

SUBMITTED SAMPLE ANALYTICAL REPORT

SGS Reference:	RB21-07273 "a SANAS Accredited Testing Laboratory, No. T0465".	Date Issued:	29 October 2021
Client Reference:	SULKEHOEK	Date(s) Tested:	27-28 October 2021
Client Reference 2.:		Principal:	EPWORTH MINERALS PTY LTD
Sample Type:	Coal Sample	Address:	40 BOWLING ROAD
Sample Received From:	Epworth minerals	City, State, Postal:	BEDFORDVIEW 2007
Sample Description:	1 x 20kg Raw sample	Country:	South Africa
Date Sample received:	26 October 2021	Attention:	WELCOME@SANDAWANA.CO.ZA
Seal Numbers:	None		

The sample(s), to which the findings recorded herein (the "FINDINGS") relate, was (were) drawn and / or provided by the Client or a third party acting on Client's directions. The Findings constitute no warranty of the sample's representativity of all the goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is /are said to be extracted.

Analysis performed in accordance with ISO Standards or other International Standards and SGS Procedures.

Analysis marked with: * denotes SGS accredited test; with # denotes SGS non-accredited test, with ** performed by a Third Party Laboratory - accredited test; with ## performed by Third Party Laboratory - non-accredited test. See METHODS PAGE for more details.

Values are reported to relevant number of significant decimal places. This can result in small rounding differences between Moisture Conversions.

			As-Received Basis (ar)	As-Determined Basis (ad)	Dry Basis (db)	Dry Ash-Free Basis (daf)
Proximate Analysis	Moisture	%	8,0	3,8	-----	-----
Moisture (Total) *	Ash *	%	7,4	7,7	8,0	-----
Moisture (as-determined) *	ISO Volatile Matter *	%	30,6	32,0	33,3	36,2
	Fixed Carbon (calculation by difference)	%	54,0	56,5	58,7	63,8
	Total Sulfur *	%	0,51	0,53	0,55	0,60

Gross Calorific Value *	kcal/kg		6708	7014	7291
ISO 1928	Net CV, constant volume	kcal/kg	6465	6785	7075

NCV(v) requires H analysis

			As-Received Basis (ar)	As-Determined Basis (ad)	Dry Basis (db)	Dry Ash-Free Basis (daf)
Ultimate Analysis	Moisture (Total) *	%				
	Moisture (as-determined) *	%				
	Total Carbon *	%	69,2	72,4	75,3	81,8
	Total Hydrogen (includes H in moisture) *	%	4,94	4,65	4,39	4,77
	Total Nitrogen *	%	1,84	1,92	2,00	2,17
	Total Sulfur *	%	0,51	0,53	0,55	0,60
	Ash *	%	7,4	7,7	8,0	-----
	Oxygen by diff.(includes O in moisture)	%	16,11	12,80	9,76	10,66
	Total	%	100,00	100,00	100,00	100,00
	Moisture	%	(8)	(3,8)	-----	-----
	<i>Hydrogen (excludes H in moisture)</i>	%	4,04	4,22	<i>DB & DAF H & O values exclude H & O in moisture</i>	
	<i>Oxygen (excludes O in moisture)</i>	%	9,01	9,43		

Chlorine	%	0,005
Fluorine	ppm	104
Arsenic	ppm	0,210
Mercury	mg/kg	0,149
%P in Coal	%	0,011

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Client Reference: SULKEHOEK
Client Reference 2.:

Date Issued: 29 October 2021
Date(s) Tested: 27-28 October 2021

Signed and dated
RICHARDS BAY
29 October 2021

For and on behalf of
SGS South Africa

SGS South Africa

Minerals Services PO BOX 341
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METHODS

SGS Reference: RB21-07273 'a SANAS Accredited Testing Laboratory, No. T0465'.

Client Reference: SULKEHOEK
Client Reference 2:
Sample Type: Coal Sample
Sample Received From: Epworth minerals
Sample Description: 1 x 20kg Raw sample
Date Sample received: 26 October 2021
Seal Numbers: None

Date Issued: 29 October 2021
Date(s) Tested: 27-28 October 2021
Principal: EPWORTH MINERALS PTY LTD
Address: 40 BOWLING ROAD
City, State, Postal: BEDFORDVIEW 2007
Country: South Africa
Attention: WELCOME@SANDAWANA.CO.ZA

Table with columns: Method, Standard, Executing Laboratory, Name of Accreditation Body, Type, & Registration No., Accreditation Test Status, Accreditation Test Status, Uncertainty of Measurement. Lists various tests like Moisture, Ash, Sulfur, etc.

Additional information required by the Accreditation Body:- NOTE: ALL Tests subcontracted to a Third Party Laboratory (internal or external), or marked as * #, ## Not Accredited *, are not included in the SGS ISO 17025 Laboratory Accreditation.

Signed and dated
RICHARDS BAY
29 October 2021

For and on behalf of
SGS South Africa

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