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SIMPLIFIED TEST REPORT

Laboratorio de Ensayo
Alcance de Acreditación N° LE-002
Acreditado a partir de: 1997.04.16
Alcance disponible en www.eca.or.cr

Reference No.: **A-23/121108**
Registered in: AGQ Lambda
Client (^): Technological Institute of COSTA RICA
Analysis: CR02-00002304-1
Analysis Center: AGQ Lambda
Address (^): CARTAGO CARTAGO STREET 15, AVENUE 14, 1 KM SOUTH OF THE Basilica of Our Lady of the Angels
Sample Type: SURFACE WATER 09/27/2023
Date Received: 26/09/2023 10/10/2023
Contract: QSP-LA230900026
Start Date:
End Date:
Third-Party Client(^):----
Description(^): Sample composed of 6 different lake points in La Paz Park

Date/Time Sampling: 26/09/2023 08:07
Sampled by: Kenneth Montoya
Sampling Site: La Paz Park, San Joseph, Saint Joseph, Saint Sebastian
SOP Sampling: PICR-211 SM 1060 A,B,C Ed 24

The results presented in this report refer only to the sample as received in the laboratory and tested. Partial reproduction of this report is prohibited without the laboratory's written approval. AGQ is not responsible for information provided by the client, including data related to their own sampling and other descriptive information marked with (^) that falls outside our accreditation scope.

ANALYTICAL RESULTS

	Parameter	Result	Units	Uncertain	CMA	PNT	Quantifiable Limit/Detective (#)
	Total Metals						
	Aluminum	1,1202	mg/L	±0.31		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00250 mg/L
	Antimony	0.00133	mg/L	±0.00021		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
	Arsenic	0.00057	mg/L	±0.00008 6		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
*	Sulfur	2.2	mg/L	±0.33		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	2.0 mg/L
	Barium	0.058740	mg/L	±0.0047		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.000250 mg/L
*	Beryllium	< 0.00025	mg/L	-		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00025 mg/L
	Boron	0.0128	mg/L	±0.0026		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.0050 mg/L
	Cadmium	< 0.00010	mg/L	-		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
	Calcium	17	mg/L	±0.51		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.50 mg/L

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Sample Type: SURFACE WATER
End Date: 10/10/2023

	Parameter	Result	Units	Uncertain	CMA	PNT	Quantifiable Limit/Detective (#)
	Total Metals						
*	Cobalt	0.00077	mg/L	±0.000039		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
	Copper	0.00437	mg/L	±0.00039		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
	Chrome	0.00099	mg/L	±0.00023		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
	Tin	0.00045	mg/L	±0.00004		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
*	Strontium	0.14552	mg/L	±0.0073		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
*	Phosphorus	0.123	mg/L	±0.0061		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.050 mg/L
	Iron	1,757	mg/L	±0.088		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.0010 mg/L
*	Lithium	< 0.0050	mg/L	-		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.0050 mg/L
	Magnesium	4.1	mg/L	±0.21		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.50 mg/L
	Manganese	0.34724	mg/L	±0.059		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
	Mercury	0.00013	mg/L	±0.000012		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
*	Molybdenum	0.00071	mg/L	±0.000078		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
	Nickel	0.00190	mg/L	±0.00038		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L

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	Parameter	Result	Units	Uncertain	CMA	PNT	Quantifiable Limit/Detective (#)
	Total Metals						
	Silver	< 0.0010	mg/L	-		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.0010 mg/L
	Lead	0.00083	mg/L	±0.00015		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
	Potassium	1.7	mg/L	±0.035		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.50 mg/L
	Selenium	< 0.010	mg/L	-		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.010 mg/L
*	Silica	14	mg/L	±1.2		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	2.1 mg/L
*	Silicon	6.3	mg/L	±0.57		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	1.0 mg/L
	Sodium	3.5027	mg/L	±0.35		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.50000 mg/L
*	Thallium	< 0.00010	mg/L	-		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
*	Titanium	0.03549	mg/L	±0.0092		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00050 mg/L
*	Vanadium	0.00465	mg/L	±0.00023		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.00010 mg/L
	Zinc	0.0355	mg/L	±0.0028		IT-399 SM 3125 Ed 23/ EPA200.8/ EPA 6020 B	0.0010 mg/L
	Trihalomethanes (THM)						
	Bromodichloromethane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
	Bromoform	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
	Chloroform	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
	Dibromochloromethane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L

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Sample Type: SURFACE WATER
End Date: 10/10/2023

