



Isotope Analyses for:

FILE # 260077

Report Date: 2026-04-07

Approved by:

A handwritten signature in blue ink, appearing to read "Orfan Shouakar-Stash", with a long horizontal flourish extending to the right.

Orfan Shouakar-Stash, PhD

Director

Isotope Tracer Technologies Inc.

608 Weber St. North, Unit 3&4

Waterloo, ON, N2V 1K4

Tel: 519-886-5555 | Fax: 519-886-5575

Email: orfan@it2isotopes.com | Website: www.it2isotopes.com



Client: Amphos 21 Chile
Address: Nueva Tajamar #481, Oficina 1901, Torre Norte.
 Las Condes, Region Metropolitana, Santiago Chile
Att.: Samuel Iglesias
E-mail: samuel.iglesias@amphos21.com
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pilar.enguita@amphos21.com
cristian.araya@amphos21.com
johana.botero@amphos21.com
Phone: 5-693-135-8833

File Number: 260077
Project #: 1115
PO:

¹⁸O-H₂O Results

#	Sample ID	Sample Collection		Sample #	$\delta^{18}\text{O}$	Aver	Stdv	Date Analyzed	Sample Size
		Date	Time						
					H ₂ O	VSMOW			
1	AGI-M1	2026/02/28	11:06:00 AM	184991	x	-6.92	0.03	3/26/2026	1x60mL Plastic
2	AGI-M2	2026/02/28	12:20:00 PM	184992	x	3.26	0.13	3/31/2026	1x60mL Plastic
3	AGI-M3	2026/02/28	1:00:00 PM	184993	x	2.44	0.06	3/31/2026	1x60mL Plastic
4	AGI-BACK UP	2026/02/28	1:44:00 PM	184994	x	6.19	0.15	3/31/2026	1x60mL Plastic
5	AGI-M5	2026/02/28	2:50:00 PM	184995	x	6.01	0.15	3/31/2026	1x60mL Plastic
6	AGI-M6	2026/02/28	2:24:00 PM	184996	x	-0.32	0.19	3/31/2026	1x60mL Plastic
7	GOR-M1	2026/02/27	11:05:00 AM	184997	x	9.86	0.21	3/31/2026	1x60mL Plastic
8	GOR-M2	2026/02/27	12:37:00 PM	184998	x	-7.43	0.21	3/26/2026	1x60mL Plastic
9	GOR-M3	2026/02/27	1:26:00 PM	184999	x	-8.19	0.13	3/26/2026	1x60mL Plastic
10	GOR-M4	2026/02/27	2:04:00 PM	185000	x	-3.46	0.16	3/26/2026	1x60mL Plastic
11	GOR-M5	2026/02/27	1:46:00 PM	185001	x	-6.97	0.15	3/26/2026	1x60mL Plastic
12	ISL-BACK UP	2026/02/28	6:23:00 PM	185002	x	-9.05	0.09	3/26/2026	1x60mL Plastic
13	ISL-MD3	2026/02/28	6:40:00 PM	185003	x	-8.94	0.15	3/26/2026	1x60mL Plastic
14	ISL-M1	2026/02/28	5:43:00 PM	185004	x	5.62	0.03	3/26/2026	1x60mL Plastic
15	ISL-M2	2026/02/28	5:07:00 PM	185005	x	-3.63	0.19	3/26/2026	1x60mL Plastic
16	ISL-M3	2026/02/28	8:01:00 PM	185006	x	4.49	0.14	3/26/2026	1x60mL Plastic
17	ISL-M4	2026/02/28	7:06:00 PM	185007	x	4.27	0.08	3/26/2026	1x60mL Plastic
18	ISL-M5	2026/02/28	6:55:00 PM	185008	x	2.36	0.12	3/26/2026	1x60mL Plastic
19	ISL-M7	2026/02/28	7:19:00 PM	185009	x	4.31	0.18	3/26/2026	1x60mL Plastic
20	PAR-BACK UP	2026/02/27	6:29:00 PM	185010	x	8.64	0.17	3/26/2026	1x60mL Plastic
21	PAR-M3	2026/02/27	7:28:00 PM	185011	x	6.52	0.18	3/26/2026	1x60mL Plastic
22	PAR-MD3	2026/02/27	7:47:00 PM	185012	x	6.80	0.07	3/26/2026	1x60mL Plastic
23	PAR-M5	2026/02/27	4:34:00 PM	185013	x	6.19	0.13	3/26/2026	1x60mL Plastic
24	PAR-M6-1	2026/02/27	6:02:00 PM	185014	x	2.67	0.09	3/26/2026	1x60mL Plastic

