Analysis 35904 - 09-23-2022

Share analysis:

Attention: these values should be checked:

Iodine Copper Nickel Barium Aluminium

Sodium Sulfur Sulfate Potassium Molybdenum Lithium

Physical-chemical basic values

Color Smell

Macro elements, calcium-related values and halogens

Sodium Sulfur Sulfate Potassium Boron Magnesium Calcium Strontium Bromine Iodine

Relational values, macro elements and halogens

Sulfate/Sulfur Magnesium/Calcium Calcium/Strontium

Salinity Line

Macro nutrients

Phosphor Total phosphate Silicon Silicate

PO4/Iodine

Nutrients line

Physiologically relevant trace substances and colour-relevant micronutrients

Zinc Vanadium Copper Nickel Manganese Molybdenum Iron Chromium Cobalt

Dynamic Elements Line

Other trace elements and potential pollutants

Lithium Barium Aluminium Antimony Tin Beryllium Selenium Silver Tungsten Lanthanum Titanium Zirconium Arsenic Cadmium

Relevance Line

Further information

Notes

Physical-chemical basic values

Color:
No

What is this: „Yellow-colored compounds“ is the term for a mixture of long-chain molecules, sequioterpenes, phenolic compounds and dyes. These are formed by the decomposition products of algae and bacteria, residues of dyes and algae powders, e.g. from feeding.

Problems: Inhibition of light energy, inhibition of absorption by corals and sponges, strengthening undesirable bacteria and fungal strains in the aquarium.

Actions: Yellow-colored compounds can be removed from the aquarium water with activated carbon, aluminium-based phosphate adsorbers, ozone addition and UV sterilizers. The regular addition of zeolite powders or Coral Balance help to keep the water clean and clear.

Read more...

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Smell:
No

What is this: Odorous substances can originate from different sources. Decaying tank inhabitants, frozen food leftovers but also infestation with dinoflagellates or algae can change the smell of the room or tank water. If a changed smell is noticeable, you should immediately research on the cause.

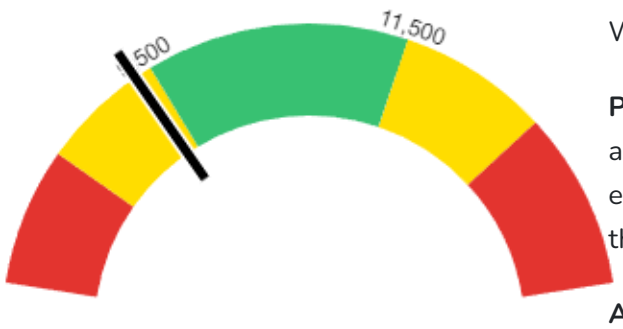
Problems: Rotten spots or decaying tank inhabitants cause a high load of germs in the aquarium. Rotting spots can release toxins into the aquarium, which can cause animal losses.

Actions: Odorous substances can be removed from the aquarium with activated carbon, aluminium-based adsorbers as well as ozone and a well adjusted skimmer. The regular addition of zeolite powders or mixtures and Coral Balance helps to keep the water clean and fresh.

Read more...

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Macro elements, calcium-related values and halogens



Sodium :

9358 mg/l

89% of the ideal value

Your development in values...

What is this: This is about a part of the common salt in our sea salt. With chloride, sodium forms the common salt, the basis of sea salt.

Problems: Too high and too low salt quantities cause problems for all aquarium inhabitants. Poor growth, loss of colour, no polyps or tissue expansion are the first signs. The salt content should always be set in the range 33-35 ppt.

Actions: Regular control of the salt content, replacement of evaporated water with osmosis water, re-dosing of sea salt to compensate for losses due to discharge.

Read more... Calculator

What to do here:

Value too low: Observe salinity and adjust the salt content accordingly.

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What is this: Sulphur occurs in seawater as sulphate and is a component of normal seawater. A few amino acids and other compounds also contain certain amounts of sulphur, but these are



Sulfur :
847 mg/l

94% of the ideal value

Your development in values...

negligible. Sulphate itself is not dangerous, but reduced forms that can occur in oxygen-free areas of the aquarium are very toxic and often cause problems. Likewise, sulphur bacteria can cause an accumulation of sulphur in the substrate. These should generally not be dosed into a saltwater aquarium.

Problems: High or too low sulphate values should be avoided. Differences can easily be balanced out with the help of some partial water changes. For shifts of more than 30 % please contact the laboratory for verification of the data. Too low sulphate values are suspected to be the trigger of bacterial infections on corals.

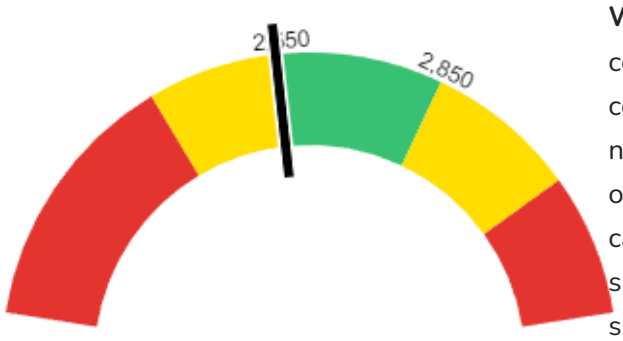
Actions: Regular control of the sulphur and/or sulphate value, regular partial water change with Professional Sea Salt. Avoid mineral salts or single doses of sulphate-rich trace mixtures.

Read more... Calculator

What to do here:

Value too low: No additional dosages necessary, partial water change with balanced salt is sufficient.

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Sulfate :
2537.612 mg/l

94% of the ideal value

Your development in values...

What is this: Sulphur occurs in seawater as sulphate and is a component of normal seawater. A few amino acids and other compounds also contain certain amounts of sulphur, but these are negligible. Sulphate itself is not dangerous, but reduced forms that can occur in oxygen-free areas of the aquarium are very toxic and often cause problems. Likewise, sulphur bacteria can cause an accumulation of sulphur in the substrate. These should generally not be dosed into a saltwater aquarium.

Problems: High or too low sulphate values should be avoided. Differences can easily be balanced out with the help of some partial water changes. For shifts of more than 30 % please contact the laboratory for verification of the data. Too low sulphate values are suspected to be the trigger of bacterial infections on corals.

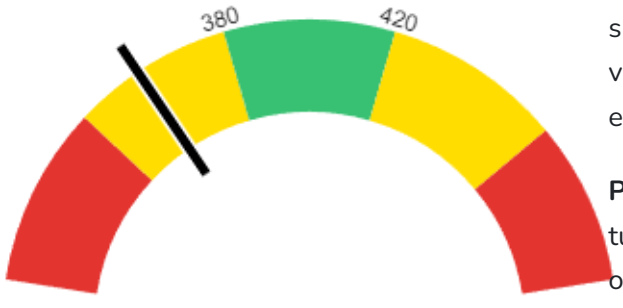
Actions: Regular control of the sulphur and/or sulphate value, regular partial water change with Professional Sea Salt. Avoid mineral salts or single doses of sulphate-rich trace mixtures.

