

Tank
Display Reef

Net size
1000 liter

Reason for analysis
Routine

Barcode
CPCA-4CAY-57BR-R9M9 (ID: 261453)

Created
01/10/2024

Arrived in the laboratory
01/19/2024

Evaluated
01/19/2024



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 | 95 / 100 |
| Minor elements | 89 / 100 |
| Pollutants | 100 / 100 |
| Base elements | 100 / 100 |

Results of Salt water

Base elements

| | | |
|--------------------|------------------------|-------------|
| Sal. total | 35.43 PSU | TOP |
| Salinity | Ideal value: 35.00 PSU | Near nature |
| KH | 7.29 °dKH | TOP |
| Carbonate hardness | Ideal value: 7.50 °dKH | Near nature |

Major elements

| | | |
|-----------|-------------------------|-------------|
| Cl | 20046 mg/l | TOP |
| Chloride | Ideal value: 19779 mg/l | Near nature |
| Na | 10840 mg/l | TOP |
| Sodium | Ideal value: 10988 mg/l | Near nature |
| Mg | 1541 mg/l | INCREASED |
| Magnesium | Ideal value: 1314 mg/l | Attention |
| S | 936.7 mg/l | TOP |
| Sulfur | Ideal value: 909.0 mg/l | Near nature |
| Ca | 400.3 mg/l | TOP |
| Calcium | Ideal value: 420.6 mg/l | Near nature |
| K | 410.8 mg/l | TOP |
| Potassium | Ideal value: 407.6 mg/l | Near nature |
| Br | 94.85 mg/l | INCREASED |
| Bromine | Ideal value: 66.93 mg/l | Attention |
| Sr | 7.23 mg/l | TOP |
| Strontium | Ideal value: 7.99 mg/l | Near nature |
| B | 3.99 mg/l | TOP |
| Boron | Ideal value: 4.50 mg/l | Near nature |
| F | 1.31 mg/l | TOP |
| Fluorine | Ideal value: 1.30 mg/l | Near nature |



Minor elements

| | | |
|-------------------------|----------------------------------------------|-------------------------------|
| Li Lithium | 430.8 µg/l Ideal value: 169.8 µg/l | TOP Near nature |
| Si Silicon | 163.2 µg/l Ideal value: 99.89 µg/l | TOP Near nature |
| I Iodine | 49.56 µg/l Ideal value: 64.93 µg/l | TOP Near nature |
| Ba Barium | 76.32 µg/l Ideal value: 9.99 µg/l | INCREASED Attention |
| Mo Molybdenum | 30.90 µg/l Ideal value: 11.99 µg/l | INCREASED Attention |
| Ni Nickel | --- Ideal value: 0.50 µg/l | TOP Near nature |
| Mn Manganese | --- Ideal value: 1.00 µg/l | DECREASED Attention |
| As Arsenic | --- Ideal value: 0.50 µg/l | TOP Near nature |
| Be Beryllium | --- Ideal value: 0.10 µg/l | TOP Near nature |
| Cr Chrome | --- Ideal value: 0.50 µg/l | TOP Near nature |
| Co Cobalt | --- Ideal value: 0.10 µg/l | TOP Near nature |
| Fe Iron | --- Ideal value: 0.50 µg/l | DECREASED Attention |
| Cu Copper | --- Ideal value: 0.50 µg/l | TOP Near nature |
| Se Selenium | --- Ideal value: 0.50 µg/l | TOP Near nature |
| Ag Silver | --- Ideal value: 0.10 µg/l | TOP Near nature |
| V Vanadium | 1.25 µg/l Ideal value: 1.50 µg/l | TOP Near nature |
| Zn Zinc | --- Ideal value: 2.00 µg/l | TOO LITTLE Critical |
| Sn Tin | --- Ideal value: 0.50 µg/l | TOP Near nature |

Nutrients

| | | |
|-------------------------|----------------------------------------------|-----------------------------|
| NO3 Nitrate | 50.08 mg/l Ideal value: 2.00 mg/l | TOO HIGH Critical |
| P Phosphorus | 84.45 µg/l Ideal value: 14.98 µg/l | TOO HIGH Critical |
| PO4 Phosphate | 0.26 mg/l Ideal value: 0.04 mg/l | TOO HIGH Critical |