Approved by:

Orfan Shouakar-Stash, PhD
Director

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Phone: 5-693-135-8833

File Number: 260077
Project #: 1115
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²H-H₂O Results

#	Sample ID	Sample Collection		Sample #	δ ² H	Aver	Stdv	Date Analyzed	Comments
		Date	Time		H ₂ O	VSMOW			
1	AGI-M1	2026/02/28	11:06:00 AM	184991	x	-66.3	0.6	3/26/2026	
2	AGI-M2	2026/02/28	12:20:00 PM	184992	x	-28.6	0.2	3/26/2026	
3	AGI-M3	2026/02/28	1:00:00 PM	184993	x	-31.9	0.4	3/26/2026	
4	AGI-BACK UP	2026/02/28	1:44:00 PM	184994	x	-6.6	0.2	3/26/2026	
5	AGI-M5	2026/02/28	2:50:00 PM	184995	x	-11.1	0.2	3/26/2026	
6	AGI-M6	2026/02/28	2:24:00 PM	184996	x	-27.6	0.1	3/26/2026	
7	GOR-M1	2026/02/27	11:05:00 AM	184997	x	-0.1	0.1	3/31/2026	
8	GOR-M2	2026/02/27	12:37:00 PM	184998	x	-70.2	0.6	3/31/2026	
9	GOR-M3	2026/02/27	1:26:00 PM	184999	x	-67.5	0.6	3/26/2026	
10	GOR-M4	2026/02/27	2:04:00 PM	185000	x	-46.4	0.6	3/26/2026	
11	GOR-M5	2026/02/27	1:46:00 PM	185001	x	-65.5	0.2	3/26/2026	
12	ISL-BACK UP	2026/02/28	6:23:00 PM	185002	x	-74.2	0.4	3/26/2026	
13	ISL-MD3	2026/02/28	6:40:00 PM	185003	x	-74.0	0.3	3/26/2026	
14	ISL-M1	2026/02/28	5:43:00 PM	185004	x	-9.2	0.4	3/26/2026	
15	ISL-M2	2026/02/28	5:07:00 PM	185005	x	-50.6	0.5	3/26/2026	
16	ISL-M3	2026/02/28	8:01:00 PM	185006	x	-17.3	0.4	3/26/2026	
17	ISL-M4	2026/02/28	7:06:00 PM	185007	x	-13.8	0.2	3/26/2026	
18	ISL-M5	2026/02/28	6:55:00 PM	185008	x	-24.2	0.1	3/26/2026	
19	ISL-M7	2026/02/28	7:19:00 PM	185009	x	-18.8	0.5	3/26/2026	
20	PAR-BACK UP	2026/02/27	6:29:00 PM	185010	x	-0.5	0.5	3/26/2026	
21	PAR-M3	2026/02/27	7:28:00 PM	185011	x	-2.6	0.4	3/31/2026	
22	PAR-MD3	2026/02/27	7:47:00 PM	185012	x	-1.2	0.5	3/26/2026	
23	PAR-M5	2026/02/27	4:34:00 PM	185013	x	-7.4	0.5	3/26/2026	
24	PAR-M6-1	2026/02/27	6:02:00 PM	185014	x	-20.6	0.3	3/26/2026	

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johana.botero@amphos21.com
Phone: 5-693-135-8833

File Number: 260077

Project #: 1115

PO:

¹⁸O-H₂O Standards

^{d18} O-Water (Standards)				
Date Analyzed	^{d18} O-Water		Actual Value	Calculated Value
3/26/2026	IT2-13E	STD	-9.23	-9.11
3/26/2026	IT2-12F	STD	-16.72	-16.81
3/26/2026	IT2-13E	STD	-9.23	-9.28
3/26/2026	IT2-13E	STD	-9.23	-9.30
3/26/2026	IT2-12F	STD	-16.72	-16.63
3/26/2026	IT2-14D	STD	-2.08	-2.08
3/26/2026	IT2-14D	STD	-2.08	-2.05
3/26/2026	IT2-13E	STD	-9.23	-9.23
3/26/2026	IT2-13E	STD	-9.23	-9.23
3/26/2026	IT2-12F	STD	-16.72	-16.73
3/26/2026	IT2-14D	STD	-2.08	-2.10
3/26/2026	IT2-13E	STD	-9.23	-9.25
3/26/2026	IT2-13E	STD	-9.23	-9.21
3/26/2026	IT2-12F	STD	-16.72	-16.71
3/26/2026	IT2-14D	STD	-2.08	-2.11
3/26/2026	IT2-13E	STD	-9.23	-9.22
3/26/2026	IT2-13E	STD	-9.23	-9.20
3/26/2026	IT2-12F	STD	-16.72	-16.72
3/26/2026	IT2-14D	STD	-2.08	-2.05
3/26/2026	IT2-13E	STD	-9.23	-9.27
3/26/2026	IT2-12F	STD	-16.72	-16.71

