

Tank  
Pam's Reef

Net size  
454 liter

Reason for analysis  
Routine

Barcode  
EDFS-HWT7-5SHT-FFLH (ID: 289955)



Created  
08/06/2024

Arrived in the laboratory  
08/08/2024

Evaluated  
08/09/2024



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	88 / 100
Minor elements	92 / 100
Pollutants	98 / 100
Base elements	100 / 100

## Results of Salt water

### Base elements

Sal. total Salinity	36.01 PSU Ideal value: 35.00 PSU	<b>NORMAL</b> Near nature
KH Carbonate hardness	8.54 °dKH Ideal value: 7.50 °dKH	<b>NORMAL</b> Near nature

### Major elements

Cl Chloride	20359 mg/l Ideal value: 20255 mg/l	<b>NORMAL</b> Near nature
Na Sodium	11196 mg/l Ideal value: 11253 mg/l	<b>NORMAL</b> Near nature
Mg Magnesium	1382 mg/l Ideal value: 1345 mg/l	<b>NORMAL</b> Near nature
S Sulfur	954.8 mg/l Ideal value: 930.9 mg/l	<b>NORMAL</b> Near nature
Ca Calcium	475.3 mg/l Ideal value: 430.7 mg/l	<b>NORMAL</b> Near nature
K Potassium	391.6 mg/l Ideal value: 417.4 mg/l	<b>NORMAL</b> Near nature
Br Bromine	57.09 mg/l Ideal value: 68.54 mg/l	<b>NORMAL</b> Near nature
Sr Strontium	11.36 mg/l Ideal value: 8.29 mg/l	<b>CRITICALLY HIGH</b> Critical
B Boron	5.77 mg/l Ideal value: 4.60 mg/l	<b>ABOVE NORMAL</b> Attention
F Fluorine	1.21 mg/l Ideal value: 1.33 mg/l	<b>NORMAL</b> Near nature



## Minor elements

<b>Li</b> Lithium	<b>501.7 µg/l</b> Ideal value: 173.9 µg/l	<b>NORMAL</b> Near nature
<b>Si</b> Silicon	<b>131.6 µg/l</b> Ideal value: 102.3 µg/l	<b>NORMAL</b> Near nature
<b>I</b> Iodine	<b>22.71 µg/l</b> Ideal value: 66.50 µg/l	<b>CRITICALLY LOW</b> Critical
<b>Ba</b> Barium	<b>8.39 µg/l</b> Ideal value: 10.23 µg/l	<b>NORMAL</b> Near nature
<b>Mo</b> Molybdenum	<b>8.56 µg/l</b> Ideal value: 12.28 µg/l	<b>NORMAL</b> Near nature
<b>Ni</b> Nickel	<b>1.29 µg/l</b> Ideal value: 0.51 µg/l	<b>NORMAL</b> Near nature
<b>Mn</b> Manganese	<b>---</b> Ideal value: 1.02 µg/l	<b>BELOW NORMAL</b> Attention
<b>As</b> Arsenic	<b>---</b> Ideal value: 0.51 µg/l	<b>NORMAL</b> Near nature
<b>Be</b> Beryllium	<b>---</b> Ideal value: 0.10 µg/l	<b>NORMAL</b> Near nature
<b>Cr</b> Chrome	<b>---</b> Ideal value: 0.51 µg/l	<b>NORMAL</b> Near nature
<b>Co</b> Cobalt	<b>---</b> Ideal value: 0.10 µg/l	<b>NORMAL</b> Near nature
<b>Fe</b> Iron	<b>---</b> Ideal value: 0.51 µg/l	<b>BELOW NORMAL</b> Attention
<b>Cu</b> Copper	<b>---</b> Ideal value: 0.51 µg/l	<b>NORMAL</b> Near nature
<b>Se</b> Selenium	<b>---</b> Ideal value: 0.51 µg/l	<b>NORMAL</b> Near nature
<b>Ag</b> Silver	<b>---</b> Ideal value: 0.10 µg/l	<b>NORMAL</b> Near nature
<b>V</b> Vanadium	<b>1.52 µg/l</b> Ideal value: 1.53 µg/l	<b>NORMAL</b> Near nature
<b>Zn</b> Zinc	<b>1.49 µg/l</b> Ideal value: 2.05 µg/l	<b>NORMAL</b> Near nature
<b>Sn</b> Tin	<b>2.26 µg/l</b> Ideal value: 0.51 µg/l	<b>NORMAL</b> Near nature

## Nutrients

<b>NO3</b> Nitrate	<b>4.60 mg/l</b> Ideal value: 2.00 mg/l	<b>NORMAL</b> Near nature
<b>P</b> Phosphorus	<b>25.23 µg/l</b> Ideal value: 15.35 µg/l	<b>NORMAL</b> Near nature
<b>PO4</b> Phosphate	<b>0.08 mg/l</b> Ideal value: 0.05 mg/l	<b>ABOVE NORMAL</b> Attention