Read more... Calculator

What to do here:

Value too low: No additional dosages necessary, partial water change with balanced salt is sufficient.

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Potassium :
358 mg/l

90% of the ideal value

What is this: Potassium is a macro element that should always be set slightly below the calcium value (Ca value minus 20 mg/l). The optimum value is between 380 mg/l and 420 mg/l. Potassium is a nutrient element and part of the supply process for corals and biofilms.

Problems: Too low or too high potassium values disturb the nutrient turnover in the aquarium and have a fundamentally damaging influence on coral growth as well as colour development.

Actions: Regular control of the potassium value, observance of the salinity line, partial water change with Fauna Marin Professional Sea Salt as well as dosage via Elementals K. Due to the strongly varying consumption of the systems, individual dosage is advisable. The potassium value can be checked at home with the Aquahome Test K.

Read more... Calculator

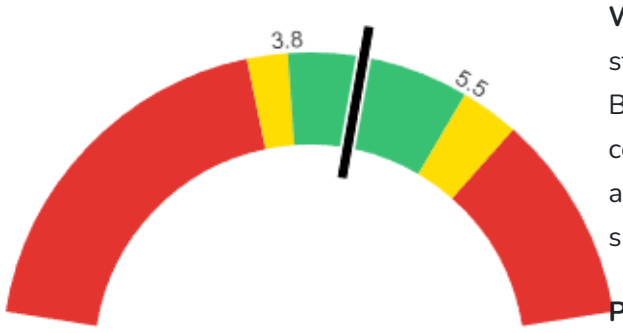
Your development in values...

What to do here:

Value too low: Dose Elementals K.

Please insert the amount of water of the aquarium for this analysis to calculate the dosage!

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Boron :
4.5 mg/l

97% of the ideal value

Your development in values...

What is this: Boron is present in seawater as boric acid. With 4-6 mg/l it still belongs to the macro elements despite its low content in seawater. Boron is essential and is mainly needed for growth and stabilization of cell membranes. Boron also contributes to the carbonate system, although only to a few percent. A high concentration of boron suppresses the damaging effects of too high aluminium levels.

Problems: Too low a boron concentration inhibits the growth of corals and at extremely low levels (below 2 mg/l) also leads to partial tissue detachment, which can be bubble-shaped.

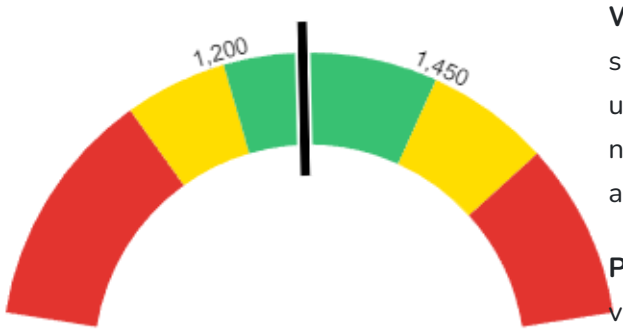
Actions: Regular control of the boron value, adjustment of the dosage if necessary. Reduction by partial water change and adjustment of the dosage.

Read more... Calculator

What to do here:

No actions necessary

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Magnesium :
1292 mg/l

98% of the ideal value

Your development in values...

What is this: Magnesium is a macro element and part of the calcium supply system or salinity line in seawater. Although magnesium is not used as frequently as calcium and carbonates, a stable calcium value is not possible without magnesium. Some organisms such as calcareous algae, clams or sea urchins absorb larger amounts of magnesium.

Problems: High magnesium concentrations are still acceptable up to a value of approx. 1600 mg/l. Higher values cause a chemical imbalance in the calcium supply, which leads to tissue dissolving in soft corals and tissue detachment in SPS corals. To combat algae, it is repeatedly recommended to increase the magnesium concentration to values above 1800 mg/l, but we strongly advise against this.

Too low measured values (below 1100 mg/l) destabilize calcium and carbon hardness and cause coral bleaching and tissue detachment in LPS corals from the base.

Actions: Regular control of the Mg value, observing the salinity line, partial water change with Fauna Marin Professional Sea Salt as well as dosage via Elementals Mg

Read more... Calculator

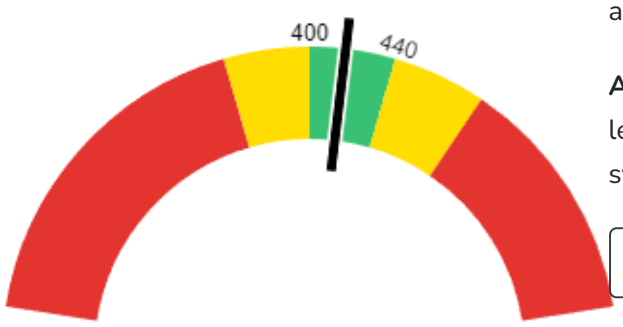
What to do here:

No actions necessary

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What is this: Calcium is part of the calcium supply system and the basis of coral growth. The coral combines calcium with carbonates to form solid calcium, the calcium carbonate. This occurs in different forms, and it forms the coral skeleton or the shells of clams.

Problems: Insufficient calcium levels cause disturbances in the growth and stability of the elements in the salinity line. Too high values lead to precipitation, unstable carbonate hardness as well as tissue detachment



Calcium :

417 mg/l

99% of the ideal value

Your development in values...

and bubble formation in coral tissue.

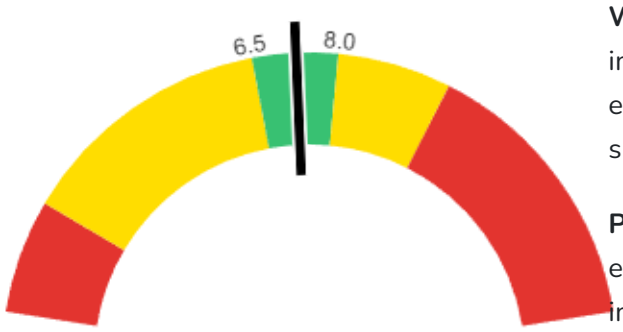
Actions: Regular control of the calcium value, adjustment of the calcium level according to the salinity line, change to the Balling light supply system for individual adjustment of the calcium leven.

Read more... Calculator

What to do here:

No actions necessary

↑ Back to index



Strontium :

7.27 mg/l

100% of the ideal value

Your development in values...

What is this: Like calcium, strontium is an alkaline earth metal and an important macro element in seawater. Strontium is not considered essential. Nevertheless, it has important functions in reef aquariums and should always be kept at the reference value of 7-10 mg/l.

Problems: Too low strontium levels lead to loss of colour and growth, especially in calcareous algae and hard corals. Strontium is also important for the health of the corals.

