



ALS Laboratory Group, SL  
Poligono Parque Plata  
Calle Camino Mozarabe naves 13 y 15  
Camas (Sevilla) 41900  
www.alsglobal.com/geochemistry

An INAB accredited testing laboratory Reg. No. 173T. Accredited methods are listed in the Scope of Accreditation available on request.

To: SIMÕES DE SÁ & PEREIRA, SA  
CANAVAI  
AGUADA DE CIMA 3750047  
PORTUGAL

Page: 1  
Total # Pages: 3 (A)  
Plus Appendix Pages  
Finalized Date: 3-SEP-2021  
This copy reported on 9-SEP-2021  
Account: SIMIRA

## QC CERTIFICATE SV21206928

Project: SAMPLE ANALYSIS

P.O. No.: SV21-0805

This report is for 2 samples of Sediment submitted to our lab in Seville, Spain on 9-AUG-2021.

The following have access to data associated with this certificate:

TERESA ALMEIDA

## SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
SND-01	Send samples to external laboratory
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-22Y	Split Sample - Boyd Rotary Splitter
PUL-31	Pulverize up to 250g 85% <75 um

## ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
C-IR06	Non-Carbonate C by HCl Leach, IR Spec	LECO
C-CAL04	Inorganic Carbon	LECO
OA-VOL08EU	AP & NP of Sulphidic Waste	
S-IR08	Total Sulphur (IR Spectroscopy)	LECO
S-ICP19	Sulphate Sulphur / By ICP-AES	ICP-AES
S-CAL19	Sulphide Sulphur (Calculated)	LECO
C-IR07	Total Carbon (IR Spectroscopy)	LECO

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.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

Signature:

Andrey Tairov, Technical Manager, Ireland



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		0.01	0.01	0.01	0.01	1	0.3	0.01	1
<b>STANDARDS</b>									
AmmSO4			25.4						
AmmSO4			24.6						
Target Range - Lower Bound			23.0						
Upper Bound			25.5						
DC73320a					0.43				
Target Range - Lower Bound					0.49				
Upper Bound					0.55				
GGC-11					4.74				
Target Range - Lower Bound					4.57				
Upper Bound					4.93				
GS910-4		8.50		2.64					
Target Range - Lower Bound		7.97		2.55					
Upper Bound		8.57		2.75					
GS914-5		1.05		1.37					
Target Range - Lower Bound		1.03		1.33					
Upper Bound		1.13		1.45					
KZK-1						60	24.9	2.40	35
Target Range - Lower Bound						54	22.8	2.21	31
Upper Bound						64	27.0	2.57	38
NBM-1						50	8.7	5.70	41
Target Range - Lower Bound						45	7.8	5.50	38
Upper Bound						54	9.6	6.36	45
SY-4					0.12				
Target Range - Lower Bound					0.11				
Upper Bound					0.15				
<b>BLANKS</b>									
BLANK					0.02				
BLANK					<0.01				
Target Range - Lower Bound					<0.01				
Upper Bound					0.02				
BLANK							<0.3		
Target Range - Lower Bound					1.000000000	<0.3	0.010000000	1.000000000	
Upper Bound					2.000000000	0.6	0.020000000	2.000000000	
BLANK			<0.01						
Target Range - Lower Bound			<0.01						
Upper Bound			0.02						
BLANK		0.01		<0.01					
Target Range - Lower Bound		<0.01		<0.01					
Upper Bound		0.02		0.02					



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		0.01	0.01	0.01	0.01	1	0.3	0.01	1
ORIGINAL		0.01		0.06					
DUP		0.01		0.06					
Target Range - Lower Bound		<0.01		0.05					
Upper Bound		0.02		0.07					
ORIGINAL				<0.01					
DUP				<0.01					
Target Range - Lower Bound				<0.01					
Upper Bound				0.02					
3217-Areia-S1						-1	<0.3	-4.67	-1
DUP						-1	<0.3	-4.67	-1
Target Range - Lower Bound						-2	<0.3	-4.91	-2
Upper Bound						0	0.6	-4.43	0
3217-Areia-S2			0.02		0.01				
DUP			0.01		0.01				
Target Range - Lower Bound			<0.01		<0.01				
Upper Bound			0.02		0.02				
3217-Areia-S2		0.02		0.10					
DUP		0.01		0.09					
Target Range - Lower Bound		<0.01		0.08					
Upper Bound		0.02		0.11					



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## CERTIFICATE COMMENTS

### ANALYTICAL COMMENTS

Applies to Method: OA-VOL08EU Units:  $\text{tCaCO}_3/1\text{Kt} = \text{tCaCO}_3/1000\text{t ore}$   
OA-VOL08EU

### ACCREDITATION COMMENTS

Applies to Method: The methods immediately below this line are ISO 17025:2017 Accredited. INAB Registration No: 173T  
C-IR07 S-IR08



### LABORATORY ADDRESSES

Applies to Method: Processed at ALS Seville located at Poligono Parque Plata, Calle Camino Mozarabe naves 13 y 15, Camas (Sevilla), Spain.  
CRU-31 CRU-QC LOG-22 PUL-31  
PUL-QC SND-01 SPL-22Y WEI-21

Applies to Method: Processed at ALS Loughrea located at Dublin Road, Loughrea, Co. Galway, Ireland.  
C-CAL04 C-IR06 C-IR07 OA-VOL08EU  
S-CAL19 S-ICP19 S-IR08