



**INCOLAB SERVICES RUSSIA S.C.**  
**COMMODITY SAMPLERS AND ANALYTICAL CHEMISTS**

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**Certificate of Sampling and Analysis**

**TO WHOM IT MAY CONCERN**

We have examined the sample(s) of  
 and report the following to be the result:

Date : 06 April 2022  
 Our ref. : 2203630RUS Ye  
 Material : COAL D GRADE (0-50 mm)  
 Ex : m/v "VOLARIS-55"  
 Lot : AVERAGE  
 Weight : 5' 351.352 mt  
 Port : Kavkaz, Russia  
 Sampling date : 04-05 April 2022

We, the undersigned Incolab Services R.S.C., confirm to have attended the loading and sampling the material of coal loaded on board of the vessel "VOLARIS-55" on 04-05 April 2022 at the port of Kavkaz.

**SAMPLING**

Sampling was carried out in accordance with I.S.O. Standards 18283.

**ANALYSIS**

TOTAL MOISTURE	:	9.5 %	ISO 589
ASH IN DRY	:	10.3 %	ISO 1171
ASH AS RECEIVED	:	9.3 %	
VOLATILE MATTER DAF	:	44.6 %	ISO 562
VOLATILE MATTER IN DRY	:	40.0 %	
VOLATILE MATTER AS RECEIVED	:	36.2 %	
GROSS AND NET CALORIFIC VALUE			ISO 1928
GROSS CALORIFIC VALUE IN DRY	:	6857 kcal/kg	
GROSS CALORIFIC VALUE AS RECEIVED	:	6206 kcal/kg	
NET CALORIFIC VALUE IN DRY	:	6612 kcal/kg	
NET CALORIFIC VALUE AS RECEIVED	:	5932 kcal/kg	
SULPHUR IN DRY	:	0.88 %	ISO 19579
SULPHUR AS RECEIVED	:	0.80 %	
FIXED CARBON DAF	:	55.4 %	ISO 17246
FIXED CARBON IN DRY	:	49.7 %	
FIXED CARBON AS RECEIVED	:	45.0 %	

**SIZING TEST:**

	+	50	mm	:	9.8 %
50	-	20	mm	:	26.5 %
20	-	15	mm	:	6.6 %
15	-	6	mm	:	20.5 %
	-	6	mm	:	36.6 %
					100.0 %

Sizing test was carried out using square mesh sieves in accordance with I.S.O. 1953.

For and on behalf of,  
 Incolab Services R.S.C.