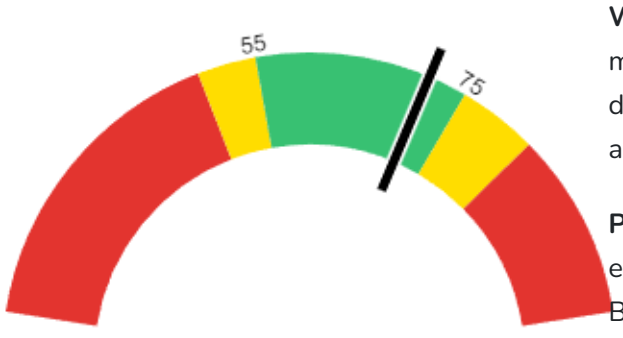
Actions: Regular control of the strontium value, observing the salinity line, partial water change with Fauna Marin Professional Sea Salt as well as dosage via Elementals Sr. Strontium can be added in proportion to the calcium consumption. Strontium is the key element in the Balling light Trace 1 solution.

Read more... Calculator

What to do here:

No actions necessary

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Bromine :

71.3 mg/l

110% of the ideal value

Your development in values...

What is this: Bromine belongs to the halogens and is an important macro element in seawater. Bromine is an essential element that has a direct effect on biological processes and the growth of corals as well as an inhibitory effect.

Problems: Too little bromine leads to loss of colour and growth, especially in soft corals, gorgonians, sponges, but also hard corals. Bromine is also important for the formation of fluorescent effects. Too high values from approx. 90 mg/l cause tissue detachment, starting in the middle of the coral.

Actions: Regular control of the bromine value, if necessary adjustment of the dosage, reduction by partial water change and use of activated carbon

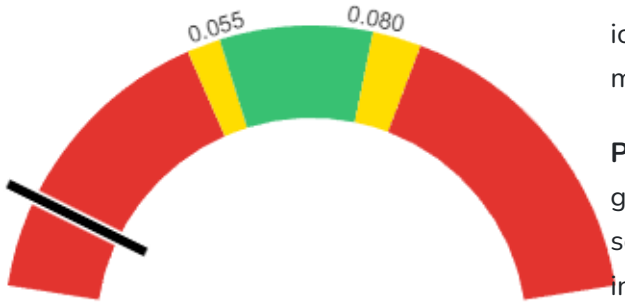
Read more... Calculator

What to do here:

No actions necessary

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What is this: Iodine is one of the most important trace elements for reef aquariums. Iodine occurs in nature in various forms. Organic and inorganic forms are known here, and there are many intermediate forms.



Iodine :

0.015 mg/l

22% of the ideal value

Your development in values...

For us aquarists only the three inorganic forms of iodine are relevant: iodine and the oxidation forms iodide and iodate. Total iodine is measured via ICP measurements.

Problems: A low iodine concentration shows up in dull tissue, reduced growth, colourless growth tips or growth edges as well as clear light sensitivity. Corals become more sensitive to parasites, dinoflagellate infestation by ejected zooxanthellae occurs more frequently. Too high values lead to a darkening of the corals and increased algae growth.

Actions: Regular control of the iodine concentration and if necessary adjustment of the dosage. Reduction by partial water change and adjustment of the dosage. Iodine is the key element of the Fauna Marin Balling Light Trace 3 solution.

Read more... Calculator

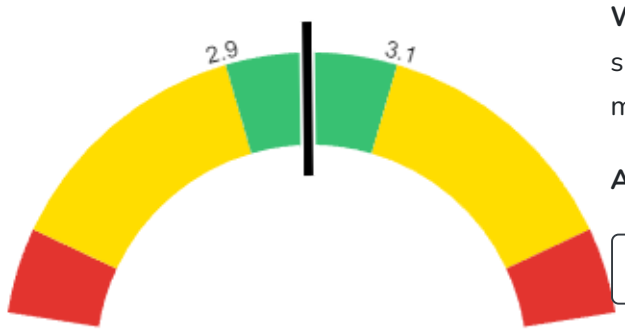
What to do here:

Value too low: Dose Elementals I.

Please insert the amount of water of the aquarium for this analysis to calculate the dosage!

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Relational values, macro elements and halogens



Sulfate/Sulfur :

2.996

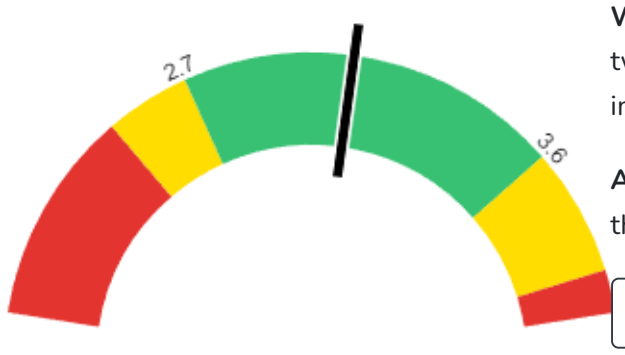
100% of the ideal value

What is this: This ratio value indicates an important factor in the sulphate system. Checking one value by two different measuring methods ensures the measuring quality.

Actions: If there is too big a difference to the setpoint, ask for advice.

Calculator

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Magnesium/Calcium :

3.098

98% of the ideal value

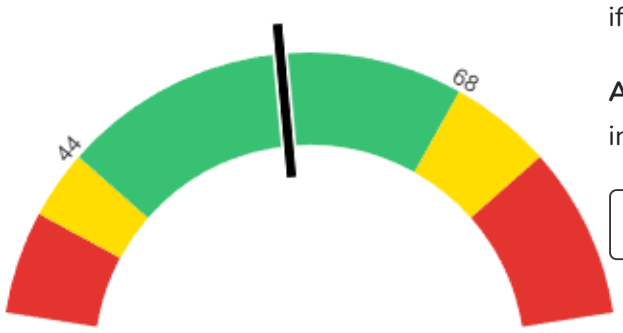
What is this: This relation value shows the correct relation between the two important calcium values. This relation value is particularly important.

Action: Adjust the target values of the individual elements according to the instructions.

Calculator

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What is this: This ratio value is especially important for the growth of corals: calcium and strontium should generally be in a fixed ratio. If the relation of the two values deviates too much, corals stop growing, even



Calcium/Strontium :

57.359

102% of the ideal value

if both values are still ok when viewed individually.

Action: Adjust the target values of the individual elements according to instructions.

Calculator

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Salinity Line

No salinity measured!

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Macro nutrients



Phosphor :

0.008 mg/l

24% of the ideal value

Your development in values...

What is this: Phosphorus is the most important nutrient in a reef aquarium. In the aquarium, phosphorus is measured as orthophosphate using standard tests. This is a dissolved and reactive version of phosphorus in reef aquariums. Phosphates are largely non-toxic, but too large amounts disturb our corals. Pay attention to low and stable values.

Problems: Fluctuating PO_4^{3-} values in particular cause problems for corals and tank biology. Detachment, algae growth, growth stop with corals and bad colours are the result of too high or too low phosphate values. Pay attention to our special nutrient recommendations for our biotopes.

