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# НҮҮРСНИЙ ОВООЛГЫН ҮЗҮҮЛЭЛТ

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№ ETT\_SP\_TC

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ISO 45001:2018

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ISO 9001:2015

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ISO 14001:2015



### НҮҮРСНИЙ ОВООЛГЫН ЧАНАРЫН ДУНДАЖ ҮЗҮҮЛЭЛТ

**НИЙТ ЧИЙГ  
TM (ar)**

**≤9.0%**

**НИЙТ ХҮХЭР S(db)**

**1.5%**

(-0.3; +0.5)

**ДЭГДЭМХИЙ БОДИС VM  
(daf)**

**>20-37.0%**

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**ИЛЧЛЭГ (ar)**

**≥6000**

**БАРЬЦАЛДАХ  
ЧАНАР**

**≤30.0**

**НҮҮРСНИЙ  
ХЭМЖЭЭ**

**64.0**

**МЯН.ТН**

### НҮҮРСНИЙ ОВООЛГЫН ШИНЖИЛГЭЭНИЙ ҮР ДҮН

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



CERTIFICATE OF ANALYSIS  
25D309,E57,E299,F36,G09,G230,G344-TT

CLIENT: **Erdenes Tavantolgoi JSC**  
ADDRESS: Finance Center, Jigjidjav-8  
1st khoroo, Chingelhei District  
Ulaanbaatar, Mongolia  
ATTN: Erkhembayar.M  
PROJECT NO. xxx  
LAB. JOB NO. 25D309,E57,E299,F36,G09,G230,G344-TT  
NO. SAMPLES: 15  
Notes/Comments: xxx

SAMPLES RECEIVED: 30/04/2025 21/07/2025  
INSTRUCTIONS RECEIVED: 30/04/2025 21/07/2025  
DATE OF REPORT: 1/05/2025 28/07/2025  
STATUS OF REPORT: FINAL  
ANALYSIS COMPLETE: 1/05/2025 28/07/2025  
PREPARATION CODE: CRUSH-01.02.MLL-01  
ANALYSIS CODE: 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.

| STANDARD METHOD | LAB NO.  | SAMPLE NO. | 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               | 25112430 |            | 3.76                | 21.68     | 18.27                 | 56.29             | 1.03                 | 6118                        | 1.06            | 22.29     | 18.78                 | 57.87             | 1.06                 | 6290                        |         |
| 2               | 25112530 |            | 7.27                | 18.62     | 18.32                 | 55.79             | 0.62                 | 5923                        | 2.67            | 19.55     | 19.23                 | 58.55             | 0.65                 | 6217                        |         |
| 3               | 25119306 |            | 6.98                | 16.78     | 16.80                 | 59.44             | 0.45                 | 6139                        | 1.77            | 17.72     | 17.74                 | 62.77             | 0.48                 | 6482                        |         |
| 4               | 25119406 |            | 6.41                | 14.53     | 17.81                 | 61.25             | 0.60                 | 6486                        | 1.72            | 15.25     | 18.70                 | 64.32             | 0.63                 | 6811                        |         |
| 5               | 25148226 |            | 8.22                | 16.54     | 17.71                 | 57.53             | 0.44                 | 6080                        | 2.40            | 17.59     | 18.83                 | 61.18             | 0.49                 | 6466                        |         |
| 6               | 25148326 |            | 8.26                | 19.27     | 16.82                 | 55.65             | 0.48                 | 5821                        | 2.14            | 20.56     | 17.94                 | 59.37             | 0.51                 | 6210                        |         |
| 7               | 25148626 |            | 8.46                | 17.13     | 16.58                 | 57.83             | 0.45                 | 5999                        | 1.89            | 18.36     | 17.77                 | 61.98             | 0.48                 | 6430                        |         |
| 8               | 25158603 |            | 3.51                | 14.87     | 17.27                 | 64.36             | 0.61                 | 6822                        | 1.15            | 15.23     | 17.69                 | 65.93             | 0.63                 | 6989                        |         |
| 9               | 25158703 |            | 6.80                | 20.88     | 17.64                 | 54.68             | 0.47                 | 5769                        | 2.16            | 21.92     | 18.52                 | 57.40             | 0.49                 | 6056                        |         |
| 10              | 25173001 |            | 5.82                | 14.91     | 22.43                 | 56.84             | 0.43                 | 6206                        | 2.28            | 15.47     | 23.27                 | 58.98             | 0.45                 | 6440                        |         |
| 11              | 25173101 |            | 6.72                | 13.46     | 23.96                 | 55.86             | 0.36                 | 6219                        | 2.49            | 14.07     | 25.05                 | 58.39             | 0.38                 | 6501                        |         |
| 12              | 25186419 |            | 2.82                | 22.00     | 17.57                 | 57.61             | 1.02                 | 6357                        | 0.78            | 22.46     | 17.94                 | 58.82             | 1.04                 | 6490                        |         |
| 13              | 25186519 |            | 3.15                | 18.11     | 17.40                 | 61.34             | 1.15                 | 6475                        | 0.79            | 18.55     | 17.82                 | 62.84             | 1.17                 | 6837                        |         |
| 14              | 25199827 |            | 1.75                | 19.45     | 17.59                 | 61.21             | 0.89                 | 6716                        | 0.62            | 19.67     | 17.79                 | 61.92             | 0.90                 | 6793                        |         |
| 15              | 25199927 |            | 1.39                | 18.76     | 18.37                 | 61.47             | 1.21                 | 6735                        | 0.50            | 18.93     | 18.54                 | 62.03             | 1.22                 | 6796                        |         |