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¹⁸O & ²H (CRDS)

Instrument Used: Cavity Ring Down Spectroscopy (CRDS)
 CRDS (Model L2130-i) (Picarro, California, USA).

Standard Used:

IT2-12F / IT2-13E / IT2-14D Calibrated with
 IAEA Standards (V-SMOW, SLAP, and GISP)

Typical Standard deviation:

(¹⁸O ± 0.1‰) (²H ± 1‰)



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Phone: 5-693-135-8833

File Number: 260077

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PO:

d ¹⁸ O-Water (Standards)				
Date Analyzed	d ¹⁸ O-Water		Actual Value	Calculated Value
3/31/2026	IT2-15B	STD	11.02	11.04
3/31/2026	IT2-14D	STD	-2.08	-2.04
3/31/2026	IT2-14D	STD	-2.08	-2.07
3/31/2026	IT2-13E	STD	-9.23	-9.24
3/31/2026	IT2-13E	STD	-9.23	-9.21
3/31/2026	IT2-13E	STD	-9.23	-9.24
3/31/2026	IT2-12F	STD	-16.72	-16.72
3/31/2026	IT2-15B	STD	11.02	11.02
3/31/2026	IT2-15B	STD	11.02	11.01
3/31/2026	IT2-14D	STD	-2.08	-2.08
3/31/2026	IT2-14D	STD	-2.08	-2.13
3/31/2026	IT2-13E	STD	-9.23	-9.23
3/31/2026	IT2-13E	STD	-9.23	-9.18
3/31/2026	IT2-13E	STD	-9.23	-9.21
3/31/2026	IT2-12F	STD	-16.72	-16.75
3/31/2026	IT2-12F	STD	-16.72	-16.69

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File Number: 260077

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$^2\text{H-H}_2\text{O}$ Standards

$\text{d}^2\text{H-Water}$ (Standards)				
Date Analyzed	$\text{d}^2\text{H-Water}$		Actual Value	Calculated Value
3/26/2026	IT2-14D	STD	-9.5	-10.0
3/26/2026	IT2-13E	STD	-74.5	-74.1
3/26/2026	IT2-12F	STD	-114.5	-113.9
3/26/2026	IT2-14D	STD	-9.5	-9.0
3/26/2026	IT2-13E	STD	-74.5	-74.6
3/26/2026	IT2-12F	STD	-114.5	-114.3
3/26/2026	IT2-14D	STD	-9.5	-9.5
3/26/2026	IT2-13E	STD	-74.5	-74.7
3/26/2026	IT2-12F	STD	-114.5	-114.7
3/26/2026	IT2-14D	STD	-9.5	-9.5
3/26/2026	IT2-13E	STD	-74.5	-74.4
3/26/2026	IT2-13E	STD	-74.5	-74.2
3/26/2026	IT2-12F	STD	-114.5	-115.0
3/26/2026	IT2-14D	STD	-9.5	-9.6
3/26/2026	IT2-13E	STD	-74.5	-74.5
3/26/2026	IT2-13E	STD	-74.5	-74.4
3/26/2026	IT2-12F	STD	-114.5	-114.8
3/26/2026	IT2-14D	STD	-9.5	-9.4
3/26/2026	IT2-13E	STD	-74.5	-74.8
3/26/2026	IT2-12F	STD	-114.5	-114.7

Approved by:

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^{18}O & ^2H (CRDS)

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Standard Used:

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 IAEA Standards (V-SMOW, SLAP, and GISP)

Typical Standard deviation:

($^{18}\text{O} \pm 0.1\text{‰}$) ($^2\text{H} \pm 1\text{‰}$)



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johana.botero@amphos21.com
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Project #: 1115