Actions: Regular control of the PO_4^{3-} value! Adjustment of the dosages and the food input, reduction by partial water change, adsorber, checking the technology and filter media.

Read more... Calculator

What to do here:

No actions necessary

Back to index



Total phosphate :

0.02453 mg/l

41% of the ideal value

Your development in values...

What is this: Phosphorus is the most important nutrient in a reef aquarium. In the aquarium, phosphorus is measured as orthophosphate using standard tests. This is a dissolved and reactive version of phosphorus in reef aquariums. Phosphates are largely non-toxic, but too large amounts disturb our corals. Pay attention to low and stable values.

Problems: Fluctuating PO_4^{3-} values cause problems for corals and tank biology. Loosening, algae growth, growth stop in corals and bad colours are the result of too high or too low phosphate values. Pay attention to our biotope recommendations.

Actions: Regular control of the PO_4^{3-} value! Adjustment of the dosages and the feed input, reduction by partial water change, checking the technology and filter media.

Read more... Calculator

What to do here:

No actions necessary

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Silicon :
0.138 mg/l

92% of the ideal value

Your development in values...

What is this: Silicates are salts of silicic acid and occur in nature in very large quantities. There are numerous different silicates, but not all of them are relevant in seawater. In aquariums a too high value of silicic acid is problematic.

Problems: Too high values of silicic acid lead to a diatom plague, too low values, however, lead to unsightly green deposits on aquarium panes and poor sponge growth.

Actions: Filtering via adsorber, partial water change and installation of a reverse osmosis system with downstream ion exchanger (MB20).

Read more... Calculator

What to do here:

No actions necessary

Back to index



Silicate :
0.413 mg/l

92% of the ideal value

What is this: Silicates are salts of silicic acid and occur in nature in very large quantities. There are numerous different silicates, but not all of them are relevant in seawater. In aquariums a too high value of silicic acid is problematic.

Problems: Too high values of silicic acid lead to a diatom plague, too low values, however, lead to unsightly green deposits on aquarium panes and poor sponge growth.

Actions: Filtering via adsorber, partial water change and installation of a reverse osmosis system with downstream ion exchanger (MB20).

Read more... Calculator

What to do here:

No actions necessary

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PO_4/Iodine :
1.6352

182% of the ideal value

What is this: We call this relation value, between iodine and phosphate "brown value". Iodine and phosphate must be in a certain ratio to each other to ensure optimal colouring and growth of the corals.

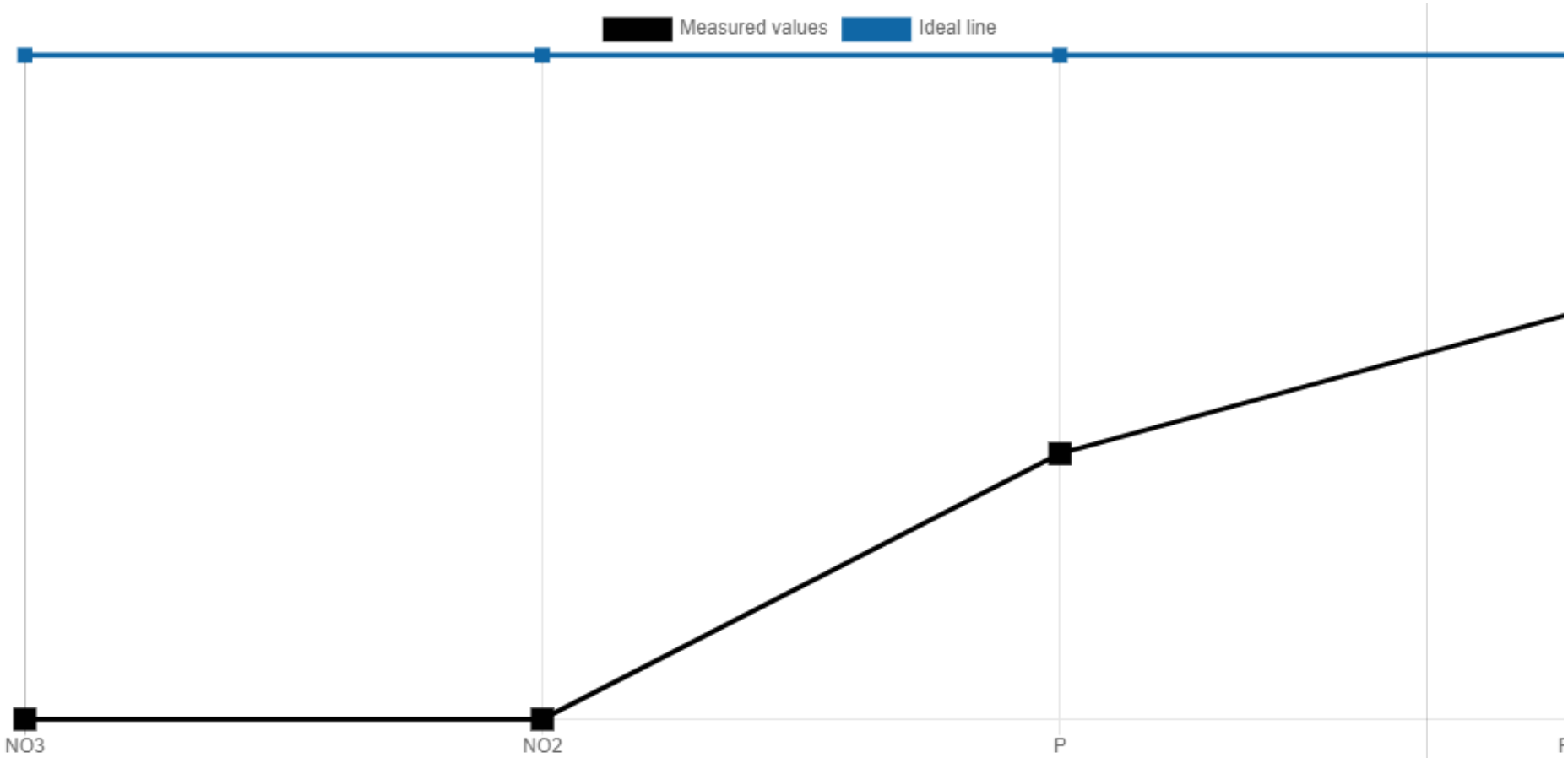
Problems: If iodine rises above 80 µg/l while PO_4^{3-} is set well below 0.03 - 0.02 mg/l, most SPS darken significantly. This is usually interpreted as an oversupply of nutrients and then attempts to lower the PO_4^{3-} value even further. This results in dissolving of coral tissue.

Actions: Make sure that the iodine content does not rise above 80 µg/l. Also pay attention to the relation value which shows you if the values are set correctly.

Calculator

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Nutrients line



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Physiologically relevant trace substances and colour-relevant micronutrients

Zinc
Not detectable

Your development in values...