## Pollutants

<b>Al.</b> Aluminium	<b>90.29 µg/l</b> Ideal value: 0.10 µg/l	<b>ABOVE NORMAL</b> Attention
<b>Sb</b> Antimony	--- Ideal value: 0.10 µg/l	<b>NORMAL</b> Near nature
<b>Bi</b> Bismuth	--- Ideal value: 0.10 µg/l	<b>NORMAL</b> Near nature
<b>Pb</b> Lead	--- Ideal value: 0.10 µg/l	<b>NORMAL</b> Near nature
<b>Cd</b> Cadmium	--- Ideal value: 0.20 µg/l	<b>NORMAL</b> Near nature
<b>La.</b> Lanthanum	--- Ideal value: 0.00 µg/l	<b>NORMAL</b> Near nature
<b>Tl</b> Thallium	--- Ideal value: 0.10 µg/l	<b>NORMAL</b> Near nature
<b>Ti</b> Titanium	--- Ideal value: 0.10 µg/l	<b>NORMAL</b> Near nature
<b>W</b> Tungsten	--- Ideal value: 0.00 µg/l	<b>NORMAL</b> Near nature
<b>Hg</b> Mercury	--- Ideal value: 0.00 µg/l	<b>NORMAL</b> Near nature

## Results of Osmosis water

### Minor elements

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

### Nutrients

<b>P</b> Phosphorus	---	<b>NORMAL</b> Near nature
<b>PO4</b> Phosphate	---	<b>NORMAL</b> Near nature

## Pollutants

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

## Recommendations

The following recommendations were calculated for the aquarium **Pam's Reef** with **454 liters** content.

### Recommended actions

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#### Strontium

**Important**

Stop adding strontium to reduce value to 7.8-8.2 mg/l. Can be accelerated by several water changes with Absolute Ocean.

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#### Boron

**Recommended**

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

**Iodine (1000 ml bottle)**

**Important**

Addition Total: 19.88 ml  
 Divide the addition into portions: three times 6.63 ml \*

**Iodine (alt. 100 ml bottle)**

**Important**

Addition Total: 1.99 ml  
 Divide the addition into portions: three times 0.66 ml \*

**Manganese (Mn)**

**Recommended**

Addition Total: 2.32 ml  
 Divide the addition into portions: once 2.32 ml

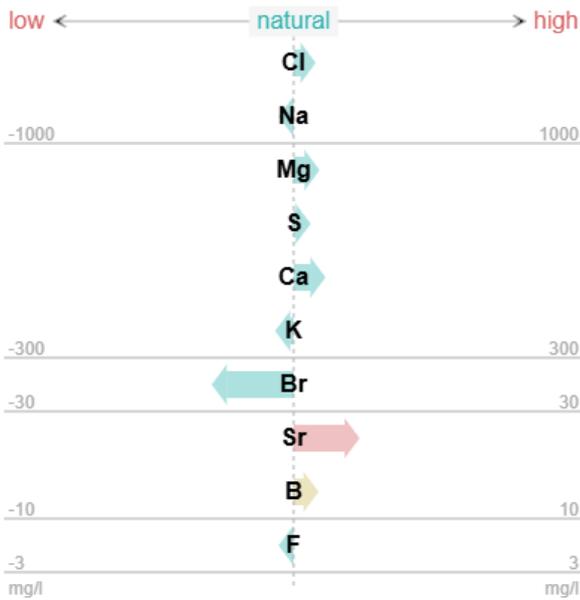
**Iron (Fe)**

**Recommended**

Addition Total: 1.16 ml  
 Divide the addition into portions: six times 0.19 ml \*

\* Only one portion should be dosed per day.

**Diagrams**

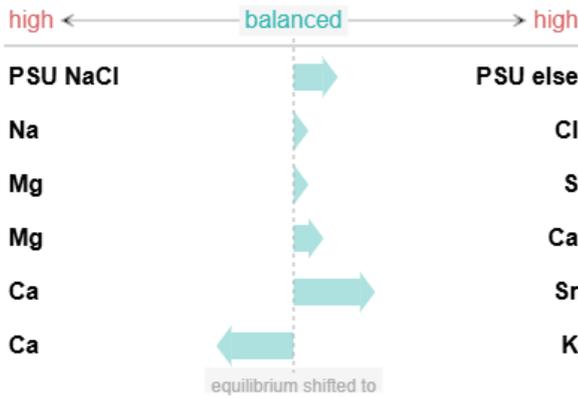


**Composition of the aquarium water**

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.