Tank
90 gal

Net size
341 liter

Reason for analysis
Routine

Barcode
AM5G-NM3X-LPKF-8KWN (ID: 293620)

Created	Arrived in the laboratory	Evaluated
09/07/2024	09/19/2024	09/20/2024

Quality assessment:
The quality of your aquarium water is assessed using the score in the circle. The closer it is to 100, the better the quality. You can also use the bar chart to identify the areas in which problems may occur.

Major elements	90 / 100
Minor elements	89 / 100
Pollutants	100 / 100
Base elements	92 / 100

Results of Salt water

Base elements

Sal. total Salinity	32.66 PSU Ideal value: 35.00 PSU	BELOW NORMAL Attention
KH Carbonate hardness	8.13 °dKH Ideal value: 7.50 °dKH	NORMAL Near nature

Major elements

Cl Chloride	18272 mg/l Ideal value: 18125 mg/l	NORMAL Near nature
Na Sodium	9988 mg/l Ideal value: 10069 mg/l	NORMAL Near nature
Mg Magnesium	1336 mg/l Ideal value: 1204 mg/l	NORMAL Near nature
S Sulfur	904.6 mg/l Ideal value: 833.0 mg/l	ABOVE NORMAL Attention
Ca Calcium	411.5 mg/l Ideal value: 385.4 mg/l	NORMAL Near nature
K Potassium	416.7 mg/l Ideal value: 373.5 mg/l	ABOVE NORMAL Attention
Br Bromine	82.34 mg/l Ideal value: 61.33 mg/l	ABOVE NORMAL Attention
Sr Strontium	8.58 mg/l Ideal value: 7.41 mg/l	NORMAL Near nature
B Boron	5.65 mg/l Ideal value: 4.12 mg/l	ABOVE NORMAL Attention
F Fluorine	1.03 mg/l Ideal value: 1.19 mg/l	NORMAL Near nature

Minor elements

Li Lithium	51.15 µg/l Ideal value: 155.6 µg/l	BELOW NORMAL Attention
Si Silicon	79.34 µg/l Ideal value: 91.54 µg/l	NORMAL Near nature
I Iodine	25.98 µg/l Ideal value: 59.50 µg/l	CRITICALLY LOW Critical
Ba Barium	30.32 µg/l Ideal value: 9.15 µg/l	NORMAL Near nature
Mo Molybdenum	14.16 µg/l Ideal value: 10.98 µg/l	NORMAL Near nature
Ni Nickel	1.30 µg/l Ideal value: 0.46 µg/l	NORMAL Near nature
Mn Manganese	--- Ideal value: 0.92 µg/l	BELOW NORMAL Attention
As Arsenic	--- Ideal value: 0.46 µg/l	NORMAL Near nature
Be Beryllium	--- Ideal value: 0.09 µg/l	NORMAL Near nature
Cr Chrome	--- Ideal value: 0.46 µg/l	NORMAL Near nature
Co Cobalt	--- Ideal value: 0.09 µg/l	NORMAL Near nature
Fe Iron	--- Ideal value: 0.46 µg/l	BELOW NORMAL Attention
Cu Copper	--- Ideal value: 0.46 µg/l	NORMAL Near nature
Se Selenium	--- Ideal value: 0.46 µg/l	NORMAL Near nature
Ag Silver	--- Ideal value: 0.09 µg/l	NORMAL Near nature
V Vanadium	1.75 µg/l Ideal value: 1.37 µg/l	NORMAL Near nature
Zn Zinc	5.77 µg/l Ideal value: 1.83 µg/l	ABOVE NORMAL Attention
Sn Tin	1.62 µg/l Ideal value: 0.46 µg/l	NORMAL Near nature

Nutrients

NO3 Nitrate	13.53 mg/l Ideal value: 2.00 mg/l	ABOVE NORMAL Attention
P Phosphorus	29.40 µg/l Ideal value: 13.73 µg/l	ABOVE NORMAL Attention
PO4 Phosphate	0.09 mg/l Ideal value: 0.04 mg/l	ABOVE NORMAL Attention