What is this: Zinc is an important element for corals and aquarium biology. Especially when using bacteria and artificial decoration materials, the demand for zinc is high. The more coral biomass you have, and the more energy you import to your system, the larger its zinc consumption will be.

Problems: Too little zinc values lead to growth problems, corals tend to shifiting. The nutrient cycles are disturbed, the decomposition of nitrate and PO_4^{3-} is reduced or completely disturbed. Colours are washed out and have little contrast.

Actions: Partial water change, control of the additions, single dosage if needed, filtration via adsorber and zeolite if too high.

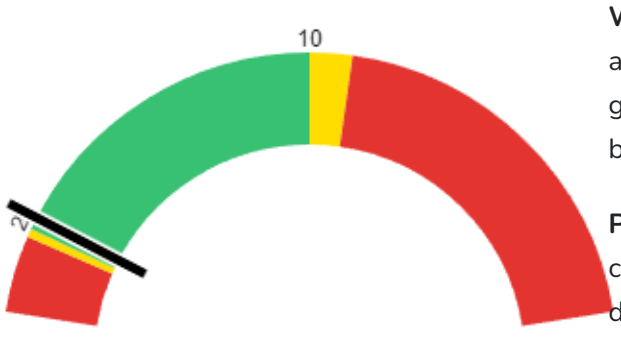
Read more... Calculator

What to do here:

Value too low: Dosing zinc via Elementals Trace Zn.

Please insert the amount of water of the aquarium for this analysis to calculate the dosage!

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Vanadium :
2.28 µg/l

What is this: Vanadium is an important essential element in reef aquariums. Vanadium is important for the formation of colour pigments, growth and numerous physiological processes in the coral tissue and biofilms in the aquarium.

Problems: Too low concentrations lead to weak colour formation, low colour contrast and weak fluorescence effects. Nutrient build-up and degradation are disturbed. Too high concentrations are relatively uncritical, but darkening of the animals and increased algae growth are a common consequence. From 30 - 50 µg/l vanadium starts to precipitate and form deposits. In order to assure optimum bioavailability of vanadium, it is important ro use a suitable method of supplementation. If

38% of the ideal value

Your development in values...

this is not done, the addition of vanadium quickly leads to the development of deposits and can cause undesireable cyanobacterial plagues.

Actions: Filtering via adsorber, partial water change and removal of the source/addition. Our aquarium systems are usually used to dose sufficient vanadium in bioactive form. High demand can be balanced by individual dosing.

Read more... Calculator

What to do here:

No actions necessary

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Copper :

1.1 µg/l

28% of the ideal value

Your development in values...

What is this: Copper is an important and essential trace element and part of the Dynamic Elements. Copper is irreplaceable in numerous physiological processes and is therefore needed in trace amounts.

Problems: Too high copper levels from 20 µg/l can cause partial dying of corals. This starts with a significant tissue brightening of Acropora (later Seriatopora, Pocillopora and Montipora) and soft corals. First molluscs like bivalves and snails as well as shrimps die. It typically starts very slow, with considerable acceleration at some time later.

Actions: Adsorber filtration, partial water change and removal of the source.

Read more... Calculator

What to do here:

Value too low: Dosing via Elementals Trace Cu.

Please insert the amount of water of the aquarium for this analysis to calculate the dosage!

Back to index



Nickel :

0.735 µg/l

16% of the ideal value

Your development in values...

What is this: Nickel is an essential element for corals and part of the Dynamics Elements. Nickel plays an important role in the growth of corals. The formation of basal discs is problematic if the nickel content is too low. Bright colors and strong contrasts are also difficult to achieve without nickel.

Problems: Too high nickel values cause tissue brightening and partial flaking of the tissue. Growth is restricted. Sensitivity to parasitic infestation increases. Fast-growing corals react first with dissolving tissue near the basal disc.

Actions: Filter through adsorber, partial water change and remove source.

Read more... Calculator

What to do here:

Value too low: Elemetals Trace Ni, Color Elements blue and green, Organic.

Please insert the amount of water of the aquarium for this analysis to calculate the dosage!

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Manganese

What is this: Manganese is almost not present in seawater, because there it quickly precipitates. This element can only be detected by ICP

Not detectable

Your development in values...

analysis in higher quantities than required. Manganese is an essential element for corals. Like iron, it is a nutrient that is important for coral growth. Manganese also has an effect on the red coloration of many corals.

Problems: Too little manganese shows itself in blunt tissue, reduced or missing growth, colourless growth tips as well as retracted polyps in Goniopora and Alveopora corals and partial light sensitivity in LPS corals.

Actions: Regular control of the manganese value, if necessary adjustment of the dosage, reduction by partial water change, filtration via zeolite and strong skimming.

Read more... Calculator

What to do here:

Value too low: Dose Elementals Trace MN, Organic, Trace 2, employ the Balling-Light-System.

Please insert the amount of water of the aquarium for this analysis to calculate the dosage!

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Molybdenum : 9.86 µg/l

66% of the ideal value

Your development in values...

What is this: Like vanadium, molybdenum is a transition metal, essential and part of the Dynamic Elements as it is needed in many enzymatic processes within the nutrient cycle and within the cell functions. A lack of molybdenum should be avoided, because a reduction of nitrate is not possible without molybdenum. Molybdenum works here as a component of the important enzymes in the nitrogen cycle.

Problems: In connection with iron, these enzymes are also used for the utilization of nitrates and their reduction to ammonium within the coral. A deficiency of these elements inevitably leads to a reduction in growth and an increase in nutrient values. Higher values, on the other hand, hardly have any influence and are well tolerated, too low values should be avoided as the light protection of the corals is also depending on molybdenum, among other elements. Vanadium and molybdenum also play an important role in the colouring of the corals and should be detectable in the correct ratio of approx. 1:3-1:4. (target value vanadium 3-5 µg/l, target value molybdenum 12-15 µg/l).

Actions: Molybdenum can only be reduced slowly in a reef tank. Regular water changes, carbon and filtration via aluminium-based adsorbers help.

Read more... Calculator

What to do here:

Value too low: Elementals Trace Mo, Color Elements.

Please insert the amount of water of the aquarium for this analysis to calculate the dosage!

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Iron
Not detectable

Your development in values...

What is this: Iron is the basic trace element in reef aquariums. In natural seawater, iron is limited and hardly detectable with only a few nanograms. The source for corals is therefore bacteria, algae plankton and food. In most reefs, iron is the limiting factor and not, as often read, the nutrients PO_4^{3-} and NO_3^-.

Problems: A too high iron content therefore acts like an over-fertilization. Corals are adjusted to a limitation of iron and cannot cope with permanently too high values. Iron itself is not stable in seawater and precipitates quickly like manganese. The use of zeolites in an

aquarium system ensures an iron export and such tanks may require an additional iron dosage. The first visible effect of a low iron dosage is the strengthening effect on the green color of the corals. Almost all colours benefit from a low iron dosage. However, too much iron can easily lead to the undesirable darkening of the corals and increased algae growth.