Parameter	Result	Units	Uncertain	CMA	PNT	Quantifiable Limit/Detective (#)
BTEX						
*26 Benzene	< 0.50	µg/L	-		IT-383 / EPA 8260 D	0.50 µg/L
*26 Ethylbenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
*26 m,p-Xylene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
*26 o-xylene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
Toluene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
VOCs						
1,1,1,2-tetrachloroethane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,1,1-Trichloroethane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,1,2,2-Tetrachloroethane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,1,2-Trichloroethane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,1,2-Trichloroethene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,1-Dichloroethane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,1-Dichloroethene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,1-Dichloropropene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,2,3-Trichlorobenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,2,3-Trichloropropane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,2,4-Trichlorobenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,2,4-Trimethylbenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,2-Dibromo-3-chloropropane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,2-Dibromoethane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,2-Dichlorobenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,2-Dichloroethane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,2-Dichloropropane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,3,5-Trimethylbenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,3-Cis-Dichloropropene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,3-Dichlorobenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,3-Dichloropropane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,3-Trans-Dichloropropene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
1,4-Dichlorobenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
2,2-Dichloropropane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
2-Chlorotoluene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L

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Reference No.: A-23/121108
Description(^): Sample composed of 6 different lake points in La Paz Park
Sample Type: SURFACE WATER
End Date: 10/10/2023

Parameter	Result	Units	Uncertain	CMA	PNT	Quantifiable Limit/Detective (#)
VOCs						
4-Chlorotoluene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
Bromobenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
cis-1,2-Dichloroethene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
Chlorobenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
Dibromomethane	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
Dichloromethane	< 5.00	µg/L	-		IT-383 / EPA 8260 D	5.00 µg/L
Styrene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
Hexachlorobutadiene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
Isopropylbenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
*26 Methyl-t-Butyl ether (MTBE)	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
Naphthalene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
n-Butylbenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
n-Propylbenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
p-Isopropyltoluene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
sec-Butylbenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
tert-Butylbenzene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
Tetrachloroethene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
Carbon tetrachloride	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
trans-1,2-Dichloroethene	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
VOCs	< 1.00	µg/L	-		IT-383 / EPA 8260 D	1.00 µg/L
Other Pesticides						
*2 Acetamiprid	< 0.0050	µg/L	±30%		PE-678	0.0050 µg/L
* Azithromycin	< 0.0050	µg/L	±30%		PE-678	0.0050 µg/L
* Clarithromycin	< 0.0050	µg/L	±30%		PE-678	0.0050 µg/L
*2 Clothianidin	< 0.0050	µg/L	±30%		PE-678	0.0050 µg/L
* Erythromycin A	< 0.0050	µg/L	±30%		PE-678	0.0050 µg/L
*2 Imidacloprid	< 0.0050	µg/L	±30%		PE-678	0.0050 µg/L
*2 Thiamethoxam (Sum)	< 0.0050	µg/L	±30%		PE-678	0.0050 µg/L
*2 Thiacloprid	< 0.0050	µg/L	±30%		PE-678	0.0050 µg/L

Note. A: Subcontracted and accredited assay. N: Subcontracted and non-accredited assay. RE: Estimated plate count. The results issued have not been corrected with recovery values. The uncertainties of the accredited parameters have been calculated and are available to the client. The uncertainty applied to the result does not apply to values below the Limit of Quantification (LOQ). The Exp. Uncertainty (U) has been reported with a Coverage Factor k = 2, for an approximate confidence level of 95%.

(2) Test covered by Accreditation No. TL-475 issued by IAS.
(26) Parameter Accredited by IAS No. TL-1036 and recognized by ECA No. ECA-RECA-020-2023
(*) Parameter not accredited by ECA No. LE-002
Full information regarding the trials is available to the client.

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Reference No.: A-23/121108
Description(^): Sample composed of 6 different lake points in La Paz Park
Sample Type: SURFACE WATER
End Date: 10/10/2023

Pamela Badilla Escalante
Chemistry NI 2997

Anthony Crisanto Ramirez Mendez
NI 3101 Chemical

José Luis Malvar Guzman

ISSUE DATE: 10/16/2023

OBSERVATIONS (*):
Sampling carried out from 07:45 to 10:00
Attention: Mauricio Chicas

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Description(^):	Sample composed of 6 different lake points in La Paz Park	End Date:	10/10/2023

AGQ Lambda SA reports its results based on the LC quantification limit (Lim Quantif/). Current PSF No. 988 expires on April 5, 2024. The parameters accredited by IAS are approved by ECA-RECA-020-2023, which expires on March 13, 2024.