Pollutants

Al. Aluminium	7.54 µg/l Ideal value: 0.09 µg/l	NORMAL Near nature
Sb Antimony	--- Ideal value: 0.09 µg/l	NORMAL Near nature
Bi Bismuth	--- Ideal value: 0.09 µg/l	NORMAL Near nature
Pb Lead	--- Ideal value: 0.09 µg/l	NORMAL Near nature
Cd Cadmium	--- Ideal value: 0.18 µg/l	NORMAL Near nature
La. Lanthanum	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Tl Thallium	--- Ideal value: 0.09 µg/l	NORMAL Near nature
Ti Titanium	--- Ideal value: 0.09 µg/l	NORMAL Near nature
W Tungsten	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Hg Mercury	--- Ideal value: 0.00 µg/l	NORMAL Near nature

Results of Osmosis water

Minor elements

Li Lithium	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Si Silicon	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Ba Barium	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Mo Molybdenum	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Ni Nickel	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Mn Manganese	--- Ideal value: 0.00 µg/l	NORMAL Near nature
As Arsenic	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Be Beryllium	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Cr Chrome	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Co Cobalt	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Fe Iron	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Cu Copper	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Se Selenium	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Ag Silver	--- Ideal value: 0.00 µg/l	NORMAL Near nature
V Vanadium	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Zn Zinc	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Sn Tin	--- Ideal value: 0.00 µg/l	NORMAL Near nature

Nutrients

P Phosphorus	--- Ideal value: 0.00 µg/l	NORMAL Near nature
PO4 Phosphate	--- Ideal value: 0.00 mg/l	NORMAL Near nature

Pollutants

Al. Aluminium	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Sb Antimony	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Bi Bismuth	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Pb Lead	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Cd Cadmium	--- Ideal value: 0.00 µg/l	NORMAL Near nature
La. Lanthanum	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Tl Thallium	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Ti Titanium	--- Ideal value: 0.00 µg/l	NORMAL Near nature
W Tungsten	--- Ideal value: 0.00 µg/l	NORMAL Near nature
Hg Mercury	--- Ideal value: 0.00 µg/l	NORMAL Near nature

Recommendations

The following recommendations were calculated for the aquarium **90 gal** with **341 liters** content.

Recommended actions

Potassium — Recommended

Reduce/stop addition of potassium to bring value down to 400-415 mg/l.

Bromine — Recommended

Reduce/stop addition of bromide to bring value down to 65-67 mg/l.

Boron — Recommended

Reduce/stop addition of boron to bring value down to 4,3-4,7 mg/l.

Sulfur — Recommended

Stop addition of sulfur to reduce value to 900-920 mg/l.

Zinc — Recommended

Zinc is elevated. Find and eliminate the source (e.g. corroding metals, contaminated water treatment, osmosis water, etc.).

Phosphorus — Recommended

Phosphorus is slightly too high. Improve the filtration and/or reduce the food supply. Check the osmosis water.

Nitrate — Recommended

Nitrate is slightly too high. Improve the filtration and/or reduce the food supply.

Salinity — Recommended

Increase the salinity to 35 PSU.
For example, add 1367 ml Absolute Ocean #1 and 1367 ml Absolute Ocean #2 to the aquarium.