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     | 10.65 | 20.58 | 7687    | 0.616  |

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.  
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**CERTIFICATE OF ANALYSIS**  
**25D309,E57,E299,F36,G09,G230,G344-TT**

**CLIENT:** Erdenes Tavantolgoi JSC  
**ADDRESS:** Finance Center, Jigjidjav-8  
 1st khoroо, Chingeltei District  
 Ulaanbaatar, Mongolia  
**ATTN:** Erkhembayar.M  
**PROJECT NO.** xxx  
**LAB. JOB NO.** 25D309,E57,E299,F36,G09,G230,G344-TT  
**NO. SAMPLES:** 15  
**Notes/Comments:** xxx

**SAMPLES RECEIVED:** 30/04/2025 27/07/2025  
**INSTRUCTIONS RECEIVED:** 30/04/2025 27/07/2025  
**DATE OF REPORT:** 1/05/2025 28/07/2025  
**STATUS OF REPORT:** FINAL  
**ANALYSIS COMPLETE:** 1/05/2025 28/07/2025  
**PREPARATION CODE:** CRUSH-01, 02; MILL-01  
**ANALYSIS CODE:** 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. | SAMPLE NO. | STANDARD METHOD |                       |                   |                      |                             |                       |                   |                      |                             |                       |                   | GB/T 5447            |                             |     |          |         |           |  |  |
|---------|------------|-----------------|-----------------------|-------------------|----------------------|-----------------------------|-----------------------|-------------------|----------------------|-----------------------------|-----------------------|-------------------|----------------------|-----------------------------|-----|----------|---------|-----------|--|--|
|         |            | GB/T 212        |                       | GB/T 212          |                      | ISO 19579                   |                       | GB/T 213          |                      | GB/T 212                    |                       | GB/T 212          |                      | ISO 19579                   |     | GB/T 213 |         | 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) | Volatile Matter (VOL) | Fixed Carbon (FC) | Total Sulphur (TSUL) | Gross Calorific Value (GCV) | 5:1 | 3:3      |         |           |  |  |
|         |            | DRY BASIS       |                       |                   |                      |                             |                       |                   |                      |                             |                       |                   | DRY, ASH-FREE BASIS  |                             |     |          |         |           |  |  |
|         |            | %               |                       |                   |                      |                             |                       |                   |                      |                             |                       |                   | kcal/kg              |                             | %   |          | kcal/kg |           |  |  |
| 1       | 25112430   | 22.53           | 18.98                 | 58.49             | 1.07                 | 6357                        | 24.50                 | 75.50             | 1.88                 | 8206                        | -                     | -                 | 9                    | -                           | -   |          |         |           |  |  |
| 2       | 25112530   | 20.08           | 19.76                 | 60.16             | 0.67                 | 6387                        | 24.73                 | 75.27             | 0.84                 | 7992                        | -                     | -                 | 0                    | -                           | -   |          |         |           |  |  |
| 3       | 25119306   | 18.04           | 18.06                 | 63.90             | 0.49                 | 6599                        | 22.04                 | 77.96             | 0.59                 | 8052                        | -                     | -                 | 0                    | -                           | -   |          |         |           |  |  |
| 4       | 25119406   | 15.52           | 19.03                 | 65.45             | 0.65                 | 6930                        | 22.53                 | 77.47             | 0.76                 | 8203                        | -                     | -                 | 0                    | -                           | -   |          |         |           |  |  |