PO:

d ² H-Water (Standards)				
Date Analyzed	d ² H-Water		Actual Value	Calculated Value
3/31/2026	IT2-15B	STD	32.9	32.9
3/31/2026	IT2-15B	STD	32.9	33.0
3/31/2026	IT2-14D	STD	-9.5	-9.2
3/31/2026	IT2-13E	STD	-74.5	-75.2
3/31/2026	IT2-13E	STD	-74.5	-74.5
3/31/2026	IT2-12F	STD	-114.5	-114.0
3/31/2026	IT2-12F	STD	-114.5	-114.1
3/31/2026	IT2-12F	STD	-114.5	-114.8
3/31/2026	IT2-15B	STD	32.9	32.7
3/31/2026	IT2-15B	STD	32.9	33.0
3/31/2026	IT2-14D	STD	-9.5	-9.8
3/31/2026	IT2-13E	STD	-74.5	-73.9
3/31/2026	IT2-13E	STD	-74.5	-74.5
3/31/2026	IT2-13E	STD	-74.5	-74.5
3/31/2026	IT2-12F	STD	-114.5	-114.3
3/31/2026	IT2-12F	STD	-114.5	-115.4

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CHAIN OF CUSTODY / ANALYTICAL SERVICES REQUEST FORM Page 1 of 1

Note: all TAT Quoted material is in business days which exclude statutory holidays and weekends.	Specify date required	Service Requested	
		(regular)	X
		(Rush)	

COMPANY NAME		Amphos 21						NUMBER OF CONT		ANALYSIS REQUEST										PLEASE INDICATE FILTERED, PRESERVED OR BOTH F/P) <---- (F, P, F/P)		
OFFICE ADDRESS		Nueva Tajamar #481, Oficina 1901, Torre Norte. Las Condes, Región Metropolitana, Santiago. Chile																				
PROJECT MANAGER: Samuel Iglesias																						
PROJECT # 1115																						
PHONE 0056 9 31358833				FAX		REPORT FORMAT/DISTRIBUTION																
						EMAIL ____X____ FAX ____ BOTH SELECT: PDF ____X____ DIGITAL ____ BOTH ____ EMAIL 1 cristian.araya@amphos21.com EMAIL 2 johana.botero@amphos21.com																
SAMPLING INFORMATION																						
Sample Date/Time				TYPE		MATRIX																
Date (YYYY-MM-DD)		Time (24hr) (hh:mm)		COMP	GRAB	WATER	SOIL	ROCK	SAMPLE DESCRIPTION TO APPEAR ON REPORT										COMMENTS		LAB ID	
2026-02-28		11:06:00 AM				X			AGI-M1 1 x 60 ml										X			
2026-02-28		12:20:00 PM				X			AGI-M2 1 x 60 ml										X			
2026-02-28		1:00:00 PM				X			AGI-M3 1 x 60 ml										X			
2026-02-28		1:44:00 PM				X			AGI-BACK UP 1 x 60 ml										X			
2026-02-28		2:50:00 PM				X			AGI-M5 1 x 60 ml										X			
2026-02-28		2:24:00 PM				X			AGI-M6 1 x 60 ml										X			
2026-02-27		11:05:00 AM				X			GOR-M1 1 x 60 ml										X			
2026-02-27		12:37:00 PM				X			GOR-M2 1 x 60 ml										X			
2026-02-27		1:26:00 PM				X			GOR-M3 1 x 60 ml										X			
2026-02-27		2:04:00 PM				X			GOR-M4 1 x 60 ml										X			
2026-02-27		1:46:00 PM				X			GOR-M5 1 x 60 ml										X			
2026-02-28		6:23:00 PM				X			ISL-BACK UP 1 x 60 ml										X			
2026-02-28		6:40:00 PM				X			ISL-MD3 1 x 60 ml										X			
2026-02-28		5:43:00 PM				X			ISL-M1 1 x 60 ml										X			
2026-02-28		5:07:00 PM				X			ISL-M2 1 x 60 ml										X			
2026-02-28		8:01:00 PM				X			ISL-M3 1 x 60 ml										X			
2026-02-28		7:06:00 PM				X			ISL-M4 1 x 60 ml										X			
2026-02-28		6:55:00 PM				X			ISL-M5 1 x 60 ml										X			
2026-02-28		7:19:00 PM				X			ISL-M7 1 x 60 ml										X			
2026-02-27		6:29:00 PM				X			PAR-BACK UP 1 x 60 ml										X			
2026-02-27		7:28:00 PM				X			PAR-M3 1 x 60 ml										X			
2026-02-27		7:47:00 PM				X			PAR-MD3 1 x 60 ml										X			
2026-02-27		4:34:00 PM				X			PAR-M5 1 x 60 ml										X			
2026-02-27		6:02:00 PM				X			PAR-M6-1 1 x 60 ml										X			