Iodine (1000 ml bottle) — Important

Addition Total:	11.43 ml
Divide the addition into portions:	twice 5.72 ml *

Iodine (alt. 100 ml bottle) — Important

Addition Total:	1.14 ml
Divide the addition into portions:	twice 0.57 ml *

Lithium (Li) — Recommended

Addition Total:	35.62 ml
Divide the addition into portions:	six times 5.94 ml *

Manganese (Mn) — Recommended

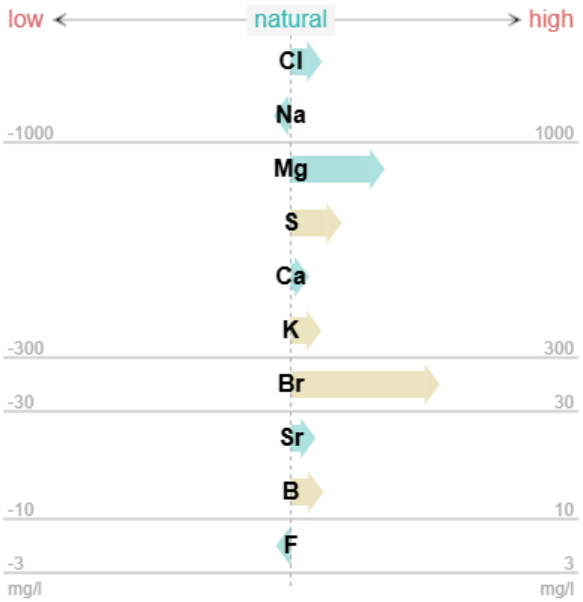
Addition Total:	1.56 ml
Divide the addition into portions:	once 1.56 ml

Iron (Fe) — Recommended

Addition Total:	0.78 ml
Divide the addition into portions:	five times 0.16 ml *

* Only one portion should be dosed per day.

Diagrams



Composition of the aquarium water

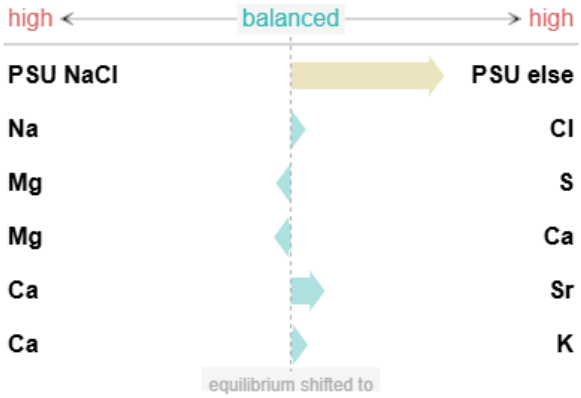
The diagram shows whether the concentrations of the major elements in your water sample match the measured salinity or whether individual elements are increased or reduced. Note the different concentration ranges on the x-axis.

Background: Natural seawater consists of the same elements in fixed proportions. Only the concentrations of the elements increase or decrease in proportion to salinity. That is why the ideal values also change with salinity.

Green arrow
Value is relatively natural.

Yellow arrow
Value is becoming increasingly unnatural.

Red arrow
Value unnatural.



Element ratios

This chart shows whether the element supply is appropriate or whether the ratios of certain element pairs are skewed due to an imbalanced supply. The arrow points in the direction of the element with increased concentration. Only the relationship between the elements is evaluated. The evaluation of the individual measured values may vary.

Background: The reef inhabitants remove various elements from the aquarium water. To compensate for this consumption and obtain water that is true to nature, water changes are carried out and water additives are used. This does not always work as needed.

Green Arrow
Relationship close to nature.

Yellow arrow
Ratio slightly shifted.

Red arrow
Ratio shifted drastically.

Growth Factors

This diagram shows whether important growth factors are in balance or out of proportion. The arrow points in the direction of the factor with increased concentration. Only the relationship between the factors is evaluated. The evaluation of the individual measured values may vary.

Background: The most important growth factors include carbonate hardness, calcium concentration and phosphorus content. When these values are slightly increased, growth is usually encouraged, while greatly increased or reduced values slow growth. If there is an imbalance between these factors, it can adversely affect coral growth and, in the worst case, lead to tissue necrosis.

Green arrow
Balance between factors OK.

Yellow arrow
Factors increasingly disproportionate to one another.

Red arrow
Factors in disproportion to one another.