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Analysis Report

Date of Analysis: 07.10.2021
Analysis No: OC185402
Date of Sampling: 18.09.2021 - 11:00

Customer: Clifton Gill
Customer ID: 3964
Tank: Reef tank 53g

Main Parameters

Parameter	Measured Value	Ideal Value	Rating
Salinity	34,1 psu	35,0 psu	✓
Alkalinity (KH)	9,44 dKH	7,50 dKH	↗

Main Elements

Parameter	Measured Value	Ideal Value	Rating
Calcium	448 mg/l	429 mg/l	✓
Boron	4,7 mg/l	4,4 mg/l	✓
Bromide	70 mg/l	65,3 mg/l	✓
Chloride	19266 mg/l	18901 mg/l	✓
Potassium	451 mg/l	390 mg/l	✓
Magnesium	1420 mg/l	1364 mg/l	✓
Sodium	10742 mg/l	10522 mg/l	✓
Strontium	8,7 mg/l	7,8 mg/l	✓
Sulfate	2480 mg/l	2631 mg/l	✓

Trace Elements

Parameter	Measured Value	Ideal Value	Rating
Barium	54,9 µg/l	10-100 µg/l	✓
Chromium	0,3 µg/l	0,5 µg/l	✓
Cobalt	0,7 µg/l	0,5 µg/l	✓
Iron	n.n.	1-3 µg/l	✓
Fluoride	1,03 mg/l	1,3 mg/l	✓
Iodine	n.n.	50-70 µg/l	↓
Copper	0,8 µg/l	1-3 µg/l	✓
Lithium	306 µg/l	50-150 µg/l	↗
Manganese	0,9 µg/l	1,0 µg/l	✓
Molybdenum	10,1 µg/l	10-15 µg/l	✓

Nickel	n.n.		1,0 µg/l	✓
Rubidium	127 µg/l		90–150 µg/l	✓
Selenium	n.n.		0,5 µg/l	✓
Vanadium	2,8 µg/l		2–3 µg/l	✓
Zinc	4,4 µg/l		1,0 µg/l	✓
Tin	n.n.		< 1 µg/l	✓

Pollutants

Parameter	Measured Value	Ideal Value	Rating
Aluminium	176,0 µg/l	< 40 µg/l	↑
Bismuth	n.n.	< 3 µg/l	✓
Lead	n.n.	< 3 µg/l	✓
Mercury	n.n.	< 3 µg/l	✓
Antimony	n.n.	< 3 µg/l	✓
Titan	n.n.	< 1 µg/l	✓
Cadmium	n.n.	< 3 µg/l	✓
Uranium	n.n.	< 10 µg/l	✓
Beryllium	n.n.	< 1 µg/l	✓
Arsenic	n.n.	< 3 µg/l	✓
Lanthanum	n.n.	< 3 µg/l	✓
Thallium	n.n.	< 3 µg/l	✓

Nutrients

Parameter	Measured Value	Ideal Value	Rating
Phosphate (photometric)	0,030 mg/l	0,03–0,1 mg/l	✓
Total Phosphorous (ICP)	11 µg/l	10–50 µg/l	✓
Nitrate	4,71 mg/l	2–15 mg/l	✓
Nitrite	0,041 mg/l	< 0,1 mg/l	✓
Silicon	277 µg/l	50–250 µg/l	↗

Osmose

Parameter	Measured Value	Ideal Value	Rating
Copper	n.n.	n.n. µg/l	✓
Zinc	n.n.	n.n. µg/l	✓
Silicon	21,1 µg/l	n.n. µg/l	✓

✓ No action required

↗↘ Need for action

↑↓ Urgent need for action

n.n Not found

n.b Not measured

Interpretation

Dear Gill!

Alkalinity is elevated in your tank. Alkalinity is the main pH buffer system in seawater, and should be kept in the optimum concentration range (7–8 dKH) with minimum fluctuations. The dosing amount of alkalinity should be reduced in your tank.

Regarding trace elements there is a deficiency in iodine: The consumption rate of this important trace element can vary from tank to tank, in your case its suggested to dose regularly, and see after the next ICP analysis if the dosing amount should be adopted.

Aluminium is elevated, which might lead to problems with coral. Typical sources are alumina based adsorber media (silicate/phosphate), reef cement, artificial rocks/ceramics and some fish feeds. We recommend water changes to lower aluminium.

Lithium is slightly elevated, which is not a concern. Typical sources for lithium are reef cement/ceramics/artificial rocks.

Silicon is elevated, which can cause the blooming of diatoms. The RO water is not the source. Silicon can be introduced via activated carbon, reef cement, artificial rockwork, etc. If diatoms are not an issue in your tank the silicon is not problematic, but even an important nutrient for sponges.

In case of questions, i am happy to help!
Best regards, Christoph