Actions: In the Balling Light System, iron is removed from the system via biopolymers, additional filtering via zeolites increases the effect. If the values are too low, iron in bioactive form can be added via the supply system or individual dosing.

Read more... Calculator

What to do here:

Value too low: Dose Elementals Trace FE, Organic, Trace 2, employ the Balling-Light-System.

Please insert the amount of water of the aquarium for this analysis to calculate the dosage!

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Chromium
Not detectable

Your development in values...

What is this: Chromium is an essential trace element, but in high concentrations it is toxic. Chromium accumulates in the aquarium and then develops a toxic effect. In nature, chromium is enriched by some corals in the skeleton. In the coral it is used to form enzymes for fat metabolism in the tissue cells.

Problems: Whether a chrome value can become a problem depends largely on the compound. Most chromium compounds are not water-soluble and therefore tend to be particulate. Soluble chromium compounds come from the sources listed below, and toxicity in seawater is usually not very high due to the high content of carbonates and PO_4.

Actions: Chromium is found in reef aquariums as chromate and enters the water via cement-containing adhesives or decorative items as well as some trace element solutions. Feeding Artemia as frozen food can also be a source of too high a chromium value.

Read more... Calculator

What to do here:

Value too low: No individual dosing required!

Please insert the amount of water of the aquarium for this analysis to calculate the dosage!

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Cobalt
Not detectable

Your development in values...

What is this: Cobalt is an important essential element that belongs to the iron group and is a component of the important vitamin B12.

Problems: Low growth and vulnerability of corals to parasites

Actions: Insufficient cobalt values reduce growth and colour formation

Read more... Calculator

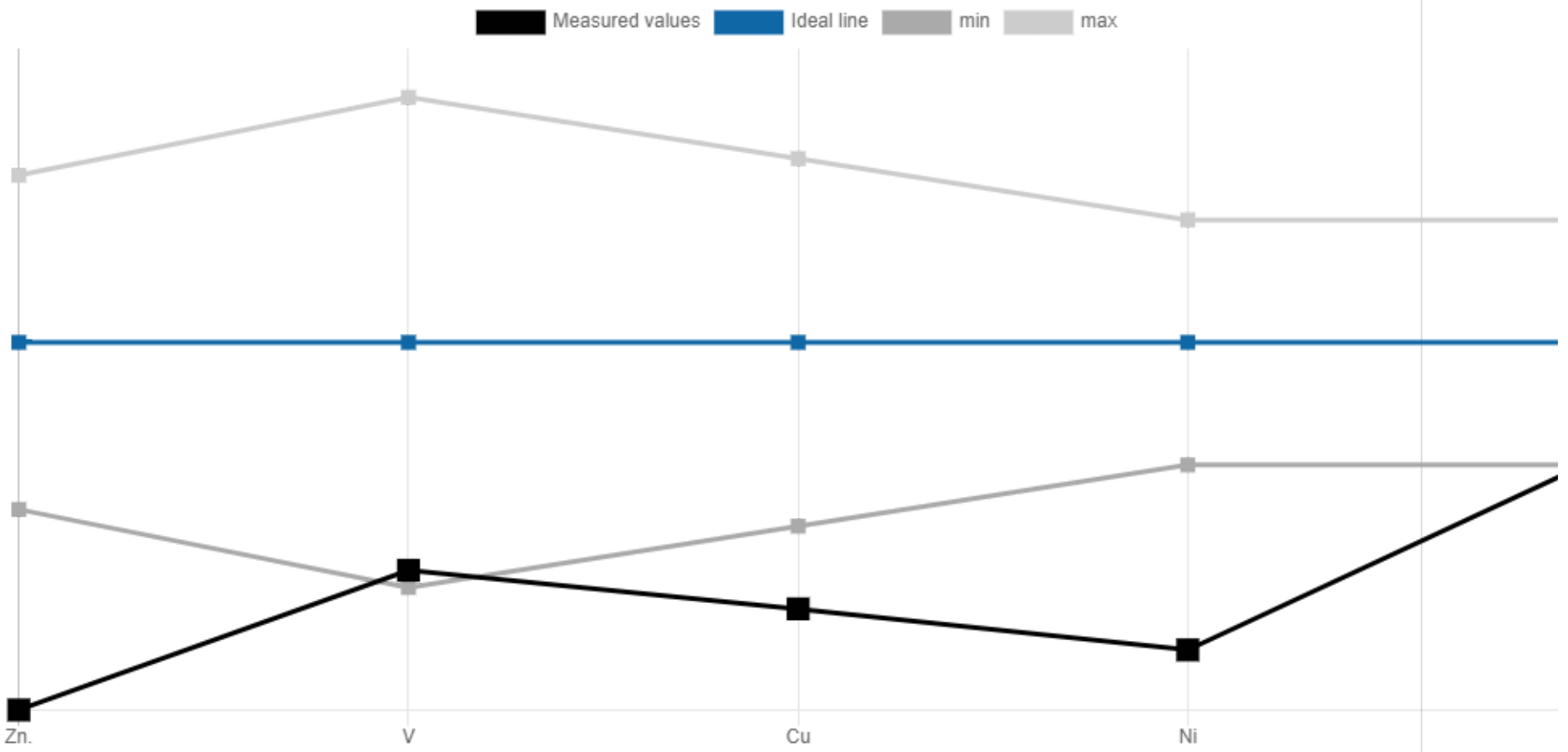
What to do here:

Value too low: Elementals Trace Co/addition via vitamin mix.

Please insert the amount of water of the aquarium for this analysis to calculate the dosage!

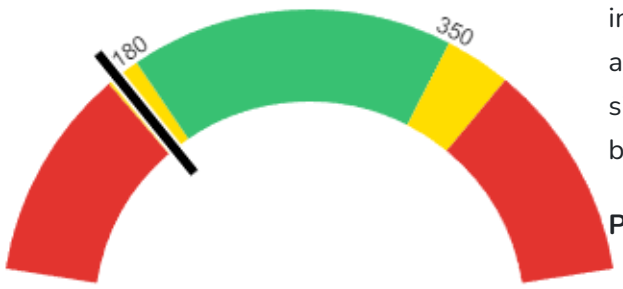
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Dynamic Elements Line



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Other trace elements and potential pollutants



Lithium :

167 µg/l

63% of the ideal value

Your development in values...

What is this: Lithium is a microelement and is occasionally found in increased quantities in the aquarium. Especially the use of cement, but also the use of special magnesium solutions for algae control, leads to significantly increased measured values. Values above 500 µg/l should be reduced by partial water changes and reduction of sources.

Problems: None.

Actions: Too low values reduce the hardness of the coral skeleton

Read more... Calculator

What to do here:

Value too low: Partial water change with Professional Sea Salt, dosing via Elementals Trace Li up to the reference value.

