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# НҮҮРСНИЙ ОВООЛГЫН ҮЗҮҮЛЭЛТ

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№ ETT\_SP\_TC



ISO 45001:2018



ISO 9001:2015



ISO 14001:2015



НҮҮРСНИЙ ОВООЛГЫН ЧАНАРЫН ДУНДАЖ ҮЗҮҮЛЭЛТ

<p><b>НИЙТ ЧИЙГ (ar)</b></p> <p><b>6.0%</b></p> <p>(-3.0; +3.0)</p>	<p><b>ҮНСЛЭГ (db)</b></p> <p><b>18.5%</b></p> <p>(-5.0; +5.0)</p>	<p><b>ДЭГДЭМХИЙ (daf)</b></p> <p><b>32.0%</b></p> <p>(-5.0; +5.0)</p>
<p><b>НИЙТ ХҮХЭР (ad)</b></p> <p><b>≤1.5%</b></p> <p>max</p>	<p><b>ИЛЧЛЭГ (ar)</b></p> <p><b>5500</b></p> <p>(-800; +500)</p>	<p><b>НҮҮРСНИЙ ХЭМЖЭЭ</b></p> <p><b>128.0</b></p> <p>МЯН.ТН</p>

НҮҮРСНИЙ ОВООЛГЫН ШИНЖИЛГЭЭНИЙ ҮР ДҮН

ALS GROUP LLC  
Mongol Nekhmal 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. COKING COAL  
TM, MOIS, ASH, VOL, TSUL,  
GCV, CSN, CIGN

**APPROVED BY:** Laboratory Manager  
*(Signature)*  
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	%						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  
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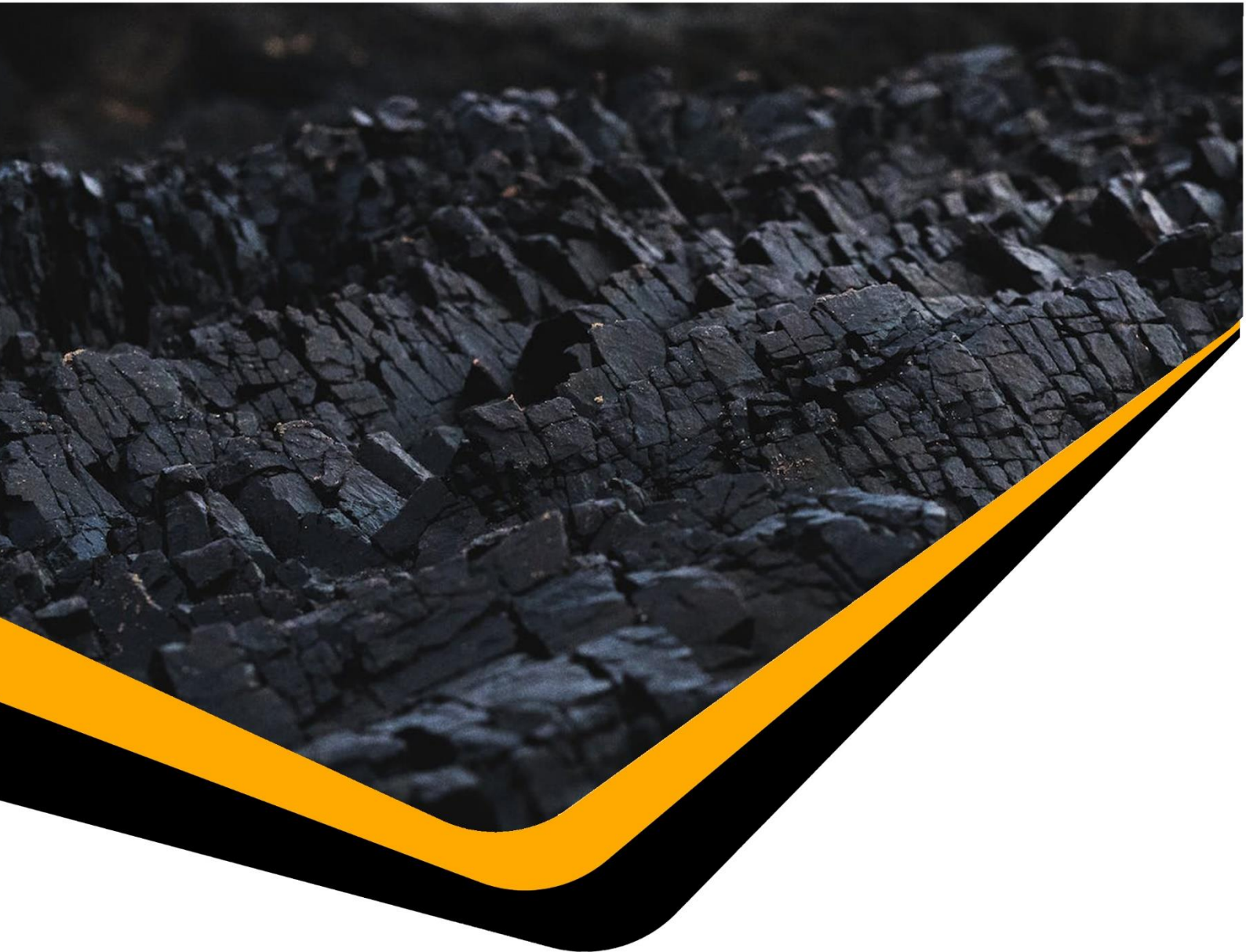
**CERTIFICATE OF ANALYSIS**  
**23E18-TT-23H59-TT**

**CLIENT:** Erdenes Tavantolgoi JSC  
**ADDRESS:** Finance Center, Jigjidjav-8  
1st khoroо, Chingelbai District  
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**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	7863				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

