WSS-23-6-1tr-1C-123	3.38	16.95	25.63	54.04	0.46	6466	1.05	17.36	26.25	55.34	0.47	6622
4	ETT_SP_30009-1E	2.77	18.75	25.90	52.58	0.91	6324	0.85	19.12	26.42	53.62	0.93	6449
5	ETT_SP_30009-1F	5.25	17.84	24.74	52.17	0.44	6158	1.20	18.60	25.80	54.40	0.46	6421
6	ETT_SP_30009-1G	2.59	17.49	22.10	57.82	0.66	6675	0.96	17.78	22.47	58.79	0.67	6787
7	ETT_SP_30009-1H	4.98	17.34	19.70	57.98	0.69	6418	1.69	17.94	20.38	59.99	0.72	6640
8	WSS-23-6-1tr-2A-136	6.06	17.68	24.62	51.65	0.49	6127	2.15	18.42	25.64	53.79	0.51	6382
9	WSS-23-6-1tr-2B-147	4.79	15.54	26.21	53.46	0.40	6331	1.19	16.13	27.20	55.48	0.42	6570
10	WSS-23-6-1tr-2C-148	4.85	16.96	25.54	52.65	0.39	6148	1.11	17.63	26.54	54.72	0.41	6389
11	WSS-23-6-1tr-2D-154	5.59	16.73	25.19	52.48	0.49	6223	1.33	17.49	26.33	54.85	0.51	6504
12	ETT_SP_30009-2E	4.24	21.63	23.43	50.69	0.42	5922	1.31	22.30	24.15	52.24	0.43	6103
13	ETT_SP_30009-2F	4.38	21.49	24.97	49.16	0.41	5784	1.35	22.17	25.76	50.72	0.43	5968

ALS GROUP LLC  
Mongol National Building, 2nd khoroо  
Chinggis Avenue, Khan-Lal District  
Ulaanbaatar, Mongolia  
Tel +976 70 007667



**CERTIFICATE OF ANALYSIS**  
**23E18-TT-23H59-TT**

**CLIENT:** Erdenes Tavantolgoi JSC  
**ADDRESS:** Finance Center, Jigjidjav-8  
1st khoroо, Chingelbai District  
Ulaanbaatar, Mongolia  
**ATTN:** Galtzaya.B  
**PROJECT NO.** xxx  
**LAB. JOB NO.** 23E18-TT-23H59-TT  
**NO. SAMPLES:** 67  
**Notes/Comments:** xxx

**SAMPLES RECEIVED:** 08/08/2023-4/05/2023  
**INSTRUCTIONS RECEIVED:** 08/08/2023-4/05/2023  
**DATE OF REPORT:** 09/08/2023-5/05/2023  
**STATUS OF REPORT:** FINAL  
**ANALYSIS COMPLETE:** 09/08/2023-5/05/2023  
**PREPARATION CODE:** CRUSH-01, 02; MILL-01  
**ANALYSIS CODE:** 1.1\_COOKING COAL  
2.1\_THERMAL COAL  
TM, MOIS, ASH, VOL, TSUL,  
GCV, CSN, CKIN

*These test results are representative only of the sample received in the laboratory.*

LAB NO.	STANDARD METHOD	SAMPLE NO.	GB/T 212				ISO 19579				GB/T 213				Crucible Swelling Number (CSN)	GB/T 5447	
			Ash (ASH)	Volatile Matter (VOL)	Fixed Carbon (FC)	Total Sulphur (TSUL)	Gross Calorific Value (GCV)	Volatile Matter (VOL)	Fixed Carbon (FC)	Total Sulphur (TSUL)	Gross Calorific Value (GCV)	Crucible Swelling Number (CSN)	Coal Caking Index (CKIN)				
													5:1	3:3			
			%				%				kcal/kg						
1	WSS-23-6-1tr-1A-106		15.09	26.93	57.98	0.37	6663	31.71	68.29	0.43	7847						
2	WSS-23-6-1tr-1B-122		18.01	26.42	55.56	0.41	6589	32.23	67.77	0.50	8037						
3	WSS-23-6-1tr-1C-123		17.55	26.53	55.93	0.48	6692	32.17	67.83	0.58	8116						
4	ETT_SP_30009-1E		19.28	26.64	54.08	0.94	6504	33.00	67.00	1.16	8057						
5	ETT_SP_30009-1F		18.83	26.12	55.06	0.46	6499	32.17	67.83	0.57	8007						
6	ETT_SP_30009-1G		17.95	22.69	59.36	0.68	6852	27.65	72.35	0.83	8352						
7	ETT_SP_30009-1H		18.24	20.73	61.02	0.73	6755	25.36	74.64	0.89	8262						
8	WSS-23-6-1tr-2A-136		18.82	26.20	54.98	0.52	6522	32.28	67.72	0.64	8034	2.0			11		
9	WSS-23-6-1tr-2B-147		16.32	27.52	56.15	0.42	6649	32.89	67.11	0.51	7946				13		
10	WSS-23-6-1tr-2C-148		17.83	26.84	55.33	0.41	6461	32.66	67.34	0.50	7843				5		
11	WSS-23-6-1tr-2D-154		17.72	26.68	55.59	0.52	6591	32.43	67.57	0.63	8011				14		
12	ETT_SP_30009-2E		22.59	24.47	52.93	0.44	6185	31.61	68.39	0.56	7990						
13	ETT_SP_30009-2F		22.47	26.11	51.42	0.43	6049	33.68	66.32	0.56	7803						



ISO 45001:2018



ISO 9001:2015



ISO 14001:2015



[www.ett.mn](http://www.ett.mn)



75055555  
1800-1072



Финанс төв, 1-р хороо,  
Чингэлтэй дүүрэг,  
Улаанбаатар хот