Please insert the amount of water of the aquarium for this analysis to calculate the dosage!

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Barium :

1.96 µg/l

7% of the ideal value

What is this: We consider barium to be an essential element in reef aquariums. It plays a role in coral growth and is used to control calcification within the corals. It is important that barium is adjusted in the right ratio to calcium and strontium.

Problems: Barium has long been used in trace element mixes. However, we refrain from using it because the amount of barium from other sources is usually sufficient. Barium is introduced into the aquarium via activated carbon, salt mixtures, cements and food. The natural concentration of 5 - 50 µg/l should be maintained. Values above 200 µg/l can lead to problems. This causes the tissue to turn grey. Especially if the iodine concentration is too low, too high barium values have a stronger effect.

Actions: Barium can be reduced by partial water change, reduced use of activated carbon and/or by filtering via phosphate adsorbers on aluminium basis (PHOS).

Your development in values...

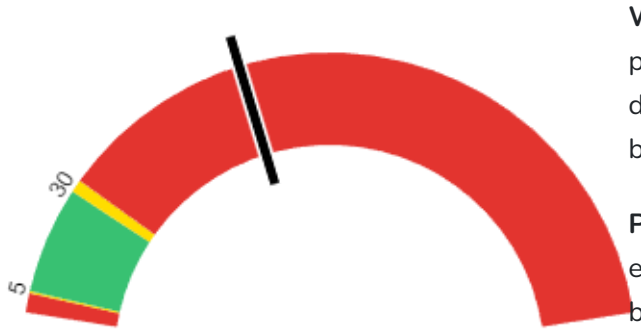
Read more... Calculator

What to do here:

Value too low: Elementals Trace Ba.

Please insert the amount of water of the aquarium for this analysis to calculate the dosage!

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Aluminium :

79.1 µg/l

452% of the ideal value

Your development in values...

What is this: Aluminum is usually present in seawater as colloidal or particulate material. A direct biological effect is not known, a slight dosage via special aluminium compounds can have a slightly brightening and colour-increasing effect on SPS corals.

Problems: A too high aluminium value reduces growth and polyp expansion of almost all corals. With permanently high values the tissue becomes thinner and partially dies off, starting with especially fast growing coral species. Leather corals like Sarcophyton, Sinularia and others then contract completely and decay, starting with the base.

Actions: Regular control of the aluminium value, if necessary adjustment of the filter media and removal of the aluminium source.

Read more... Calculator

What to do here:

Value too high: Use of ferrous PO_4^{3-} adsorbers such as Powerphos, Phos 0.04, partial water change, eliminate source.

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Antimony
Not detectable

Your development in values...

What is this: Antimony is a very special element that belongs to the potentially toxic heavy metals. It occurs in seawater in varying concentrations and can be metabolized by some bacteria.

Problems: The metalloid antimony gets into the aquarium water through unclean plastic packaging, inferior PVC parts (piping), cheap aquarium hoses and some foods. Antimony is also found in some frozen foods. Up to 20 µg/l antimony is tolerated in the aquarium. Therefore, these foods would also need to be checked if the measured values are too high.

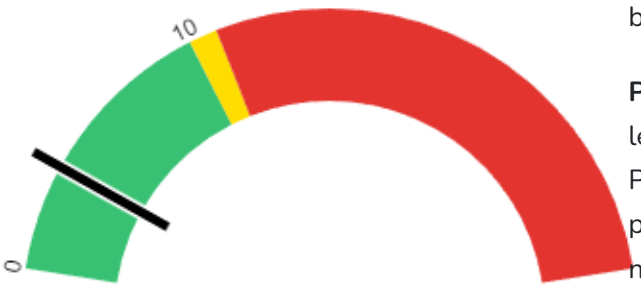
Actions: Antimony can be easily removed from the water by water changes, iron-based phosphate adsorbers and zeolite filtration. It is nevertheless advisable to find and remove the source of the antimony.

Read more... Calculator

What to do here:

No actions necessary

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Tin :

3.74 µg/l

What is this: Tin occurs in sea water up to 3 µg/l and should be kept below 10 µg/l due to its damaging effect on SPS.

Problems: Concentrations of tin above the recommended values can lead to dissolving and dying of living tissue in fast-growing SPS. Possible sources of tin are, for example, natural seawater that can be purchased, aquarium glass from unclean production (when setting up a new aquarium) as well as adhesives and cements that use a tin catalyst. Frozen food and some food types that use algae, phytoplankton or plant raw materials as well as clam meat as a basis are also possible. Frozen foods such as artemia are a particularly strong source of tin.

75% of the ideal value

Your development in values...

Actions: Filtering via iron-based adsorbers like Phos 0.04 or Powerphos

Read more... Calculator

What to do here:

No actions necessary

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Beryllium
Not detectable

Your development in values...

What is this: Beryllium is a non-essential, toxic element that can accumulate in biological systems. The analytical values should be "not detectable". Possible sources of beryllium are currently unknown. In some frozen food analyses (e.g. Artemia) elevated values could be found. Whether this has an effect to aquarium system or fish could not be determined up to now, but in any case it depends on the concentration, and with long-term feeding of beryllium-contaminated frozen food, harmful concentrations in the aquarium water would be conceivable. Read more... Calculator

What to do here:

Value too low: No dosing required.

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Selenium
Not detectable

Your development in values...

What is this: Selenium is an essential trace element that shows its effect mainly in protection against oxidative stress at high illuminance levels. Selenium also ensures stable cell walls and, in combination with vitamins, supports the absorption of nutrients.

Problems: Too high selenium values (from approx. 20 µg/l) are shown by partial damage and tissue detachment, too low values disturb growth and reduce light tolerance

Actions: Water change or dosing via element mixtures

Read more... Calculator

What to do here:

Value too low: Dose Coral Vitality starting with 25 % of the indicated dosage. Elementals Trace Se.

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Silver
Not detectable

Your development in values...

What is this: In some preparations that are supposed to be effective against cyanobacteria, colloidal silver is used.

Problems: Colloidal silver has a bactericidal effect, killing bacteria. But it does not have any specific effect on cyanobacteria. The use of silver can therefore have unforeseen consequences for the tank system and can cause a complete collapse of nitrification. In addition to the bactericidal effect, silver can also block important enzymatic reactions, and seawater seems to enhance these effects in some ways.

Actions: Silver precipitates immediately in aquarium water. As a rule, therefore, no Actions are necessary.

Read more... Calculator

What to do here:

No actions necessary

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Tungsten

What is this: Tungsten is a heavy metal that occurs in seawater in only very small quantities. Tungsten is not essential, but can displace

Not detectable

Your development in values...

molybdenum from needed enzymes.

Problems: Tungsten contamination becomes critical above 30 µg/l.

Actions: Partial water change. Exchange of cheap pumps and plastics.

Read more... Calculator

What to do here:

No actions necessary

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Lanthanum
Not detectable

Your development in values...