Pollutants

| | | |
|-----------|------------------------|-------------|
| Al. | 17.36 µg/l | TOP |
| Aluminium | Ideal value: 0.10 µg/l | Near nature |
| Sb | --- | TOP |
| Antimony | Ideal value: 0.10 µg/l | Near nature |
| Bi | --- | TOP |
| Bismuth | Ideal value: 0.10 µg/l | Near nature |
| Pb | --- | TOP |
| Lead | Ideal value: 0.10 µg/l | Near nature |
| Cd | --- | TOP |
| Cadmium | Ideal value: 0.20 µg/l | Near nature |
| La. | --- | TOP |
| Lanthanum | Ideal value: 0.00 µg/l | Near nature |
| Tl | --- | TOP |
| Thallium | Ideal value: 0.10 µg/l | Near nature |
| Ti | --- | TOP |
| Titanium | Ideal value: 0.10 µg/l | Near nature |
| W | --- | TOP |
| Tungsten | Ideal value: 0.00 µg/l | Near nature |
| Hg | --- | TOP |
| Mercury | Ideal value: 0.00 µg/l | Near nature |

Results of Osmosis water

Minor elements

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

Nutrients

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

Pollutants

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

Recommendations

The following recommendations were calculated for the aquarium **Display Reef** with **1000 liters** content.

Recommended actions

| | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Phosphorus | Important |
| Phosphorus is too high. Improve the filtration and/or reduce the amount of food. Use an iron-based PO ₄ adsorber (e.g. ATI Phosphate Stop) to reduce the phosphorus value to 13-17 µg/l. | |
| Nitrate | Important |
| Nitrate value is elevated. Optimize filtration and/or reduce feed input. Check osmosis water for nitrate. | |
| Magnesium | Recommended |
| Stop adding magnesium to reduce value to 1300-1350 mg/l. | |
| Bromine | Recommended |
| Reduce/stop addition of bromide to bring value down to 65-67 mg/l. | |

Zinc (Zn)

Recommended

Addition Total: 9.99 ml
Divide the addition into portions: once 9.99 ml

Manganese (Mn)

Recommended

Addition Total: 4.99 ml
Divide the addition into portions: once 4.99 ml

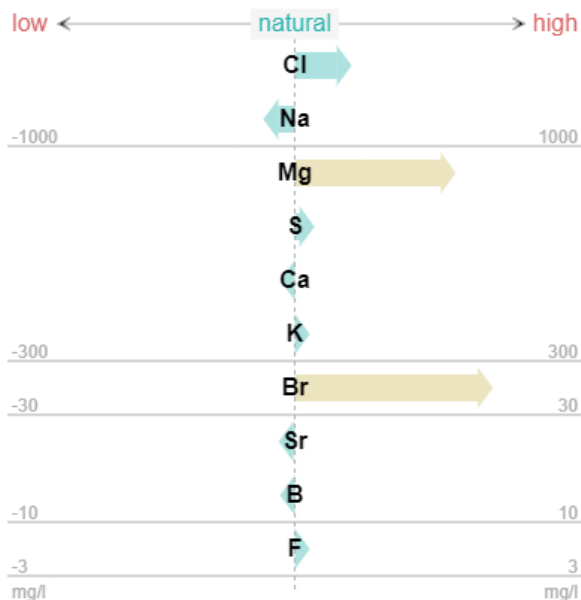
Iron (Fe)

Recommended

Addition Total: 2.5 ml
Divide the addition into portions: five times 0.5 ml *

* Only one portion should be dosed per day.

Diagrams

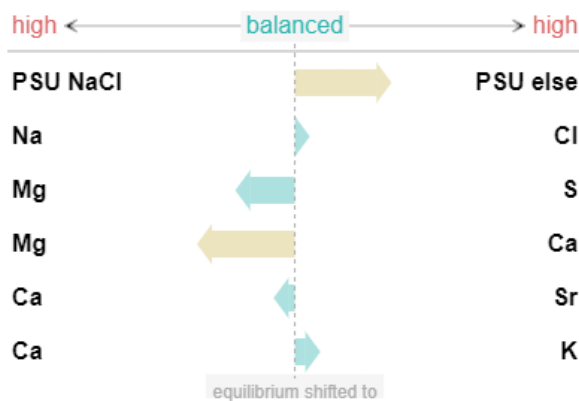


Composition of the aquarium water

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

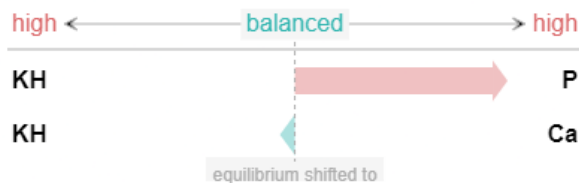
Relationship close to nature.

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.