

**ALS GROUP LLC**

Mongol Nekhmel Building, 2nd khoroo  
 Chinggis Avenue, Khan-Uul District  
 Ulaanbaatar, Mongolia  
 Tel +976 70 007667



**CERTIFICATE OF ANALYSIS  
 24E171-TT**

**CLIENT:** Tavantolgoi LLC  
**ADDRESS:** Umnugovi, Tsogttsetsii  
 Tsagaan owoo bag  
 Tavantolgoi LLC  
**ATTN:** Anar-Erdene.S  
**PROJECT NO.** xxx  
**LAB. JOB NO.** 24E171-TT  
**NO. SAMPLES:** 2  
**Notes/Comments:** xxx

**SAMPLES RECEIVED:** 15/May/24  
**INSTRUCTIONS RECEIVED:** 15/May/24  
**DATE OF REPORT:** 17/May/24  
**STATUS OF REPORT:** FINAL  
**ANALYSIS COMPLETE:** 17/May/24  
**PREPARATION CODE:** CRUSH-01, 02; MILL-01  
**ANALYSIS CODE:** TM, MOIS, ASH, VOL, TSUL,  
 GCV, CSN, CKIN

**APPROVED BY:** Laboratory Manager  
*[Signature]*  
 Quality Manager  
**CHECKED BY:** Chief Chemist

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

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
LAB NO.	SAMPLE NO.	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	R3-S5-01-1	1.04	24.66	24.09	50.21	1.31	6304	0.55	24.78	24.21	50.46	1.32	6335
2	R3-S5-01-2	0.84	20.92	25.33	52.91	0.76	6663	0.51	20.98	25.42	53.09	0.76	6685

**QUALITY ASSURANCE/QUALITY CONTROL DATA**

STDALSWS-40/23	ASH	VOL	GCV	TSUL
Certified Value	10.67	20.55	7696	0.620
Standard Deviation	0.056	0.137	24	0.0144
Unit	%	%	kcal/kg	%
Analyzed value	10.67	20.53	7690	0.624

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STANDARD METHOD		GB/T 212	GB/T 212	GB/T 212	ISO 19579	GB/T 213	GB/T 212	GB/T 212	ISO 19579	GB/T 213	GB/T 5448	GB/T 5447		
LAB NO.	SAMPLE NO.	DRY BASIS					DRY, ASH-FREE BASIS					Crucible Swelling Number (CSN)	Coal Caking Index (CKIN)	
		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)	5:1		3:3	
		%					kcal/kg							
1	R3-S5-01-1	24.92	24.34	50.74	1.32	6370	32.42	67.58	1.76	8485	6.0	73	-	
2	R3-S5-01-2	21.09	25.55	53.36	0.77	6719	32.38	67.62	0.97	8515	6.5	78	-	