What is this: Lanthanum is a transition metal used in water treatment to precipitate phosphates from water. Lanthanum chloride solutions are used for this purpose, which immediately form insoluble lanthanum phosphate in seawater. These particles must be removed from the aquarium immediately, otherwise they will sediment and later dissolve the bound PO_4.

Problems: The use of lanthanum must be slow and controlled. Excessive dosages reduce the carbonate hardness in the system, and the resulting particles can damage fish. Please follow the dosing recommendations of the manufacturers carefully and filter the particles produced thoroughly before they can enter the aquarium. Damage to fish is always caused by excessive dosage quantities and insufficient filtering of the particles produced.

Actions: Stop the dosage, too high values occur only for a short time, lanthanum precipitates out of the water.

Read more... Calculator

What to do here:

Value too low: No dosing required.

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Titanium
Not detectable

Your development in values...

What is this: The titanium metals used in aquaria are alloys and suitable as a material in marine aquaristics. Sometimes traces of titanium are found in an analysis. But these are usually harmless. During ICP measurement, titanium is also strongly disturbed by calcium, which is then shown as a slightly increased value on the analyses. Titanium is used in pump shafts or grounding probes and is a component of seawater-resistant alloys. Some types of food contain small amounts of titanium oxide, which could be measured if necessary.

Problems: none

Actions: None, in case of very high readings values should be verified.

Read more... Calculator

What to do here:

Value too low: No dosing required.

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Zirconium
Not detectable

Your development in values...

What is this: Zirconium has no known biological effect and is used as a ceramic compound in pump shafts. Too high values are extremely rare and could be reduced simply by using absorbers. An addition is not sensible. Read more... Calculator

What to do here:

Value too low: No dosing required.

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Arsenic
Not detectable

Your development in values...

What is this: Arsenic, like chromium, is usually only found in aquariums when artificial reef decorations are used. From a concentration above 20 µg/l arsenic has a toxic effect and should be removed with phosphate adsorber Powerphos or Phos 0.04.

Problems: In many ICP analyses arsenic is shown in small amounts. In addition to the technically induced indication of non-existent arsenic, this substance is introduced into the tank via animal food, especially cheap food with rice flour as the basis, as well as frozen food and regenerated adsorbers. In our test report we only indicate the arsenic value if it has been validated or if there is a need for reduction. The basic value here is 10 µg/l, which is also the limit value for drinking water. Too high arsenic values from approx. 20 µg/l should be avoided, as they lead to partial tissue loss and later death of the corals.

Actions: Arsenic can be easily removed from the system by iron-based phosphate adsorbers.

Read more... Calculator

What to do here:

No actions necessary

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Cadmium
Not detectable

Your development in values...

What is this: Cadmium is an undesirable pollutant that should not be detectable.

Problems: Too high cadmium levels from about 5-10 µg/l cause the death of individual coral species in the order Seriatopora, Pocillopora, Montipora, Acropora

Actions: Filter via adsorber, partial water change and eliminate the cause.

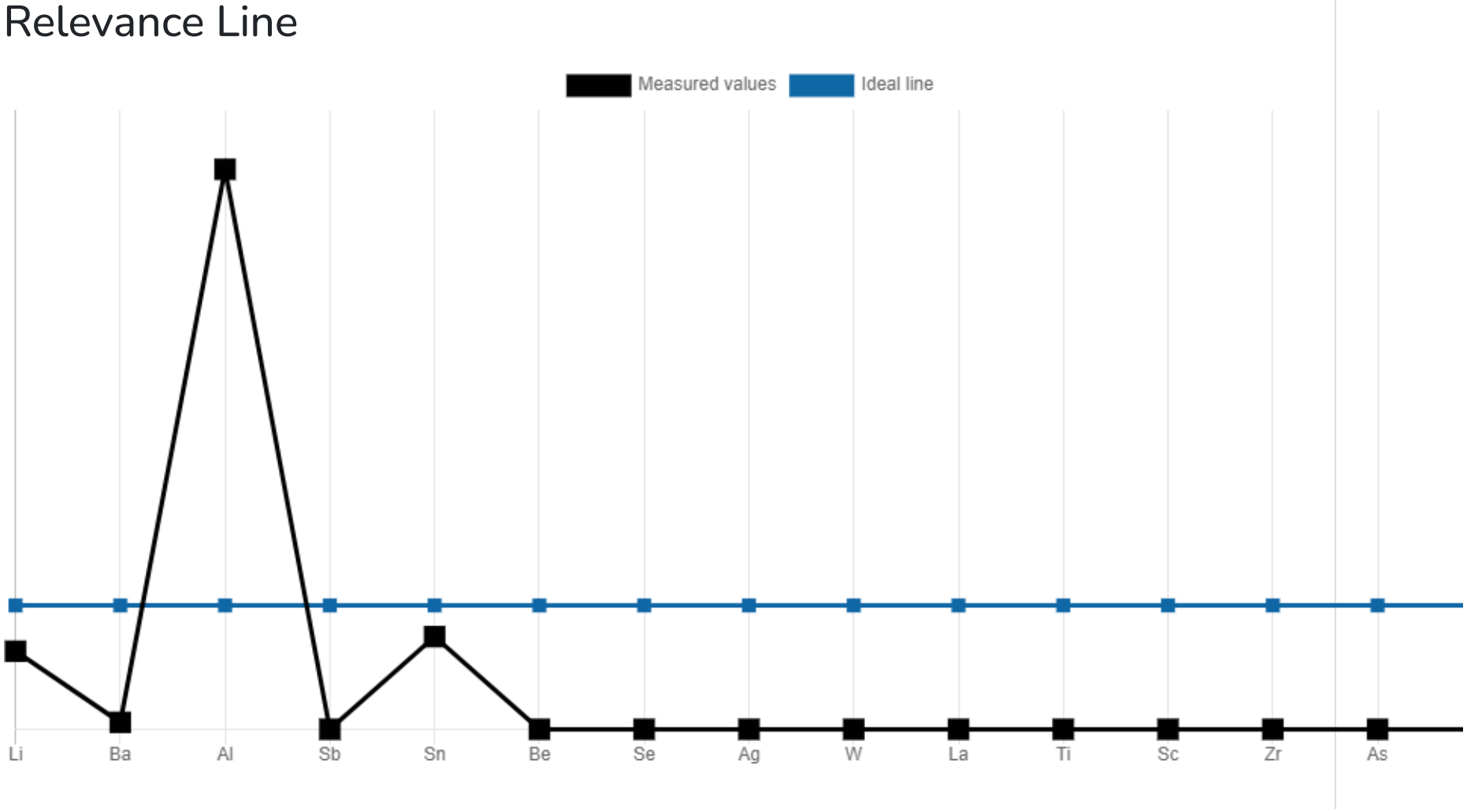
Read more... Calculator

What to do here:

No actions necessary

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Relevance Line



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Further information

All information and calculations supplied without guarantee. Mistakes and changes reserve.

Notes:

none

Share analysis: