



Minerals Services
 Barranquilla
 F490101
 Job No. OL 76675E1
 MIN-AD-F-I004-003, V1, March 2020

TO: TRAFIGURA PTE LTD
 10 COLLYER QUAY LEVEL 29 OCEAN FINANCIAL CENTRE
 SINGAPORE

CERTIFICATE OF SAMPLING AND ANALYSIS

VESSEL	LADY SALIHA
PORT OF LOADING	BARRANQUILLA, COLOMBIA
COMMENCED LOADING	SEPTEMBER 12th, 2021
COMPLETED LOADING	SEPTEMBER 14th, 2021
SHIPPER	TRAFIGURA PTE LTD
CONSIGNEE	GEORGIAN MANGANESE LLC
QUANTITY	6,603.14 MT
PRODUCT	NUT COKE 10-30 MM
DESTINATION	BATUMI, GEORGIA

In accordance with instructions received from our principal, TRAFIGURA PTE LTD, to perform analysis of the above mentioned shipment, we hereby report the following:
 SAMPLING: Samples were collected throughout the entire loading of the vessel by manual sampling, in accordance with ISO 18283 Standards.
 ANALYSIS: 5 Sub-lot samples were analyzed in accordance the applicable standard methods.

CALCULATED COMPOSITE SAMPLE

*-COMPLETE PROXIMATE	As Received Basis	Dry Basis	Method
Moisture, Total - ISO	8.2		ISO 589:2008
Ash - ISO, pct.wt.	12.6	13.8	ISO 1171:2010(A)
Volatile Matter, pct.wt.	1.1	1.2	ISO 562:2010(A)
Fixed Carbon	78.04	85.01	ISO 17246:2010 (by diff)
Sulfur - ISO	0.62	0.68	ISO 19579:2006
Gross Calorific Value	11239	12241	ISO 1928:2020
Gross Calorific Value (Kcal/Kg)	6243	6801	ISO 1928:2020
Gross Calorific Value (GJ/Ton)	26.14	28.47	ISO 1928:2020
Gross Calorific Value (J/g)	26140	28475	ISO 1928:2020(A)

RESULTS BASED ON AVERAGE WEIGHTED COMPOSITE SAMPLE
 Laboratory ID: 4903-CO2101794.010

Analysis Date: 22/09/2021

*-PHOSPHOROUS IN COKE ANALYSIS	As Received Basis	Dry Basis	Method
Phosphorous In Coke	0.037	0.041	ISO 622-2016

Size Distribution (Standard ISO 728:1995)
CALCULATED COMPOSITE SAMPLE

Size Fraction	Fractional %
Retained 30 mm (30 mm), square	9.2
Retained 10 mm (10 mm), square, Passing 30 mm (30 mm), square	86.4
Retained 1/4 in (6.3 mm), square, Passing 10 mm (10 mm), square	1.9
Passing 1/4 in (6.3 mm), square	2.5
	100.0



SGS Colombia S.A.S.

Km. 8 Vía Aeropuerto Ernesto Cortissoz
 Barranquilla,
 Colombia
 Phone: +57 5 376 9500 Ext 521
 Fax: +57 5 376 9503

This document is issued by the Company subject to its General Conditions of Service (www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues established therein.
 This document is to be treated as an original within the meaning of UCP 600. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.
 The authenticity of this document may be verified at <https://sgsonsite.sgs.com/en/v2/common/ecertificate/authenticatteeCertificate.jsp>.



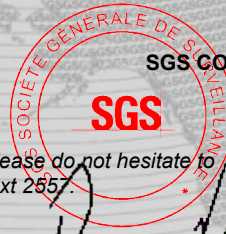
(A) These test results are accredited by the (ORGANISMO NACIONAL DE ACREDITACIÓN DE COLOMBIA - ONAC) in accordance with the requirements of ISO/IEC-17025: 2017 for the scope established in the Accreditation Certificate N° 13-LAB -015. The validity of this Certificate can be verified in www.onac.org.co.

The manual sampling method was agreed with the SGS Principal, as sampling by more reliable methods that provide probability samples was not possible at the place of execution. The Holder of this document is cautioned that collected manual samples of this type do not satisfy the minimum requirements for probability sampling, and as such cannot be used to draw statistical such as precision, standard error, or bias. The suitability of this sampling method is defined by the sampling standard. According to instructions received from our Principal after the vessel's departure, the certificate is separated in 2 parts 15300.00 MT and 6603.14 MT respectively, it is reported that quality results in this certificate correspond to the total composite sample of 21903.14 MT.

Issued in
Barranquilla, Colombia
SEPTEMBER 21st, 2021

Should you have any request or complaint regarding the authenticity of this document please do not hesitate to contact us to co.servicioalcliente@sgs.com, phone number in Colombia 57 1 7422274 ext 2557.

End of Document



SGS COLOMBIA S.A.S



VIGILADO SuperTron Director



ISO/IEC 17025:2017
13-LAB-015



SGS Colombia S.A.S.

Km. 8 Vía Aeropuerto Ernesto Cortissoz
Barranquilla,
Colombia
Phone: +57 5 376 9500 Ext 521
Fax: +57 5 376 9503

This document is issued by the Company subject to its General Conditions of Service (www.sgs.com/en/Terms-and-Conditions.aspx). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues established therein.
This document is to be treated as an original within the meaning of UCP 600. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.
The authenticity of this document may be verified at <https://sgsonsite.sgs.com/en/v2/common/ecertificate/authenticateCertificate.jsp>.