



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.

CERTIFICATE SV21206941

Project: SAMPLE ANALYSIS

P.O. No.: SV21-0806

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

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

Page: 1
Total # Pages: 2 (A - E)
Plus Appendix Pages
Finalized Date: 24-AUG-2021
This copy reported on 9-SEP-2021
Account: SIMIRA

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-MS61	48 element four acid ICP-MS	
ME-ICP06	Whole Rock Package - ICP-AES	ICP-AES
TOT-ICP06	Total Calculation for ICP06	
OA-GRA05	Loss on Ignition at 1000C	WST-SEQ
C-IR07	Total Carbon (IR Spectroscopy)	LECO
S-IR08	Total Sulphur (IR Spectroscopy)	LECO
ME-MS81	Lithium Borate Fusion ICP-MS	ICP-MS
ME-MS42	Up to 34 elements by ICP-MS	ICP-MS

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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Sample Description	Method Analyte Units LOD	WEI-21	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	TOT-ICP06	
		Recvd Wt.	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	Cr2O3	TiO2	MnO	P2O5	SrO	BaO	Total
		kg	%	%	%	%	%	%	%	%	%	%	%	%	%	%
		0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.01	0.01	
3217-Areia-S1		4.98	65.8	15.05	8.98	<0.01	0.28	0.17	2.06	0.013	0.56	0.01	0.07	<0.01	0.04	99.27
3217-Areia-S2		7.64	68.6	13.25	9.29	<0.01	0.21	0.16	1.82	0.013	0.58	0.01	0.06	<0.01	0.03	99.24



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Sample Description	Method Analyte Units LOD	OA-GRA05	C-IR07	S-IR08	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
		LOI	C	S	Ba	Ce	Cr	Cs	Dy	Er	Eu	Ga	Gd	Ge	Hf
		%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	0.01	0.01	0.5	0.1	10	0.01	0.05	0.03	0.02	0.1	0.05	5	0.1
3217-Areia-S1		6.24	0.37	0.02	325	55.9	90	6.00	3.87	2.29	1.01	19.5	4.37	<5	5.9
3217-Areia-S2		5.22	0.10	0.02	288	39.3	90	4.20	3.82	2.34	0.87	17.1	3.71	<5	6.5

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Page: 2 - D
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Sample Description	Method Analyte Units LOD	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS61	ME-MS61
		W	Y	Yb	Zr	As	Bi	Hg	In	Re	Sb	Se	Te	Tl	Ag	Cd
		ppm 1	ppm 0.1	ppm 0.03	ppm 2	ppm 0.1	ppm 0.01	ppm 0.005	ppm 0.005	ppm 0.001	ppm 0.05	ppm 0.2	ppm 0.01	ppm 0.02	ppm 0.01	ppm 0.02
3217-Areia-S1		3	21.2	2.20	210	36.3	0.27	0.024	0.027	<0.001	1.34	0.6	0.03	0.08	0.06	<0.02
3217-Areia-S2		2	22.4	2.40	240	28.7	0.22	0.043	0.033	<0.001	2.41	1.0	0.03	0.06	0.04	<0.02



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Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Co	Cu	Li	Mo	Ni	Pb	Sc	Zn
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.1	0.2	0.2	0.05	0.2	0.5	0.1	2
3217-Areia-S1		7.1	28.1	32.5	1.01	23.1	44.3	15.4	53
3217-Areia-S2		4.1	22.0	21.2	1.01	23.2	17.4	15.8	30



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CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REEs may not be totally soluble in this method.
ME-MS61

ACCREDITATION COMMENTS

Applies to Method: The methods immediately below this line are ISO 17025:2017 Accredited. INAB Registration No: 173T
C-IR07 ME-ICP06 ME-MS61 ME-MS81
OA-GRA05 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.
WEI-21

Applies to Method: Processed at ALS Loughrea located at Dublin Road, Loughrea, Co. Galway, Ireland.
C-IR07 ME-ICP06 ME-MS42 ME-MS61
ME-MS81 OA-GRA05 S-IR08 TOT-ICP06