| 5       | 25148226   | 18.02           | 19.29                 | 62.68             | 0.50                 | 6625                        | 23.54                 | 76.46             | 0.61                 | 8081                        | -                     | -                 | 0                    | -                           | -   |          |         |           |  |  |
| 6       | 25148326   | 21.01           | 18.33                 | 60.66             | 0.52                 | 6345                        | 23.21                 | 76.79             | 0.66                 | 8032                        | -                     | -                 | 0                    | -                           | -   |          |         |           |  |  |
| 7       | 25148626   | 18.72           | 18.11                 | 63.17             | 0.49                 | 6553                        | 22.28                 | 77.72             | 0.60                 | 8062                        | -                     | -                 | 0                    | -                           | -   |          |         |           |  |  |
| 8       | 25158603   | 15.41           | 17.90                 | 66.70             | 0.64                 | 7070                        | 21.16                 | 78.84             | 0.75                 | 8357                        | -                     | -                 | 0                    | -                           | -   |          |         |           |  |  |
| 9       | 25158703   | 22.41           | 18.93                 | 58.67             | 0.50                 | 6190                        | 24.39                 | 75.61             | 0.65                 | 7977                        | -                     | -                 | 0                    | -                           | -   |          |         |           |  |  |
| 10      | 25173001   | 15.83           | 23.82                 | 60.35             | 0.46                 | 6590                        | 28.29                 | 71.71             | 0.54                 | 7829                        | -                     | -                 | 0                    | -                           | -   |          |         |           |  |  |
| 11      | 25173101   | 14.43           | 25.69                 | 59.88             | 0.39                 | 6667                        | 30.02                 | 69.98             | 0.45                 | 7791                        | -                     | -                 | 0                    | -                           | -   |          |         |           |  |  |
| 12      | 25186419   | 22.64           | 18.08                 | 59.28             | 1.05                 | 6541                        | 23.37                 | 76.63             | 1.36                 | 8455                        | -                     | -                 | 15                   | -                           | -   |          |         |           |  |  |
| 13      | 25186519   | 18.70           | 17.96                 | 63.34             | 1.18                 | 6892                        | 22.10                 | 77.90             | 1.46                 | 8477                        | -                     | -                 | 13                   | -                           | -   |          |         |           |  |  |
| 14      | 25199827   | 19.79           | 17.90                 | 62.30             | 0.90                 | 6835                        | 22.32                 | 77.68             | 1.12                 | 8522                        | -                     | -                 | 13                   | -                           | -   |          |         |           |  |  |
| 15      | 25199927   | 19.03           | 18.63                 | 62.34             | 1.22                 | 6831                        | 23.01                 | 76.99             | 1.51                 | 8435                        | -                     | -                 | 14                   | -                           | -   |          |         |           |  |  |

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